

Nutrition education message topics and accessibility for the well-being of infants in an urban slum area

by

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Declaration

I, the undersigned hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature

Date

Abstract

The aim of the study was to contribute to the nutritional well-being of 0 – 24 month old children who attend primary health care clinics (PHC) in Duncan Village, an urban slum. This was to be achieved by first formulating essential nutrition-related message topics and second by formulating recommendations for optimising the accessibility of services, including nutrition-related messages, aimed at mothers attending PHC clinics in Duncan Village.

In order to formulate targeted and relevant nutrition-related messages for mothers attending the PHC clinics (Phase 1 of the research) the need for more information on the six focus areas for intervention that were identified in the previous Duncan Village Day Hospital (DVDH) study* was determined. This was done through key-informant interviews and studying other relevant published research. Eleven research questions related to the six focus areas were subsequently formulated to guide further research. Non-scheduled structured interviews were conducted with mothers with children in specific age groups until data saturation was achieved. A total of 31 interviews were thus conducted at the homes of participants and observation data was also collected at the same time. Three focus groups with corresponding participant categories were also conducted to check the information obtained through the interviews. Two focus groups were conducted with grandmothers to serve as a further form of checking research but also to obtain a different perspective on the research questions. The data available for the formulation of the message topics was analysed qualitatively by hand. The focus areas and the research questions gave a specific focus to the analysis process and the unprocessed data was available in these broad predetermined categories. All the information from all sources (DVDH study, the non-scheduled structured interviews with mothers, focus groups with mothers and grandmothers and observation data) was studied, interpreted and integrated for each identified category. During this process key-factors, which need to be addressed in nutrition-related messages essential for the well-being of infants attending PHC clinics in Duncan Village, were identified. The final step in the analysis process was the formulation of message topics based on these key-factors. During the analysis process it became clear that some of the identified key factors were not suitable for the formulation of nutrition-related message topics but rather give insight into the total context of the mothers attending the clinics in Duncan Village. It was evident that the information contained in the key factors could be used by health workers to identify and assist vulnerable mothers. These key-factors led to the formulation of relevant help topics. Eighteen main message topics and 16 help topics were formulated. The message topics included topics on: self-development, household food security, breastfeeding, good feeding practices, mothers' health and nutrition and hygiene practices.

In Phase 2 of the study the accessibility of services, including nutrition-related messages, to mothers attending PHC clinics in Duncan Village was determined. This was done by determining how mothers in

* The DVDH study refers to the case-control study that was completed in 1996 at the Duncan Village Day Hospital

Duncan Village experience the clinics where they could be exposed to nutrition-related messages and by determining the experiences of health care workers with mothers as clients as well as with service delivery. This information was obtained through focus group discussions with different participant categories. These categories included mothers with children in the same age groupings as in Phase 1 who had either attended clinic for all the child's immunisations or who had not attended clinic for all the child's immunisations or who had attended clinics outside Duncan Village for immunisation purposes. Pregnant women who had either attended antenatal clinics or had not attended antenatal clinics were also included. The last participant category involved health workers. This category included health workers from the obstetric unit where mothers from Duncan Village give birth, the primary health care clinics and community health care workers. The data obtained was analysed with ATLAS/ti, computer software specifically designed for qualitative data analysis. Twelve code families were created during the analysis process, each family referring to a specific aspect of accessibility of services provided at the PHC clinics. A detailed description of each code family is presented after which six networks were compiled. The data and networks were used to create a framework for data interpretation. According to the framework it is proposed that the final elements in the process of providing accessible nutrition-related messages to clients at clinics are (1) that the clients must attend the clinic and (2) that appropriate nutrition-related messages must be available. Problems with interpersonal and organisational aspects of service delivery were found to be two of the most important aspects that influence accessibility of clinic services and therefore nutrition-related messages at the clinics.

The last phase of the study (Phase 3) involved the formulation of recommendations to the relevant authorities about targeted and relevant nutrition-related message topics to be included in the education of mothers and pregnant women as well as recommendations to optimise accessibility of nutrition-related messages at the three PHC clinics in Duncan Village and the obstetric unit where mothers of Duncan Village give birth. A total of fifteen recommendations were formulated based on the findings and recommendations of Phase 1 and Phase 2. These recommendations focus especially on the necessity for the municipality to create a health empowering environment at the clinics, on the provision of appropriate nutrition-related messages at the clinics and on the need to reach vulnerable mothers. The importance of involving the community in these processes was also emphasised in the recommendations.

It is concluded that the implementation of the recommendations will contribute to the nutritional well-being of all young children in Duncan Village and could play an important role in realising the rights of children living in the area.

Abstrak

Die doel van die studie was om 'n bydrae te maak tot die voedingswelstand van 0–24 maandoue kinders wat primêre gesondheidsorg (PGS) klinieke in Duncan Village, 'n verarmde stedelike gebied, besoek. Om die doel te bereik is daar eerstens beplan om essensiële voedingsverwante boodskappe te formuleer. Tweedens is daar beplan om aanbevelings vir die optimalisering van die toeganklikheid van gesondheidsorgdienste vir ma's wat die klinieke bywoon, insluitend die toeganklikheid van voedingsverwante boodskappe, te maak.

Voordat relevante voedingsverwante boodskappe vir ma's wat die klinieke in Duncan Village besoek, geformuleer kon word, was meer inligting nodig oor die ses fokusareas vir intervensie wat in die vorige Duncan Village Daghospitaal studie bepaal is. Die bepaling van watter inligting nodig was, is gedoen deur sleutelinformantonderhoude en die bestudering van ander relevante gepubliseerde navorsing. Na aanleiding hiervan is elf navorsingsvrae wat verband hou met die ses fokusareas geformuleer. Nie-geskeduleerde, gestruktureerde onderhoude is vervolgens met ma's met kinders in spesifieke ouderdomsgroepe gehou totdat dataversadiging bereik is. 'n Totaal van 31 onderhoude is met respondente gehou by hul huise, waartydens die onderhoudvoerder ook sekere waarnemingsdata ingesamel het. Drie fokusgroepe is ook met ma's met kinders in ooreenstemmende kategorieë gehou om die inligting na te gaan wat deur die onderhoude ingesamel is. Twee fokusgroepe is ook met oumas gehou om die data verder na te gaan maar ook om 'n ander perspektief op die navorsingsvrae te verkry. Die data wat verkry is, is kwalitatief met die hand geanaliseer. Die fokusareas en die navorsingsvrae het 'n spesifieke fokus aan die analiseproses gegee en die ongeprossesseerde data was beskikbaar in hierdie breë vooraf gedetermineerde kategorieë. Die inligting van alle bronne (DVDH-studie, die nie-geskeduleerde gestruktureerde onderhoude met die ma's, die fokusgroepe met die ma's en oumas asook die observasie data) is bestudeer, geïnterpreteer en geïntegreer vir elke geïdentifiseerde kategorie. Gedurende hierdie proses is sleutelfaktore geïdentifiseer wat aangespreek moet word in essensiële voedingsverbandhoudende boodskappe wat gemik is om die voedingswelstand van klein kinders wat die PGS-klinieke in Duncan Village besoek te verbeter. Die finale stap in die analiseproses was die formulering van boodskaponderwerpe. Die onderwerpe is gebaseer op die geïdentifiseerde sleutelfaktore. Dit het duidelik geword tydens die analiseproses dat sommige van die sleutelfaktore nie geskik was vir die formulering van voedingsverbandhoudende boodskaponderwerpe nie, maar dat dit eerder insig verskaf in die totale lewenskonteks van die ma's. Die inligting in hierdie sleutelfaktore kan wel gebruik word deur gesondheidswerkers om kwesbare ma's te identifiseer en by te staan. Hierdie sleutelfaktore het dus tot die formulering van relevante hulpboodskappe gelei. Agtien voedingsverbandhoudende en 16 hulpboodskappe is geformuleer. Die boodskaponderwerpe sluit in onderwerpe oor selfontwikkeling, huishoudelike voedselsekuriteit, borsvoeding, goeie voedingspraktyke, gesondheid van die ma en voeding- en higiënepraktyke.

Tydens Fase 2 van die studie is die toeganklikheid van PGS dienste, insluitend voedingsverbandhoudende boodskappe vir ma's, bepaal. Dit is gedoen deur te bepaal hoe ma's in Duncan Village die kliniekdienste

ondervind, waar hulle aan hierdie boodskappe blootgestel kan word asook die ondervindinge van die gesondheidswerkers met die ma's en die dienslewingsproses. Hierdie inligting is deur middel van fokusgroepbesprekings met verskillende deelnemerskategorieë ingesamel. Hierdie kategorieë het ma's ingesluit wat die klinieke in Duncan Village besoek het vir al die spesifieke kinders se immunisasies maar ook ma's wat nie kinders geneem het vir al hul immunisasies nie of wat hul kinders na klinieke buite Duncan Village geneem het. Swanger vroue wat die voorgeboortelike klinieke besoek het asook die wat nie die klinieke besoek het nie, is ook ingesluit. Die laaste kategorie wat betrek is, was gesondheidswerkers. Hierdie kategorie het werkers van die kraamafdeling van die nabygeleë hospitaal en die primêre gesondheidsorgklinieke ingesluit. Beide professionele verpleegpersoneel en gemeenskapsgesondheidswerkers van die klinieke is betrek. Die data wat verkry is, is met ATLAS/ti, 'n rekenaarprogram spesifiek geskep vir die analise van kwalitatiewe data, ontleed. Twaalf kodefamilies is geskep tydens die analiseproses. Elke familie verwys na 'n spesifieke aspek van toeganklikheid van dienste by die klinieke. 'n Gedetailleerde beskrywing van elke kodefamilie is gegee asook ses netwerke. Die data en die netwerke is gebruik om 'n raamwerk vir data-intepretasie te skep. Die raamwerk postuleer dat die finale elemente in die proses van die verskaffing van toeganklike voedingsverbandhoudende boodskappe by klinieke die volgende is: (1) kliënte moet die kliniek besoek en (2) toepaslike voedingsverbandhoudende boodskappe moet beskikbaar wees.

Probleme met interpersoonlike en organisatoriese aspekte van dienslewering is geïdentifiseer as die twee belangrikste aspekte wat toeganklikheid van kliniekdienste en daarom ook toeganklikheid van voedingsverbandhoudende boodskappe beïnvloed.

Die laaste fase van die studie (Fase 3) het die formulering van aanbevelings aan die relevante owerhede behels. Die aanbevelings handel oor die insluiting van toepaslike voedingsverbandhoudende boodskappe by die gesondheidsonderrig van ma's en swanger vroue sowel as aanbevelings oor die optimalisering van toeganklikheid van dienste by die PGS klinieke en die kraamafdeling waar Duncan Village ma's geboorte gee. Vyftien aanbevelings gebaseer op die bevindinge van Fases 1 en 2 is geformuleer. Die aanbevelings fokus veral op die noodsaaklikheid vir die plaaslike owerheid om 'n atmosfeer van gesondheidsbemaatting by die klinieke te skep, die noodigheid om toepaslike voedingsverbandhoudende boodskappe by die klinieke te verskaf en die belangrikheid daarvan om kwesbare ma's te bereik. Die noodsaaklikheid om die gemeenskap te betrek in hierdie prosesse is ook benadruk.

Samevattend kan gesê word dat die implementasie van die aanbevelings sal bydra tot die voedingswelstand van alle jong kinders in Duncan Village en dat dit 'n belangrike bydrae kan lewer tot die realisering van die regte van kinders in die area.

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Chapter 1: Introduction

1 Motivation and problem identification

A 2002 World Health Organisation (WHO) document on strategic directions for improving the health and development of children and adolescents notes that the world has witnessed a remarkable achievement: “Child mortality has decreased from 97 per 1000 live births in the early 1980s to 67 per 1000 live births in 1999” (WHO, 2002a: 1). The United Nations Standing Committee for Nutrition (SCN) further notes that it is predicted that at current trends pre-school wasting and stunting will be halved by 2030 (Macdonald, Haddad, Gross & McLachlan, 2002: 1). Effective public health interventions delivered to large numbers of children are named by the WHO as being responsible for a major part of this success (WHO, 2002a: 1). The prevailing situation is however still unacceptable. The failure to reduce child mortality even more effectively and ensure the development of surviving children to their full potential could partly be ascribed to the limited impact that has been made in addressing the multiple determinants of ill health. These include malnutrition, unhealthy environments and low levels of access to and utilisation of quality health care services (WHO, 2002a:1).

More than 5 million children died in the year 2000 because of just five preventable communicable diseases compounded by malnutrition (WHO, 2002a:1). Death as an outcome is however not the only concern with undernutrition. In a review of the long-term effects of nutritional deficiencies in early life Grantham-McGregor, Walker and Chang (2000:47) wrote that there is evidence that many nutritional deficiencies may have an effect on cognition, motor performance and behaviour. These conditions include low birth weight due to undernutrition, early childhood protein-energy malnutrition (PEM), deficiencies of iodine, iron and zinc, inadequate breastfeeding and even short-term food deprivation. The effects of these conditions may be transient, last for a longer time or may even be permanent according to the review.

While undernutrition could have severe detrimental effects, good nutrition can lead to “an impressive range of benefits” (Pelletier, 2002:1). From the perspective of human capital, these include improved health, cognitive development and work capacity. From a development perspective, they include greater economic and agricultural productivity, better education, and improved workforce development, as well as greater resilience to shocks induced by social, economic and natural causes (Pelletier, 2002:1)”. According to this author there are also “compelling normative (human rights) arguments” for actions to improve nutrition. This is backed up by a growing international consensus on the right to food (Pelletier, 2002:1). The benefits that could be gained from nutritional well-being therefore support humanitarian, development and normative arguments for addressing nutrition (Pelletier, 2002:1).

That good nutrition is an essential building block for development, is illustrated by the millennium development goals of the United Nations (Textbox 1.1) (cited in Macdonald *et al.*, 2002: 2). These goals summarise the development ambitions of the global community over the next generation. Nutrition can play a key role in each of these ambitions (Macdonald *et al.*, 2002: 2).

Textbox 1.1: Millennium Development Goals of the United Nations

1. Eradicate extreme poverty and hunger
2. Achieve universal primary education
3. Promote gender equality and empower women
4. Reduce child mortality
5. Improve maternal health
6. Combat HIV/AIDS, malaria, and other diseases
7. Ensure environmental sustainability
8. Develop a global partnership for development

According to “The fourth report on the world’s nutrition situation” of the United Nations Standing Committee on Nutrition (ACC/SCN, 2000) 32.5% of pre-school children in developing countries were stunted in the beginning of the new century and 26.7% were underweight. Sub-Saharan Africa has seen the least overall improvement in the nutritional status of its pre-school children and the ACC/SCN (2000) ascribes this to the decline in women’s relative status, slow progress in improving women’s educational attainment, and low per capita food availability and income.

In South Africa a national survey that was undertaken in 1994 by the South African Vitamin A Consultative group (SAVACG) found that stunting was a major problem with one in four children being stunted. Vitamin A and iron deficiency were also identified as nutrition problem areas (SAVACG, 1996). Two of the key recommendations of the SAVACG group were the targeting of the very young (<2 years) for nutrition intervention as well as the targeting of mothers for nutrition education, socio-economic upliftment, income generation and child care.

In 1996 nutrition was identified as one of the top ten research priorities in South Africa by the Essential National Health Research (ENHR), an integrated strategy for organising and managing health-related research in South Africa (COHRED, 2001:2; 32). Three years later in 1999 the National Food Consumption Survey (NFCS) was undertaken and it was found that nationally one out of five children was stunted and one out of 10 underweight. Undernutrition therefore remains a serious health problem among many South African children (Labadarios, ed. 2000: 25).

The Eastern Cape Province of South Africa where the present research was conducted is described by the authors of “Primary Health Care in the Eastern Cape” as a microcosm of South Africa. The province has one

of the worst health and socio-economic indicators in the country (Mahlalela, Rohde, Meidany, Hutchinson and Bennett, 2001:13). The 1999 NFCS did indeed identify the Eastern Cape Province as one of the four most seriously affected provinces in relation to nutrition (Labadarios ed, 2000: 25).

Region C (now the Amatole district) where the Buffalo City municipality is located, is one of the regions in the province where the highest percentage of children has been reported as not gaining weight. It is also the region where the largest number of children were fed through the government's Protein Energy Malnutrition (PEM) Scheme (1998 – 2000) (Mahlalela *et al.*, 2001:73-74).

Duncan Village, the densely populated urban residential area that the research focused on, is situated in the Buffalo City municipality in the Amatole district (Region C). Buffalo City is one of the nine largest cities in South Africa and the second largest in the Eastern Cape. It is also one of the poorest municipalities. Of those classified as "poor" (earning incomes of less than R262.21 per month) and "ultra-poor" (incomes of less than R199.62 per month) 99% are African (Richards, 2003: 40-41). The Buffalo City municipality area is represented as a grouping of urban areas with East London being the primary regional node (Buffalo City, 2003). Duncan Village is situated five kilometres from the Central Business Area of East London and even closer to some of the major industrial areas. This relative close proximity to employment opportunities could be a possible explanation for its "popularity" as a residential area (Swart, 2003: Personal communication). An aerial photograph of Duncan Village which clearly shows the high density informal housing is included at the end of the dissertation in Addendum D.

According to Swart (2003: Personal communication) from the Buffalo City's planning department, Duncan Village encompasses an area of approximately 320 hectares with an estimated population of 92139 (1999). More than three-quarters of the residents of Duncan Village live in informal residential structures (shacks) and the densities within the informal (shack) areas vary from 150 dwellings per hectare to 500 dwellings per hectare (1996). According to Swart (2003: Personal communication) practically no space is left for the "normal functions of public open space" as most "green" areas including flood plains consist of shacks. Bank, Jekwa, Lujabe and Mlomo (1996:11) described Duncan Village as a "deeply impoverished urban slum". That the situation has not improved is shown by extracts made by the Buffalo City Municipality from the 1996 census data (Swart, 2003: Personal communication). According to these data only 23% of the population of Duncan Village are employed, 18% of the people have no education at all and most people still live without electricity, running water in their houses or proper ablution facilities.

Although nutritional status in the form of anthropometric measurements is a good indicator of poverty on the macro level, the causal link between poverty and malnutrition is less clear at the community level and cannot always be empirically established (Gillespie, 1997; Kusumayati & Gross, 1998:409, Islam, 1997). This is because nutritional outcome also depends on other critical determinants as is made clear by the multifactorial picture presented by the adapted version of the UNICEF food, health and care conceptual framework (Figure

1.1). It however does not imply that there is not a strong connection between poverty and malnutrition (WHO, 2002a: 7).

The framework is widely used as an analytical tool to portray causal factors and their interactions at three main levels – immediate, underlying and basic (UNICEF, 1990a: 22, ACC/SCN, 2000, Kurz & Johnson-Welch, 2000: 5). Extreme poverty and other factors contained in the causal framework, both underlying and basic, identify Duncan Village as an area where nutrition problems could be expected to exist. Some of these factors include the poor educational status of people living in the area and environmental conditions existing in Duncan Village. Wild (1993: 2-3) and Bank *et al.* (1996: 20-23) have extensively described the extremely poor environmental conditions as well as the political and socio-economic reasons behind it. According to these authors a “legacy of neglect” left 68% of the population with no reasonable access to sanitation, 80% without electricity and the majority of the population living in inadequate informal “shacks” less than one metre apart (Wild, 1993: 2-3; Bank *et al.*, 1996: 21-22).

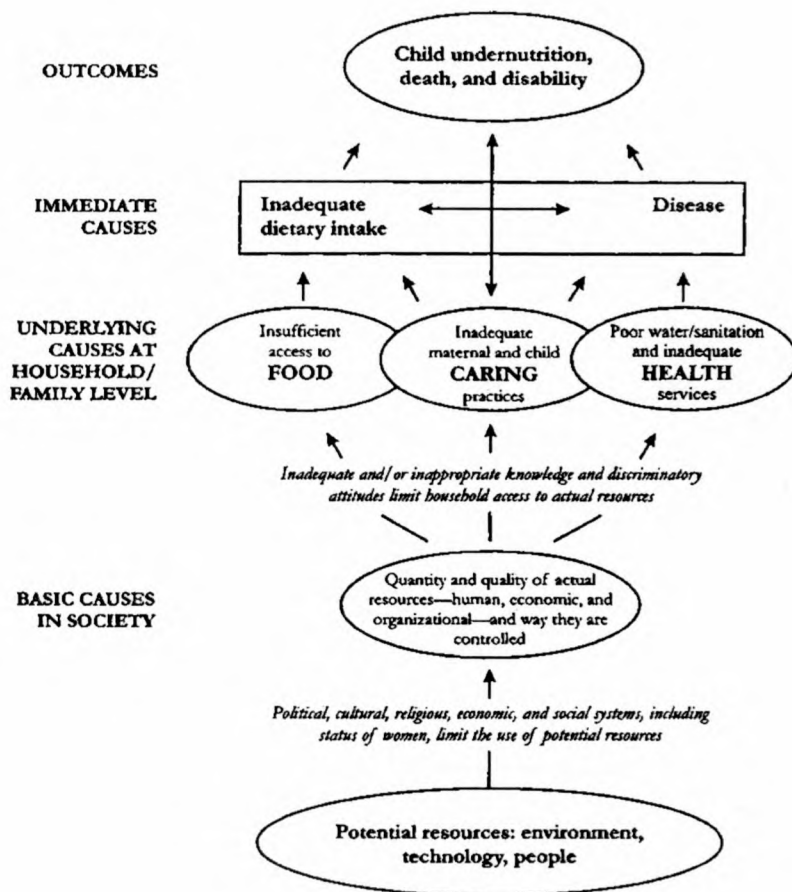


Figure 1.1: UNICEF’s Conceptual Framework for causes of undernutrition (UNICEF, 1990a: 22)

While it has been found in numerous studies that the educational status of the mother has an influence on child caring practices and child nutrition (Chirmulay, 1997, Moulton, 1997), a healthy environment is also necessary for children to grow and develop optimally. It has been speculated that growth impairment in underprivileged communities in the developing world is partly the result of the metabolic consequences of

poor hygiene (Solomons, Mazareigos, Brown & Klasing, 1993: 331). Although poor environmental conditions do not imply that health impairment will take place, children are especially susceptible to disease if they are born in such environments. They not only suffer from the direct consequences of the environment but also from the stress and other psychosocial factors that such environments create for them and their caregivers (Chelala, 2000: 14).

No published data exists about the prevalence of growth failure in Duncan Village. However the following indicators of problems were present during the nineties when the first part of this research was done during the Duncan Village Day Hospital (DVDH) study (De Villiers, 1998).

- Personal observations by the researcher from 1989 to 1994 at the paediatric and nutrition clinics at the Duncan Village Day Hospital indicated that a growth failure problem existed.
- During 1994 the three municipal clinics in Duncan Village as well as the Duncan Village Day Hospital provided food supplementation according to the guidelines of the Protein –Energy-Malnutrition Scheme (PEM scheme) to an average of 1000 children aged 0 to 6 years per month.
- The extremely unfavourable environmental and socio-economic conditions mentioned above which are highly conducive to the development of growth failure in children.

The possibility that the environmental and socio-economic profile of Duncan Village could give rise to problems of growth failure, is supported by the research of Coetsee and Ferrinho (1994: 413 – 415) in Alexandra Township in Johannesburg, an area very similar to Duncan Village. The survey done by these researchers found that while clinic based growth-monitoring data showed that 5.5% of children were below the 3rd percentile of weight for age, survey data showed that actually 17.7% of boys and 9.3% of girls were below the 3rd percentile of weight for age.

Various initiatives are taking place to address nutrition problems in South Africa through the government's Integrated Nutrition Programme (INP), programmes of the Health Systems Trust and other initiatives such as the Transnet-Phelophepa Health Care Train. However very few of these initiatives, with the exception of the government's school feeding programme are available to households in Duncan Village (Mdingi, 2000: Personal communication). The need for clearly targeted intervention initiatives to address the perceived growth failure problem in Duncan Village was evident.

To address this need the process of the Triple A cycle, a participatory decision-making process pioneered by UNICEF (1997a: 41) was initiated. According to the Triple A cycle the problem of undernutrition is assessed and its causes are analysed along with the available resources and capacity to combat it. This is followed by a decision on an appropriate mix of actions. The process is cyclical and iterative in that once the actions have been initiated, they are subsequently monitored and evaluated (reassessment).

As a first step in the process, a case control study was undertaken from a health centre in Duncan Village

during 1995 to 1996. The aim of the study was the identification of determinants of growth failure in 12 to 24 month old children attending the centre. Evaluations were based on a hypothetical causal model for growth failure in Duncan Village (De Villiers, 1998:121), which in its turn was based on the UNICEF conceptual framework for the causes of malnutrition (UNICEF, 1990a: 22) presented in Figure 1.1. The main findings of the research are summarised in Table 1.1

Table 1.1: Main findings of the Duncan Village Day Hospital Study (1998)

Causal factor based on the causal framework ¹ for growth failure		Finding
Immediate causes of growth failure:	<i>Dietary intake</i>	Relatively poor for all the children.
	<i>Disease and infection</i>	No significant difference was found between the two groups regarding <i>disease and infection</i> indicators.
Underlying causes:	<i>Household food security</i>	Poor for the whole study population with no significant differences between the two groups, which could indicate that it is not a primary determinant of the problem of growth failure. This however does not lessen the need to address the problem as it could exist at the individual (child) level.
	<i>Inadequate health services and unhealthy environment.</i>	The children were nearly all exposed to the same poor <i>environmental conditions</i> , but poor <i>hygienic practices</i> of the mothers were identified as a risk factor for the development of growth failure. Poor <i>immunisation status</i> was also identified as a possible factor contributing to growth failure.
	<i>Inadequate maternal and child care/inadequate control of resources.</i>	The most important underlying determinants of growth failure that were identified in the study population seem to be hinged around the caring capacity of and control of resources by the mothers. The following were identified as risk factors in this regard: <ul style="list-style-type: none"> ▪ Mother not the head of the household ▪ Mother not involved with the discipline of her child ▪ Biological mother not the guardian of the child ▪ Biological mother not born in Duncan Village ▪ Mother not being able to read or write Xhosa, the indigenous language ▪ Mother having a school education of less than Grade 9 ▪ Mother smoking/drinking regularly ▪ Mother's BMI <25 ▪ Index child's birth weight <2500g ▪ Inadequate feeding practices with specific reference to complementary feeding practices ▪ Mother did not receive nutrition education ▪ Mother subjectively being evaluated as having inadequate interest in and an inadequate caring attitude towards the child.

¹ Basic causes as indicated by the UNICEF framework (UNICEF, 1990a: 22) were not assessed.

Specific issues that should be addressed to alleviate the problem of growth failure in 12 to 24 month old children attending the Duncan Village Day Hospital were identified from these results. It was subsequently suggested that these should be incorporated into six focus areas (Table 1.2).

Table 1.2: Focus areas for intervention and the specific issues that should be incorporated in these areas to address the problem of growth failure in Duncan Village

Specific issues that should be addressed	Focus areas
Improved dietary intake of children	Feeding practices
Improved nutrition knowledge of mothers	Nutrition education
Improving household food security	Household food security
Mother's caring capacity: <i>Caring attitude</i> <i>Psychological well-being</i> <i>Literacy and educational level of mother</i>	Self development
Decision making role of mother	Resource management
Inadequate health practices: <i>Immunisation of child</i> <i>Smoking (mother)</i> <i>Drinking (mother)</i> Inadequate hygiene practices: <i>Basic personal cleanliness</i> <i>Washing of children's hands</i>	Health and hygiene

The focus areas identified as important to address growth failure in young children attending a health care centre in Duncan Village clearly fit in with the priorities of early childhood as set out in the UNICEF medium-term strategic plan (MTSP) for 2002-2005. These priorities are girls' education, integrated early childhood development (IECD), immunisation, fighting HIV/AIDS and improved protection of children from violence, abuse, exploitation and discrimination (UNICEF, 2002a). It furthermore closely matches the six elements of UNICEF's "Care Initiative" namely care for women, breastfeeding and feeding practices, psychosocial care, food preparation, hygiene practices and home health practices (UNICEF, 2002b: 3)

Factors that play a role in the development of growth failure need to be addressed early in a child's life because evidence exists that growth failure often already develops in the first few months of life (Waterlow, 1988:10; Simondon & Simondon, 1995:180;). Addressing these issues as early as possible in the child's life, preferably before the end of the first year of life, or even earlier during pregnancy is therefore necessary to prevent the development of the growth failure (Jonsson, 1997).

According to the ACC/SCN (2001: 89) no single intervention or mix of interventions should ever be prescribed in isolation from a participatory process of problem assessment, causal and capacity analysis and

programme design. Deciding on actions to be taken in any situation of undernutrition needs to be guided by a series of questions. These concern the existing context, the infrastructure for implementation and other existing resources and capacity. Community participation in planning these actions is important (UNICEF, 1999:5, ACC/SCN, 2001: 89). Smitasirir (1998: 51) stated that nutrition workers should aim to achieve significant and long-lasting changes by “pro-actively learning from the people”. This means communicating and working with both women and men, to do something “appropriate to improve nutrition”. Any action taken should be based on sound knowledge, and this must be “grounded in the reality of the people”.

At the completion of the study at the Duncan Village Day Hospital it was clear that the identification of the focus areas for intervention could not be the end of the analysis phase. **Before action in the form of programme design could take place, more information, “grounded in the reality of the people” was needed about nutrition-related messages to be contained in each of the focus areas.**

As was mentioned by the ACC/SCN (2001: 89) a further important point for consideration in intervention planning involves the necessary infrastructure for implementation. After wide investigation and consultation it was decided that the existing infrastructure of the municipality clinics could provide a sustainable venue for providing nutrition-related education. As the first level primary health care (PHC) structures in Duncan Village the clinics would be the most likely place where mothers or pregnant women would be exposed to any interventions concerning the causal factors for growth failure at an early enough stage i.e. at ante-natal or immunisation clinics. This is supported by Shearley’s (1999: S110) comment that vaccination programmes are the only recurring activity in primary health care that bring mothers and children into contact with health services on a predictable and frequent basis, providing an opportunity for family health education. A study done in India also provides support for the use of primary health care clinics for nutrition intervention. A project that aimed at promoting exclusive breastfeeding until age 6 months through educational intervention in existing primary health-care services was completed successfully (Bhandari, Bahl, Mazumdar, Martines, Black & Bhan, 2003: 1422). The researchers note that an important aspect of the success of the project was that the change was achieved with an approach that is feasible and sustainable because it was implemented through the routine health and nutrition services.

Although there are three primary health care clinics and two health centres in Duncan Village some concerns exist about the accessibility of PHC services to certain sectors of the Duncan Village population. It has been noted by UNICEF (1990b: 4) that high-risk groups, generally the poorest are often marginalised from society as a whole, including the health care system and can usually not be reached unless a deliberate effort is made.

A consultative approach to identify relevant message topics in each of the previously identified focus areas and to assess the accessibility of nutrition education at specific PHC facilities as a further step in the assessment and analysis phases of the Triple A process, could contribute to sustainable action to ensure the

nutritional well-being of young children in Duncan Village.

2 Aim of the study

The aim was to contribute to the nutritional well-being of 0 – 24 month old children living in Duncan Village, an urban slum, by formulating essential nutrition education message topics and recommendations for optimisation of accessibility of services aimed at mothers attending primary health care clinics in the area.

3 Objectives

The following objectives were formulated to attain this aim:

- 3.1 To define the need for further research regarding the focus areas based on additional² relevant local information and formulate research questions accordingly.
- 3.2 To obtain additional information on the research questions identified in 3.1, integrate it with existing information and formulate nutrition-related message topics accordingly.
- 3.3 To determine the accessibility of services aimed at mothers attending PHC clinics in Duncan Village through
 - 3.3.1 *Determining how mothers in Duncan Village experience the local government primary health care clinics where they could be exposed to nutrition-related messages aiming to optimise growth*
 - 3.3.2 *Determining the experience of personnel at the PHC clinics and the obstetric unit utilised by mothers, of service delivery and the recipients thereof.*
- 3.4 The formulation of recommendations to the relevant authorities about
 - 3.4.1 *Nutrition-related message topics to be included in the education of mothers and pregnant women at the clinics in Duncan Village.*
 - 3.4.2 *Optimising accessibility of nutrition-related messages at the three primary health care clinics in Duncan Village.*

4 Proposed research framework

The research was undertaken in three phases as shown in Figure 1.2.

² Additional refers to information not obtained in the previous case-control study (De Villiers, 1998).

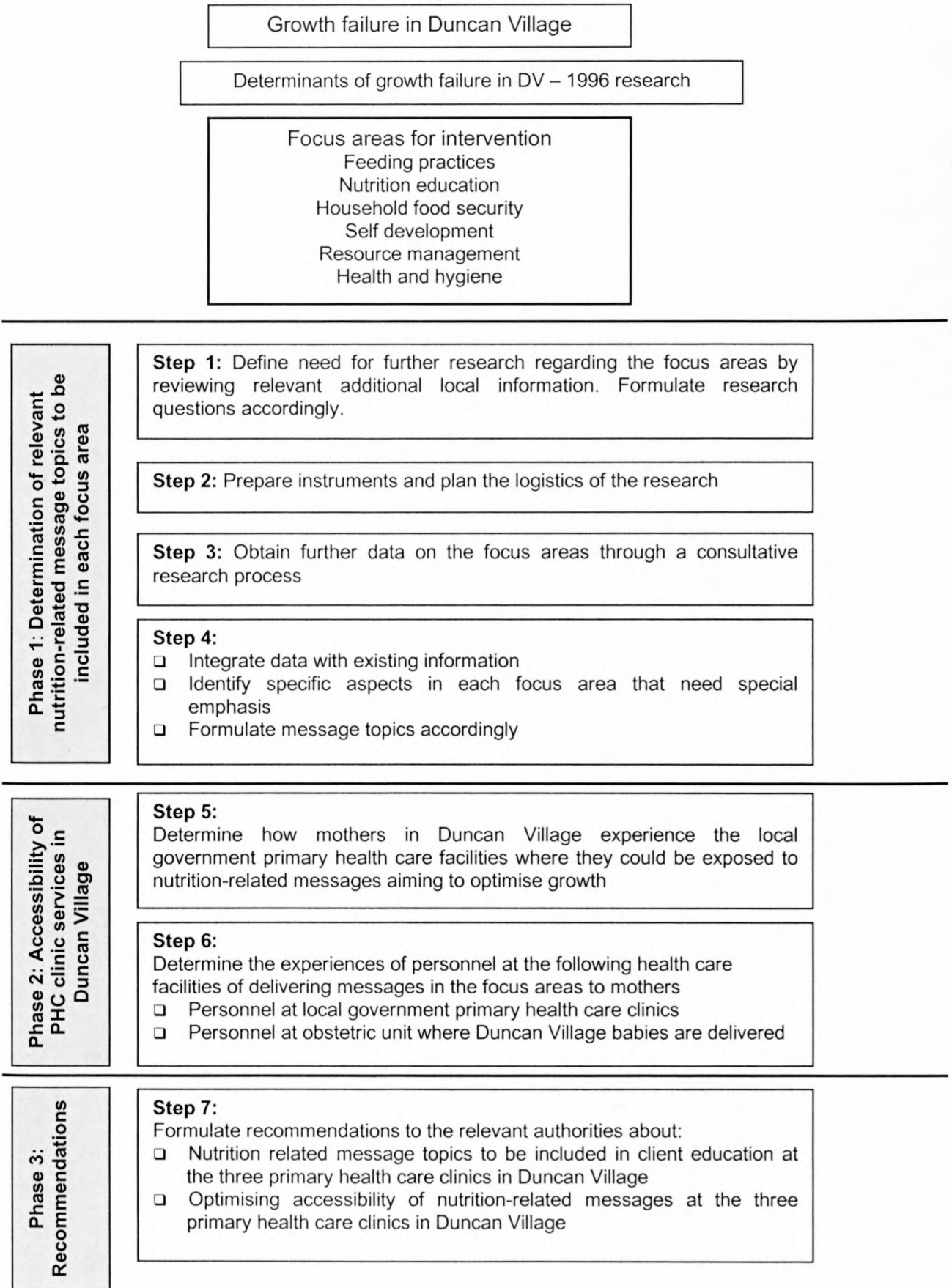


Figure 1.2: Research framework

5 Conceptualisation

Concepts are the agreed-on meanings that are assigned to terms, thereby facilitating communication, measurement and research (Babbie & Mouton, 2001:125). In rigorously structured research it is imperative that concepts be described in the beginning of any study design. It is however also important in less structured research to start with an initial set of anticipated meanings that can be refined during data collection and interpretation (Babbie & Mouton, 2001: 113). The following figure gives a visual representation of the most important concepts included in the present study³. Descriptions of the concepts in Figure 1.3 follow in Table 1.3.

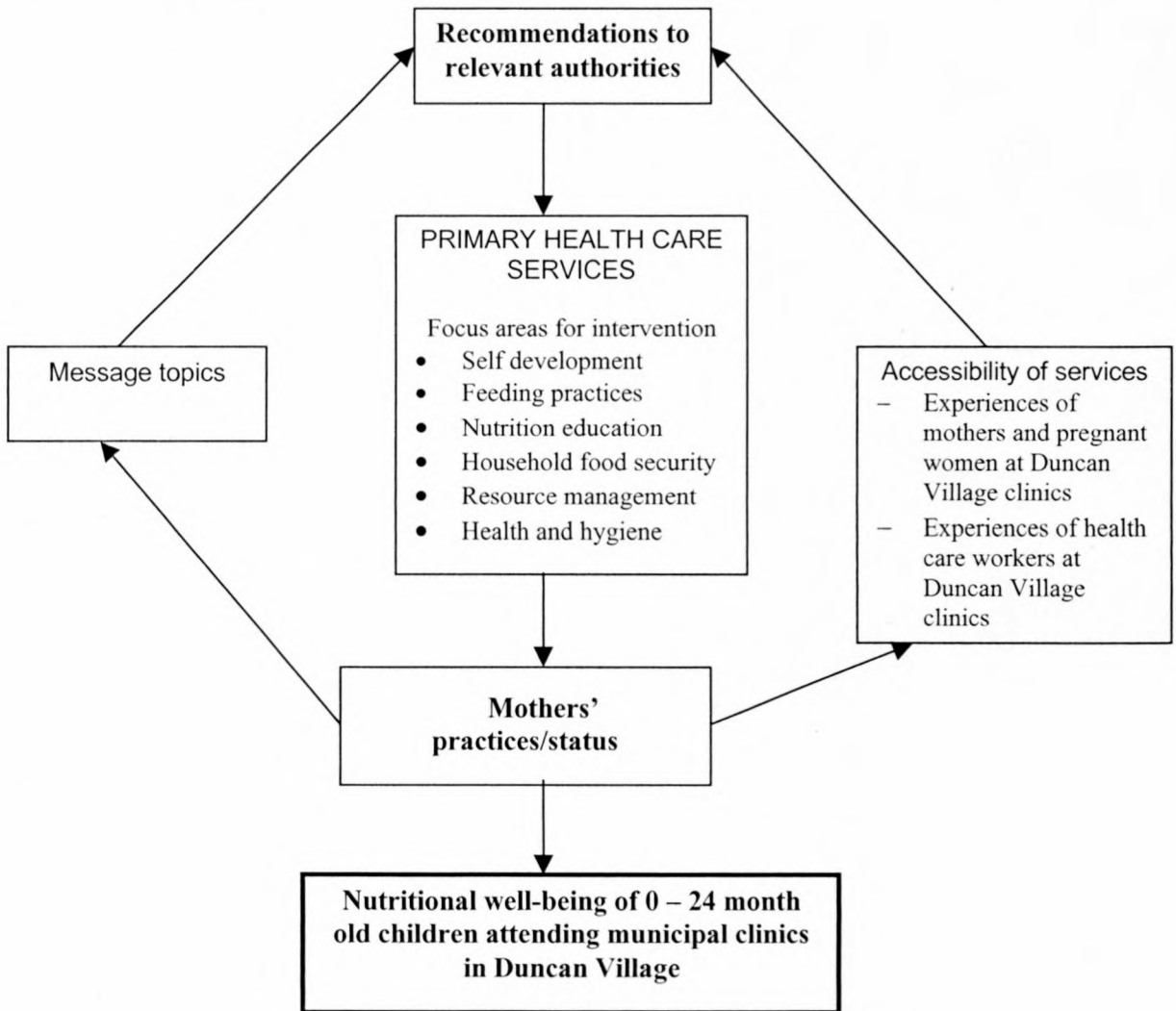


Figure 1.3: Conceptualisation of the Duncan Village Nutrition Project

³ The present study will be referred to as the Duncan Village Nutrition Project while “DVDH study” refers to the study that was completed in 1996 at the Duncan Village Day Hospital.

Table 1.3: Description of concepts

Concepts	Description
Focus areas for intervention	Aspects that were identified in previous research in the area, which should form the basis for initiatives to address the problem of growth failure in 12 to 24 month old children attending the Duncan Village Day Hospital (De Villiers, 1998).
Mothers' practices/status	The circumstances of the mothers and their actual practices concerning the focus areas.
Nutritional well-being of children	This implies more than the absence of disease or nutrient deficiencies It is an optimum state that includes social, psychological, physical health and economic outcomes (Olsen, 1990:463). According to the WHO (2000: 3) nutritional well-being depends on four main factors food, care, health and environment.
Health care workers	Defined by the South African Department of Health in the national guidelines for breastfeeding as: "All staff working in health facilities or in co-operation with such facilities, whether professional or non-professional, employed by an institution or in private practice, paid or unpaid." (DoH, 2000: 9). In this study it refers to (1) registered nurses at the clinics (2) community health workers at the clinics (3) registered nurses and enrolled nurses at the obstetric unit where Duncan Village mothers give birth, henceforth referred to as "health care workers" or "health workers". Where applicable the specific category of health care worker is referred to.
Health care facilities	Public Health Facilities refer to the following types of facilities: <ul style="list-style-type: none"> – Clinics: Fixed clinics, mobile clinics and satellite clinics – Community Health Centres – Hospitals: District hospitals, regional hospitals and specialised hospitals (Mahlalela, 2001:19). <p>First level primary care is given through the clinics. The Duncan Village community has access to three fixed primary health care clinics and two community health centres. No maternity services are available yet at these centres and babies are born in the obstetric unit of the nearby specialised hospital. For the purpose of this study only the first level of primary care was included with the exception of participation by the health workers at the obstetric unit at the hospital. This was necessary because these workers would be the first nutrition access points for mothers who have not attended antenatal clinic.</p>
Accessibility of services	This refers to the <ul style="list-style-type: none"> – Factors influencing the decisions and ability of mothers and pregnant women to access services aimed at mothers attending primary healthcare clinics in Duncan Village – The availability of appropriate nutrition-related messages as part of services aimed at mothers attending the clinics in Duncan Village.
Experiences of the health care workers	This refers to the experiences they have with the mothers at the clinic and the organisational aspects of their work with specific reference to providing nutrition-related information to mothers.
Experiences of the mothers	This refers to the perceptions and feelings of mothers' and pregnant women and the experiences they have of clinic services. It includes the difficulties they have in accessing the service.

(continued on the next page)

Concepts	Description
Message topics	According to the Food and Agricultural Organization of the United Nations (Andrien, 1994: 51) a “message” is the formulation of an idea or concept to be transmitted to a specific population”. Message topics therefore refer to topics that should be included in an intervention programme aiming at the improvement of the nutritional well-being of the target population but for which specific content have yet to be formulated

6 Outline of the dissertation

An overview of the literature is given in Chapter 2. A general discussion of the methodology used follows in Chapter 3. Phase 1 of the research, namely the consolidation of knowledge around the data obtained in previous research concerning the focus areas is reported and the findings are discussed in Chapter 4. Chapter 5 reports on and discusses Phase 2 of the research that was concerned with the accessibility of services at the PHC clinics in Duncan Village. These services include nutrition-related education. The step-by-step methodologies for these two phases are described in the chapter dealing with that particular phase. For continuity each of these chapters also include an introduction in which the relevant section of the research framework and the objectives are repeated. Recommendations to the relevant authorities will follow in Chapter 6. The literature cited in all six chapters is listed in Chapter 7.

Chapter 2: Review of the Literature

The literature review has three main aims: First to examine issues related to the nutritional well-being of children, emphasising developmental aspects and the particular problems facing the urban child. Second to discuss current efforts to achieve nutritional well-being of all children. Here two aspects receive attention: nutrition as part of an integrated approach to enhance child survival, growth and development and the role of primary health care in providing the nutrition component of this approach. Last the accessibility of health education in routine health services is discussed. An assumption is made that many of the accessibility issues will be the same for nutrition related education as it forms an integral part of health education.

1 The nutritional well-being of young children

1.1 Developmental aspects of nutritional well-being

According to the WHO, nutrition is a fundamental pillar of human life, health and development across the entire life span. “Through all the stages of life proper food and nutrition are essential for survival, physical growth, mental development, performance, productivity, health and well-being. It is therefore an essential foundation for human and national development (WHO, 2000)”. Although proper food and nutrition is essential throughout the life cycle, nutrition is of special importance in the very early stages (Jonsson, 1997).

A model proposed by Pollitt (2000: S3) provides a conceptual framework for the multiple relationships among growth and developmental domains that are presumably affected by undernutrition. In the model it is proposed that dietary intake and morbidity have the potential to influence developmental variables such as physical growth, motor development, motor activity, emotional regulation, exploration, caregiver behaviour and cognitive outcomes either directly or indirectly. The model furthermore implies that the earlier the onset and the longer the duration of undernutrition, the greater the probabilities are that internal and external mechanisms could be activated that deviate the trajectory of intellectual development (Pollitt 2000: S8). The model therefore provides a strong motivation for early intervention if nutritional well being is to be achieved in vulnerable populations.

Evidence to show the importance of prenatal intervention is found in the “Barker hypothesis”. The “foetal origins of adult disease” hypothesis originated in the 1980s when Professor David Barker of the University of Southampton noted a link between low birth-weight and the incidence of cardiovascular disease among middle-aged men and women born in the United Kingdom (ACC/SCN, 2000). The ACC/SCN (2000) uses the following quotation from Barker to illustrate the hypothesis: “Genes provide a general recipe for making a human being, but the human being is determined by the ingredients provided by the mother”. The

hypothesis posits that maternal dietary imbalances at critical periods of development *in utero* can trigger “an adaptive redistribution of foetal resources, including growth retardation” (ACC/SCN, 2000: 6). Such adaptation can affect the foetal structure and metabolism in such a way that the individual is predisposed to cardiovascular and endocrine disease in later life. According to the authors of the ACC/SCN report, the foetal origins of disease provide strong justification for “prioritising” nutrition of girls and women in interventions.

This is also supported by Misra, Guyer and Allston (2003: 72) who advocate care for girls and women throughout their reproductive life. These authors argue that perinatal outcomes are influenced by risk factors that occur before or between pregnancies, for example poor nutrition and infections. However antenatal care is of necessity limited to pregnancy and cannot address women’s health outside that time. Misra *et al.* (2003:72) suggest that it is necessary to link a broad “array of health care providers” to eventually improve pregnancy outcomes. While these authors give no suggestion on how this can be achieved in disadvantaged communities they do suggest that adolescents may be a critical group to target, as there is growing evidence that healthy behaviour adopted in adolescence continues at least into young adulthood.

To address this issue Baker, Martin and Piwoz (1996: 18) recommended a life-cycle approach that will ensure well-being of both mother and child. The recommendations were made with specific reference to African women and emphasised adolescence as an “entry point” for intervention.

The importance of a life-cycle approach was re-affirmed by a 2002 workshop on “Nutrition as a preventive strategy against adverse pregnancy outcomes”. It was reported that modest changes to maternal diet, from very early in pregnancy, or even in the pre-conceptual period, can have a marked effect on the ability of the foetus and new-born to withstand other infective or physical environmental stresses. Effective interventions are therefore likely to be required much earlier than previously thought, definitely before mid-pregnancy and for some interventions even before conception (Jackson, Bhutta & Lumbiganon, 2003: 1590S).

Taking a life cycle approach to nutritional well-being therefore moves beyond child survival towards a broader and longer perspective that aims at optimal physical and psychological development, immediately after birth and through childhood, adolescence and into adulthood (WHO, 2002a:8, Table 2.1). According to the WHO the life cycle approach reflects the principle that support provided to children will affect their immediate well-being as well as have an impact on health and development in later years. “The benefits of healthy development, but also any damage inflicted during the formative years of childhood and adolescence, accrue to continue through later generations (WHO, 2002a:8)”.

Table 2.1: Life cycle approach to nutrition: Developmental phases from birth to 19 years (WHO, 2002a:8).

Phase	Outcome	Objectives for intervention
Before and around birth	A health baby is born <i>(Babies are wanted children, have been delivered safely, have adequate birth weight and are well developed)</i>	<ul style="list-style-type: none"> – Well-nourished and healthy mother – Safe pregnancy and childbirth with skilled attendant and management of complications – Special care for new-born infants born too small and/or with complications – Exclusive breastfeeding – Bonding with primary caregiver
The first year of life	Survival through the most vulnerable period <i>(Children have survived and have grown adequately, are in good health and are well nourished)</i>	<ul style="list-style-type: none"> – Exclusive breastfeeding for 6 months – Appropriate complementary feeding at the end of 6 months (with continued breastfeeding) – Stimulation through communication and play – Full immunisation – Prevention, early recognition and timely management of main communicable diseases
Early childhood (up to age 5 years)	Ready to enter school <i>(Children have grown adequately, are in good health, well nourished and socially developed, thus ready to start school)</i>	<ul style="list-style-type: none"> – Adequate varied diets with sufficient micro-nutrients – Prevention, early recognition and timely management of main communicable diseases – Access to schooling
Late childhood (up to age 10 years)	Entering puberty <i>(Children are healthy and are physically, mentally and socially prepared to enter puberty)</i>	<ul style="list-style-type: none"> – Promotion of healthy lifestyles – Prevention, early recognition and management of infections, parasite infestation and injuries – Universal school enrolment
Adolescence (up to age 19 years)	A healthy adolescent <i>(Adolescents are free from illness, are able to adopt healthy behaviours and to resist risky behaviours and are prepared to enter adulthood)</i>	<ul style="list-style-type: none"> – Promotion of healthy development and lifestyles and prevention of health risk behaviours – Access to appropriate adolescent friendly health services – Opportunities to continue education
Across the life span	Living in a safe and supportive environment	<ul style="list-style-type: none"> – Safe home and community environment with clean indoor air, access to safe water and sanitation and effective waste management – Protection from abuse, neglect, exploitation and violence

1.2 Nutritional well-being and children's rights

The rights of children is a theme that is becoming increasingly important in South Africa. The following declaration of former president Nelson Mandela is often quoted in this regard: "Children are the major repository of South Africa's potential human capital for the future. The fact that children are the workers, scientists, parents, leaders and civil society participants of tomorrow means that their survival, health, nutrition and educational progress are key issues for reconstruction and development today. However

meeting the developmental needs of children is more than a developmental issue. It is also a question of Rights – the moral obligation of society to its children.”(Nelson Mandela, May 1996, cited in De La Barra, 1998).

Proof of the emphasis placed on children’s rights in relation to nutrition and health in South Africa is found in the inclusion of a section on children’s rights in the training manual of the community component of the Integrated Management of Childhood Illness Strategy (IMCI) and the accompanying “Family Booklet for Child Health” (Gibson & Kerry 2001:14). All health workers involved in the strategy (to be discussed in section 2.2.2) are expected to be fully aware of the rights of the child. Further proof of this emphasis is evident from the inclusion of a legal, policy and treaty framework in the policy guidelines for youth and adolescent health of the National Department of Health (DoH, 2001:10).

Sections 27 and 28 of the South African constitution specifically protect the nutrition-related rights of children. South Africa is furthermore a signatory of the Convention of the Rights of the Child that was developed and first adopted in November 1989 by the United Nation’s General Assembly (Gibson & Kerry, 2001: 14). Article 24 of the convention states that “parties shall ensure that parents are informed of and are supported in the use of basic knowledge of child health and nutrition, the advantage of breastfeeding, hygiene and environmental sanitation.” Since becoming a signatory to the convention South Africa has developed the National Programme of Action (NPA) for children. The NPA is the instrument by which South Africa’s commitment to children in terms of the Convention is expressed. It ensures that all plans for children “converge in the framework provided by the convention, the goals of the 1990 World Summit on Children and the Reconstruction and Development Programme” (DoH, 2001:11).

1.3 Nutritional well-being of urban children in the developing world

1.3.1 Urbanisation: background

In a discussion on urban health as a new discipline Vlahov and Galea (2003: 1091) quote statistics from the United Nations Population Division (UNDP) when they state that city living is a reality for many and is rapidly becoming so for most of the world’s population. These statistics show that more than half the world’s population will be living in urban areas before the end of this decade and nearly two-thirds will live in urban areas within 30 years. Currently around one billion children, close to half of all the children in the world, live in cities. Of these at least 80 per cent are in Africa, Asia and Latin America (UNICEF, 2002c). By the year 2025 six out of every 10 children will live in urban areas (Chelala, 2000: 31).

The majority of these children will live in “settlements” (Wang’ombe 1995: 857). According to Wang’ombe (1995:857) these urban settlements, inhabited by the urban poor are often described as peri-urban settlements, slums, temporary settlements and illegal settlements depending on the characteristic that the

presenter may need to describe. While there are many of these informal urban settlements in South Africa (WHO, 2002d: 30), Duncan Village, although described by Bank *et al.* (1996:10) as a “deeply impoverished urban slum” differs in some regards, mainly because of its location and history.

Duncan Village is one of a small group of historic townships in South Africa (such as Cato Manor in Durban and Alexandra in Johannesburg), which are located close to the central business district of the city (Bank *et al.*, 1996: 8). In terms of the previous government’s apartheid’s policy of forced removals Duncan Village was the target of massive forced removals between 1964 and 1979. Fifteen thousand families were moved amid protest to nearby Mdantsane, a vast township inside the borders of the “Ciskei homeland”. It was only in 1984 that this programme was eventually called off and the 8000 families who were left were accommodated mainly in one, two and four-roomed municipal houses. In 1985/86 the residents of Duncan Village took control of the township and set up their own residents’ structure. One of the first decisions taken by the Duncan Village Residents Association (DVRA) was to denounce the policy of forced removal to the Ciskei and to open the township for new settlement. It was decided that new opportunities should be created for Africans who had been systematically excluded from the city to live close to their work. Consequently dozens of informal settlements were created in Duncan Village after 1985. DVRA also permitted the erection of backyard shacks in the yards of formal houses. This has resulted in massive residential densification (Bank *et al.*, 1996: 8-12). According to the Buffalo city Municipality (Swart, 2003: Personal communication) there were 17 500 households in Duncan Village in 1998 with 13 304 of these households accommodated in informal houses.

In the 1990s after years of civil unrest Duncan Village was left with a three-decade backlog in essential maintenance and upgrading. People however continued to flow into the area. The result was that the area was transformed back into the urban slum that it was before the forced removals (Bank *et al.*, 1996: 18). Formal housing were now “engulfed in a sea of backyard and free-standing shacks”. Although infrastructural developments have taken place the current profile of Duncan Village as provided by the Buffalo City Municipality and discussed in Chapter 1 has not changed much since Bank *et al.* (1996) and Wild (1993) described the “appalling” housing and environmental conditions and inadequate services in the township.

1.3.2 Urbanisation and health

There is evidence that poverty and malnutrition is increasing along with urbanisation in the developing world. Although the magnitude of change is not always large and varies from country to country, experience suggests that there is a consistent shift in the locus of poverty and malnutrition from rural to urban areas (Garrett & Ruel, 1999:12).

Urban living has both positive and negative effects on health with some researchers highlighting the benefits of access to health services, information, education, safe drinking water and cash incomes (McDade & Adair,

2001: 55). Others note that with high rates of extreme poverty the benefits of urban environments are limited. Health problems are being exacerbated by overcrowding, inadequate water services, waste disposal and the reliance on cash for food (McDade & Adair, 2001: 56). Evidence for the latter viewpoint is found in the growing disparities in the health of urban residents as compared with suburban and rural populations. This is in spite of public health interventions often being implemented primarily in urban areas and the availability of more specialised health care in cities (Vlahov & Galea, 2003: 1091). The negative impact of urbanisation on health is especially evident in developing countries because of the extremely high rate at which urbanisation occurs in these countries (McDade & Adair, 2001: 55). The seriousness of the situation is highlighted by Wang'ombe (1995: 857) who describes it as a potential public health crisis in Sub-Saharan countries.

The human health issues that urban environments have been connected to, include a wide range of effects: infant mortality, poor nutrition, rates of chronic degenerative disease and psychopathology (MacDade & Adair, 2001: 55). Emerging infections like HIV/AIDS and re-emerging infections such as cholera pose major threats to rapidly urbanising communities with infectious diseases being the largest contributors to morbidity and mortality in urban areas throughout the 20th century (Louria, 2000: 581, Vlahov & Galea, 2003: 1091). However at the same time there was also a rise in the prevalence of chronic diseases (Vlahov & Galea, 2003: 1091).

The health effects of urbanisation could be particularly devastating on economically disadvantaged urban children as they are often exposed on a daily basis to the main contributing factors to ill health in urban environments (de la Barra, 1998: 46). Many of the social and environmental factors that influence health in an urban environment are interrelated and Chelala (2000: 6) in discussing this environmental impact on child health defines environment as “the physical, chemical, biological, social, cultural and economic conditions with which human beings interact”.

Human beings are vulnerable to environmental risks from the moment of conception, during birth and their first years of life, childhood, adolescence and ultimately adulthood. Children are however especially vulnerable to their surrounding environment. This is due to many factors including the fragility of their immune systems, the fact that early childhood is the critical period of mental and physical growth and their “almost total dependence on adults” (Chelala, 2000: 6).

Health disparity studies in two cities in developing countries have shown that children from the poorest areas of the cities have a much higher risk of dying of infectious diseases and respiratory conditions than their wealthier counterparts (De la Barra, 1998: 46–59). The critical role of the environment in influencing health therefore remains an important aspect of public health even as more attention is turning to the investigation of the genetic and prenatal origins of many adult diseases (McDade & Adair, 2001: 67).

Many children living in cities in developing countries find themselves in impoverished environments characterised not only by material poverty but also by social, cultural and environmental deprivation (Chelala, 2000: 31). These children may become disadvantaged in the long term due not only to material poverty but also to insecurity, anxiety and the inability of the family to interact socially. According to the WHO (1998: 14) poor social and economic circumstances present the greatest challenge to a child's growth and may jeopardise the child's growth and social and educational future.

Urbanisation results in more families depending on informal or intermittent employment with uncertain incomes. This uncertainty is stressful for both the individual and the household and it has been shown by numerous studies that unemployed people and their families suffer an increased risk for premature death (WHO, 1998: 18, WHO, 2002a: 7). According to Chelala (2000: 7) low income groups are often not able to protect themselves against adverse environmental conditions and "it is they who suffer the harshest consequences". These people are not able to provide their children with a safe and healthy environment that at the very least includes safe drinking water, clean air, basic sanitation, sufficient food uncontaminated food, adequate housing education and recreation. Booth, Martin and Lankester (2001: 184) describe the most vulnerable of these households as the "poorest of the poor" and say that they "live on the margins of survival. They can just manage to live and work as long as no misfortune strikes them. If it does, they may no longer be able to provide themselves with food, water and shelter. The misfortune may be something that happens to a family member, such as serious illness or the loss of a job, or it may be a community crisis such as a fire or flood".

A lack of social cohesion and support could also contribute to ill health. According to the WHO (2002a: 7) traditional family and community support structures are eroded in rapidly urbanising communities. This could threaten the nutritional well-being of children living in these circumstances. According to Booth *et al.* (2001: 99) women living in slums are more likely to be abandoned, separated or divorced and therefore to be living in a nuclear family than an extended family. This means that there is less help available to care for children and to pass on practical skills and advice on issues such as breastfeeding, weaning and how to bring up children. This is illustrated by research on the impact of urbanisation on black pre-school children in the Eastern Cape Province of South Africa where it was found that the changing patterns of lifestyles in towns and peri-urban areas brought about a reduction in the practice of breastfeeding without an appropriate substitute (Byarugaba, 1991: 448). Similar observations were made in other parts of the world (Gracey, 2000: 30).

Poor urban children are more exposed to accidents and violence than other children (Chelala, 2000:23 –24). According to De la Barra (1998: 46–59) some socially and economically disadvantaged families may maintain the family unit intact despite adverse circumstances. For others the stress is too great and frustration may result in aggression. Aggression can be manifested as self-aggression, such as alcohol or drug abuse, or as aggression against others, such as street violence, delinquency, family violence and child abandonment.

Many people in poor urban areas are dependent on alcohol, illicit drugs or smoking. These destructive habits are closely associated with markers of social and economic disadvantage. It is a response to social breakdown but is also an important factor in worsening already existing health inequalities and has a devastating effect on the lives of children (WHO, 1998: 24, De la Barra, 1998: 47).

It is evident that child health is threatened by multiple factors in an impoverished urban environment. Diseases caused by micro-organisms or malnutrition caused by poverty or ignorance are further complicated by psychosocial stress and other environmental factors. The key challenge to public health is how to respond to the multiple causes of disease in these circumstances (Chelala, 2000: 31).

1.3.3 Addressing urban health problems

Addressing urban health problems has been on the international health and development agenda since the late 1980s (Few, Harpham & Atkinson, 2003:45). The perception that actions to protect and promote urban health pose a different set of constraints and opportunities from those of rural health care induced Few *et al.* (2003) to assess two Sub-Saharan projects that aimed to strengthen urban health care. The authors found that although it was thought that there would be a tendency in urban areas to bypass lower tier facilities and overload the outpatients services of city hospitals, urban populations were quite prepared to utilise the primary health tier when improvements were made to the facilities. The communities in these studies also showed no special 'urban' capacity for collective action on health care. A widely expressed but unsatisfied need for greater integration of sectors was also found, especially in order to address severe environmental health issues.

The last point is acknowledged in the Healthy Cities Programme of the WHO that aims to address urban health problems by raising awareness that the health sector alone cannot bring about changes in the health status of a city. Any actions taken in the physical, socio-cultural or economic environments to improve health should be taken by all those whose activities impinge on health (Seager and Senkoro, 2001: 1). According to Seager and Senkoro (2001:1), a "healthy city" is not one where the people have achieved a particular level of health but one that is conscious of health and tries to improve it through commitment to health matters by promoting primary health care, addressing communicable diseases, protecting vulnerable groups and dealing with urban health and environmental hazards. The Healthy City Programme is a reflection of the shift in urban health research. According to Harpham (2002: 11) a new model of urban health is being developed in which there is a shift in the focus on the range of problems from infectious diseases and malnutrition to acute and chronic problems (e.g. mental health) and re-emerging problems like tuberculosis and lifestyle diseases. The life cycle approach (also see Table 2.1) in which various efforts come together to achieve optimum nutritional well-being, especially of children and adolescents (WHO, 2002a: 9) fits well into the vision of a healthy city.

Local leaders, who represent governments and civil society, can play an important role in mobilising action for the well-being of children. An increasing number of local authorities and planners of the world's cities are striving to implement child rights at the local level, where children live and where it can make a difference, and also to make urban environments healthier for children (UNICEF, 2002c: 48). The Convention on the Rights of the Child that has been ratified by almost all countries of the world, provides a framework for local leaders to use in creating child-friendly cities that nurture the lives, growth and development of children and young people (UNICEF, 2001: 6).

According to McDade and Adair (2001: 69) the specific components of urbanisation i.e. changes in infrastructure, population, health care, education, sanitation, transportation and affluence are likely to have comparable implications for human health across populations but the pace of changes and the specific combination of components that change may be unique to a given population. Addressing urban health may therefore differ from one community to another depending on the given context. This emphasises the importance of involvement of sectors on the local level.

A challenge facing local authorities is to integrate child-oriented programming and policy-making into local governance structures (UNICEF, 2001: 6). According to UNICEF (2001:2) a real difference can be made when efforts to integrate these programs into the structures are focused on achieving three key outcomes that have the greatest potential for change and impact on the lives of children and adolescents. These are the best possible start for children in their early years; a quality basic education for every child and support and guidance for adolescents in navigating the sensitive transition to adulthood.

2 Working towards the nutritional well-being of children

2.1 Nutrition and Primary Health Care

2.1.1 General overview of primary health care

The concept of primary health care developed in the 1940s and 1950s, when some governments had to rationalise their highly technical approach to health care and provide broader coverage of basic services that could have a positive impact on health (Dennill, Kirk and Swanepoel, 1999:1).

Health care throughout the world was in turmoil by the 1970s. Health systems were fragmented and the trend was to treat a few ill people at great financial cost while promotive and basic health care for the masses was neglected (Dennill *et al.*, 1999:2). These in-equalities existed in both developed and developing countries. An international sense of inadequate health care led to the International Conference on Primary Health Care, jointly sponsored by the WHO and UNICEF. The conference was held at Alma-Ata and attended by 134 nations as well as various governmental and non-governmental organisations. According to Dennill *et al.*

(1999:2) the primary health philosophy introduced at the conference had an immediate effect on the global strategies of the WHO and has “dominated both its policies and programmes ever since”.

The concept of primary health care advocates an approach based on principles that allow people to receive the care that enables them to lead socially and economically productive lives (Dennill *et al.*, 1999:2). The following definition of the concept is quoted from a WHO document by Dennill *et al.* (1999: 2): “Primary health care is essential care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country’s health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and the community with the national health system, bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care service.”

At the conclusion of the Alma-Ata conference a declaration of intent was drawn up. The declaration brought the hope of achieving universally available health care and “health for all by the year 2000” (Dennill, 1999:2-4). The essential care aspects of primary health care consist of eight basic elements and are listed under Section VII of the “Declaration of Alma-Ata”. Any primary health care programme should at least include these eight elements listed below:

- Education about prevailing health problems and methods of preventing and controlling them
- The promotion of food supply and proper nutrition
- An adequate supply of safe water and basic sanitation
- Maternal and child health care, including family planning and care of high risk groups
- Immunisation against the major infectious diseases
- Prevention and control of locally endemic diseases
- Appropriate treatment of common diseases and injuries
- The provision of essential drugs

It is clear that the delivery of nutritional service should form an essential part of such programmes.

Primary health care, because it evolves from the economic, socio-cultural and political characteristics of a community and is based on the needs identified by that community, is the “dynamic product of the community it serves”(Dennill *et al.*, 1999: 3). Primary health care therefore does not only refer to the development of health services but also to a comprehensive approach that is a combination of task-orientated basic health services and the process of community development. In many instances since Alma-Ata, countries have chosen to make use of selective, instead of the comprehensive approach to primary

health care. Selective primary health care is concerned with medical interventions or effective technologies that can be implemented anywhere and are aimed at improving the health status of many individuals at a low cost (Dennill *et al.*, 1999: 17). Examples of selective interventions are UNICEF's GOBI-FFF campaign and the WHO's Expanded Programme on Immunisation (EPI) (Dennill *et al.*, 1999: 17).

According to Dennill *et al.* (1999: 25) the substantial gains in health and attaining health care for all over the decades since Alma-Ata have reaffirmed the validity of the declaration "for all countries, at all stages of development".

2.1.2 Primary Health Care in South Africa

2.1.2.1 Development of Primary Health Care in South Africa

Primary health care as part of the national health system in South Africa evolved in an "unplanned and haphazard" manner (Dennill, 1999: 34). During the colonial period both the Boer republics and the British administration influenced the health system. This fragmentation escalated after unification with the forming of the four provinces and continued until the apartheid system eventually left a health service that was characterised by massive fragmentation between curative and preventative services, between races and multiple vertical services (Dennill, 1999: 34; Toomey, 2000:9).

Health reforms started in the 1970s because of the economic recession. A National Health Plan was formulated in 1986 with the objective of meeting the health needs of all the inhabitants of South Africa but it was only in 1997 with the publication of the White Paper for the Transformation of the Health System of South Africa by the new government, that major health reforms were initiated (Dennill, 1999: 35, 174).

One of the aims of the transformation process is that primary health care should be delivered through a district health system. Dennill *et al.* (1999: 190) quote the following description from the WHO concerning district health systems: "A district health system based on primary health care, is a more or less self-contained segment of the national health system. It comprises first and foremost a well defined population, living within a clearly delineated administrative and geographically area, whether urban or rural...A district health system therefore, consists of a large variety of interrelated elements that contribute to health in homes, schools, work places and communities, through the health and other related sectors...".

The Department of Health envisages the creation of 53 health districts, based on the boundaries of the six metropolitan councils and the 47 district municipalities. According to Haynes and Hall (2002: 85) the district health system is characterised by:

- Provision of comprehensive district health services (i.e. the PHC package as well as district hospital services)

- A district health plan that is part of the Local Government district Integrated Development Plan (IDP)
- A structure and processes to ensure co-operative governance, joint planning and “seamless” service provision
- Joint funding from the municipalities and the provinces
- A single health budget with clear components
- A single health management structure
- All staff being part of a single public service; and
- All staff ultimately employed by the district (or metro) municipality

Although implementation of the district health system has started there are still many challenges to be faced before the transformation process will be completed (Haynes & Hall, 2002: 100).

2.1.2.2 Primary Health Care in the Eastern Cape Province

The stated mission of the Provincial Department of Health of the Eastern Cape is to “promote and monitor the health of the people in the province and develop and support a caring and effective provincial health system, through the establishment of a province-wide district health system based on the principles of primary health care” (Toomey, 2000: 12).

Consequently work is underway in the Eastern Cape Province to achieve functional integration of services i.e. provide integrated primary health care services to the client in the “midst of multiple health authority structures” (Toomey, 2000:13). A checklist is being used in the Eastern Cape at each level of care to ensure a comprehensive integrated approach. The aim is to eliminate or minimise the promotive/preventive-curative divide between services from different health authority structures (EQUITY Project, 1999, Mahlalela, 2001:53). The checklist emphasises nine services as basic services and as indicators of integration at the primary health care clinics. These nine services include ante natal services, family planning, nutrition, sexually transmitted infections, child curative, immunisation, adult curative, chronic care and tuberculosis treatment (Mahlalela, 2001:53).

A brief overview of the primary health care (PHC) situation in the Eastern Cape from 1997 to 2000 concerning aspects that could influence nutrition promotion is presented in Table 2.2 (Mahlalela, 2001). Where the necessary data is available specific reference is made to the Amatole district (formerly region C) where Duncan Village is located.

Table 2.2: Key findings on nutrition-related PHC services in the Eastern Cape Province (Mahlalela, 2001).

Aspect of PHC	Key findings (A = Amatole district otherwise provincial)
Health Service & PHC management issues	<ul style="list-style-type: none"> • 200 fixed clinics and 34 mobile clinics, 8200 clients per clinic (A) • 24 patients per nurse per day (A)
Clinic infrastructure and equipment	<ul style="list-style-type: none"> • 98% of clinics had infant scales
Drug management	<ul style="list-style-type: none"> • Lack of drugs a common complaint of clients and staff in 1997 but 2000 survey showed that the situation had improved
Basic PHC Services towards a core package	<ul style="list-style-type: none"> • 55% of clinics provided a full package of integrated PHC services that include 9 basic services 5 days a week (lower than any other district in the province) (A) • 90% of clinics indicated that they provided a “nutrition” service 5 days a week
Maternal, child and women’s health services	<ul style="list-style-type: none"> • The four services of antenatal care, family planning, immunisation and treatment of childhood illnesses are available 5 days a week in 93% of clinics • Poor growth and severe malnutrition are problems that persist across the province • Very few clinic staff had received training on “Integrated Management of Childhood Illness” (IMCI) • 66% of nurses were observed to have weighed children • 20% of nurses were observed to provide advise on nutrition-related to the growth curve • 73% children under 12 months breastfed (A) • Only 10% of children were exclusively breastfed to 3 months • An average 4.1 antenatal clinic visits per client was recorded(A)
HIV/AIDS	<ul style="list-style-type: none"> • HIV prevalence continues to rise and reached 20.2% in 2000
Community participation	<ul style="list-style-type: none"> • 75% of clinics have functioning community health committees
Equity	<ul style="list-style-type: none"> • Towards the end of 1999 the Health Systems Trust published the “Equity Gauge Report” identifying a number of indicators to highlight the status of health and health care in South Africa. The Eastern Cape Province was ranked the worst of all nine provinces

2.1.2.3 Nutrition intervention in primary health care facilities in South Africa

An Integrated Nutrition Strategy for South Africa was adopted in the previously mentioned “White Paper for the Transformation of the Health System in South Africa” and subsequently developed into the Integrated Nutrition Programme (INP) for South Africa (Steyn & Labadarios, 2003: 328). The INP follows the Triple A (assessment, analysis and action) process to plan and implement relevant actions. It was envisioned that this approach would encourage and support integrated, sustainable and community driven programmes that would be different from the fragmented and mostly food-based approaches of the past (Steyn & Labadarios,

2003: 328).

The INP emphasises seven focus areas. A brief overview of these areas as it contributes to nutritional well-being of young children with specific reference to social and economically disadvantaged urban children is presented in Table 2.3. The information was extracted from secondary information presented in the 2002 South African Health Review.

Table 2.3: Focus areas of INP and contribution to nutritional well-being of young children

Focus area of INP	Examples of contribution to nutritional well-being of young children	Specific benefits to young urban children
Contribution to household food security	<ul style="list-style-type: none"> – Technical support and skills is given to income generating projects of the Integrated Sustainable Rural Development Strategy (ISRDS) – School feeding 	–
Disease-specific nutrition support, treatment and counselling	<ul style="list-style-type: none"> – Vitamin A supplementation – Nutrition supplementation – Inpatient management of acute severe Protein Energy malnutrition (PEM) – Integrated management of Childhood Illnesses (IMCI) 	✓
Growth monitoring and promotion	<ul style="list-style-type: none"> – Training of health workers in growth promotion and monitoring (including the Road to Health Chart) 	✓
Nutrition promotion, education and advocacy	<ul style="list-style-type: none"> – A series of policy documents aimed at promoting nutrition in all sectors have been developed 	✓
Promotion, protection and support of breastfeeding	<ul style="list-style-type: none"> – Implementing the International code of Marketing Breast Milk Substitutes and Baby Friendly Hospital Initiative (BFHI) – Training of health professionals in lactation management and assessors for the BFHI 	✓
Micronutrients malnutrition control	<ul style="list-style-type: none"> – Vitamin A supplementation programme – Fortification of food – Iodation of salt 	✓
Food Service management	–	–

Although the Department of Health states that the INP functions within the primary health care system (DoH, 1999) and the delivery of nutrition services is one of the nine basic services to be delivered at primary health care clinic level, very little evidence is found of the availability of integrated nutrition services in the overview of primary health care in the Eastern Cape Province (Mahlalela *et al.*, 2001). Reference to a nutrition survey in one health district and the percentage of children who gained weight are all that is mentioned in the nutrition section of the Eastern Cape Primary Health Care report of Mahlalela *et al.*

(2001). Steyn and Labadarios (2003: 347) confirm this observation in the 2002 South African Health Review. According to these authors there are still “enormous challenges for improvement in the implementation” of the programmes of the INP. They recommend that policy implementation should focus on the lowest level of primary and secondary health care and that the necessary resources should be given to improve capacity at these levels “which could arguably, be considered as the main impediment to the successful implementation of its [Nutrition Directorate] programmes” (Steyn & Labadarios, 2003: 347).

2.2 Integrated approach to child health in developing countries

2.2.1 The rationale for nutrition in an integrated approach

At the end of the World summit for Health and Sustainable Development in 2002, the Johannesburg Declaration on Health and Sustainable Development (WHO, 2002c: 12) stated: “Finally we emphasise that many of the key determinants of health and disease – as well as the solution – lie outside the direct control of the health sector, in sectors concerned with environment, water and sanitation, agriculture, education, finance, employment, industry, mining, urban and rural livelihoods, trade, tourism, transport, energy and housing. We draw attention to the fact that health issues are frequently inadequately considered when development decisions are made. We reaffirm that addressing the underlying determinants of health is key to ensuring ecologically sustainable development and sustained health improvements in the long term, whilst further recognising that much progress has been made in forging closer links between health and other sectors”. To this effect the summit adopted resolution 9 that stated “in recognising the intersectoral nature of health problems and solutions, we call for all countries to adopt an intersectoral and integrated approach to local and national health and development plans, policies and interventions”

The important role of nutrition in an integrated approach to ensure well-being of not only children but across the life span is reflected in the centrality of nutrition in the mandate of the WHO (WHO, 2000: 3). The WHO vision for “Nutrition for Health and Development” is one of a world where people everywhere at every age enjoy a high level of nutritional well-being free from all forms of hunger and malnutrition. The vision rests amongst others on the recognition that hunger and malnutrition are rooted in poverty, deprivation and underdevelopment resulting from a lack of access to the basic requirements for nutritional well-being including safe food, care, health, education and a clean environment (WHO, 2000).

In May 2002 the World Health Assembly of WHO approved the “Global Strategy on Infant and Young Child Feeding” (UNICEF, 2003c). The strategy reflects an integrated approach that is rights-based, and focuses on lifecycle programming, recognition of gender needs, is supportive of the mother and family, and aims to improve early childhood survival, growth and development. It builds on existing approaches like the Baby Friendly Hospital Initiative, and provides a framework for “linking synergistically the contribution of multiple programme areas” (WHO, 2002b: 15). This need to link programmes is also expressed by UNICEF

in its call to countries to integrate policies and programmes that aim to address nutrition with other programmes that address the critical aspects of early childhood (UNICEF, 2003b).

The rationale for an integrated approach is very simply explained by Iyengar and Nair's (2000: 341) with an example of low birth weight (LBW) babies and malnutrition. According to these authors LBW is a major contributor to stunting. Pre-pregnancy weight and weight gain during pregnancy are directly linked to LBW and effective preventive measures are therefore crucial to address the problem at an early stage. Although nutrition awareness and education to consumption of different types of food may appear to be a logical solution, implementation of these messages are influenced and complicated by economic aspects such as buying power. Field oriented strategies to improve nutritional status of mothers and children could be implemented and bring the desired results, but in the absence of sustained buying power (household food security), "ultimately poverty overrides every strategy, however carefully planned" (Iyengar & Nair, 2000:341).

Some evidence for the positive impact of an integrated approach is evident from Thailand's implementation of a holistic approach in which nutrition, primary health care, food production and other basic social service were integrated in a national programme that has shown encouraging results in alleviating undernutrition and improving overall quality of life (Tontisirin & Bhattacharjee, 2001: 425).

Despite the importance attached to nutrition, most developing countries and development agencies still do not adequately recognise nutrition in their policies and strategies (Macdonald *et al.*, 2002: 2). An example is the situation in Tanzania where Kinabo and Msuya (2002: 66) maintain that "achievements" in the nutrition situation had been rather limited because of the inappropriate perception among "decision-makers and individuals alike" that nutrition needs to be addressed by the health and agricultural sector only.

The multiplicity of factors that contribute to malnutrition in poor countries often make it too complicated for these countries to address malnutrition other than by implementation of economic or social policies aimed at increasing food production and /or employment and wealth (Tomkins, 2000: 136). Few governments have shown sustained commitment to the reduction of mortality through specific programmes that focus on nutrition as a means of improving immunity, health, development and survival of children and their mothers (Tomkins, 2000: 137). Pellitier and Frongillo (2003:115) support the importance of this sustained commitment to integrating nutrition in national programs. These authors state that although selective child survival interventions in the 1980s have been responsible for saving many lives, child survival data show that there is a powerful argument for addressing general malnutrition in addition to selective health and nutrition interventions. As countries reach medium-to-low child mortality rates reductions in general malnutrition become progressively more important to achieve further reductions in mortality.

According to Macdonald *et al.* (2002:2) integrating nutrition into development strategies will help countries

to meet a wide range of goals that are crucial to accelerating development. According to these authors it is also quite “straightforward” to make pro-nutrition investments within a variety of sectors. “There are many pathways to undernutrition, and the baby that fails to grow properly has been let down by a potentially large set of actors and sectors. Correspondingly there are many opportunities within those sectors to effect improvements in nutrition” (Macdonald *et al.*, 2002:2).

2.2.2 Integration of interventions to ensure nutritional well-being of children

While the term “integrated approach” is used broadly in relation to integrating the efforts of various sectors to ensure nutritional well-being for all or to combat malnutrition, it is also used when referring to the integration of different health-related interventions to improve child well-being. According to Gillespie and Allan (ACC/SCN, 2001: 69) these integrated programmes generally involve a mix of the following interventions: growth monitoring and promotion; promotion of breastfeeding and appropriate complementary feeding; communications for behavioural change (nutrition education); supplementary feeding; health related services and micro-nutrient supplementation.

Most of these interventions can potentially affect the majority of the problems threatening the nutritional well-being of children. If these efforts are combined they are more likely to be efficient than separate interventions, because they are intended for the same population and make use of the same facilities. From an economic standpoint the marginal costs of integrated programmes are expected to be low, relative to impact (ACC/SCN, 2001: 71).

Evidence for the beneficial effect of approaches that integrate nutrition with other interventions comes from two small studies one in Bolivia, and one in Ghana. In Bolivia a cross-sectional study tested the hypotheses that participation in multi-sectoral development programmes results in improved health behaviour and health outcomes. Although no difference was found in health behaviour the results suggest that participating in all three programmes, health and nutrition, literacy and credit, exerted a significant protective effect against malnutrition (Gonzales, Dearden & Jiminez, 1999: 405). A programme in Ghana that combined addressing lack of access of women to financial service, with health education on how to care and feed their children also had significant effects on the nutritional status and health of one year old children (Kurz & Johnson-Welch, 2000:15). While many large-scale interventions have also been studied and found effective, very few of these evaluations have so far been done on the specific effect of the nutrition component in integrated programmes (ACC/SCN, 2001: 69).

According to the ACC/SCN (2001: 69) programmes that are regarded as “nutrition programmes” are broadly similar across countries and continents. These programmes often integrate two or more of the following interventions: growth monitoring and promotion; promotion of breastfeeding and complementary feeding, nutrition education; supplementary feeding; health related services (including the Integrated Management of

Childhood Illness [IMCI]), and micro-nutrient supplementation. Many nutrition programmes now also include psychosocial components.

The Integrated Management of Childhood Illnesses (IMCI) strategy is in itself an example of a combination of different interventions. Many sick children present with signs and symptoms related to more than one of the five illnesses that cause the majority of childhood deaths in the developing world (Tulloch, 1999: 16). These five illnesses, acute upper respiratory tract infections, diarrhoea, measles, malaria or malnutrition were previously addressed by separate interventions such as those for acute respiratory infections (ARI) or the expanded immunisation programme (EPI). Each of these programmes had its own procedures, training modules and courses (Walley, Wright & Hubley (2001: 169). In the early 1990’s several findings pointed to the need to move beyond single diseases and address the overall health of the child and the strategy known as IMCI was developed (Tulloch, 1999:16).

Key factors in the child’s immediate environment – nutrition, hygiene, and immunisations – are as important as medical treatment in improving health. The IMCI strategy focuses on treatment, but it also furnishes the opportunity to emphasise prevention of illness by providing education on the importance of immunisation, micro-nutrient supplementation, and improved nutrition (Figure 2.1). The latter focuses especially on oral rehydration therapy (ORT), breastfeeding and infant feeding. The aim of IMCI is to reduce childhood mortality and morbidity by improving family and community practices for the home management of illness; improving case management skills of health workers in the wider health system and strengthening the health system to deal better with child health issues. IMCI can therefore be seen as the “umbrella” through which all community health interventions can be delivered to the child (UNICEF, 2003a).

	WELL CHILDREN – HOME	ILL CHILDREN - HOME	
WELLNESS	<ul style="list-style-type: none"> • Immunisations • Nutrition/child feeding • Breastfeeding • Hygiene (Personal/Community) • Impregnated bednets 	<ul style="list-style-type: none"> • Recognition of illness • Appropriate care seeking • Home treatment (ORS) • Compliance with Rx regimens • CHW/TBA 	ILLNESS
	<ul style="list-style-type: none"> • Immunisations • Ante natal counselling • Perinatal monitoring • Growth promotion • MN Delivery (Vit A, Iodine, Iron/Folate) • Health promotion counselling 	<ul style="list-style-type: none"> • Dx/Rx by trained health worker • Availability of medicine • Anthelmintic Rx • Complementary feeding/breastfeeding • Sound logistic/procurement 	
	CHILDREN – FACILITY	ILL CHILDREN - FACILITY	

Figure 2.1: Integrated management of childhood illness (Barbiero & Kathuria, 2002: S17)

There have been reservations about the potential effectiveness of the IMCI strategy. Ehiri and Prowse (1999:4) stated that for an integrated strategy to have a significant and sustainable impact on child health, it must include social and environmental improvements. Further criticism on the IMCI is that although it aims for prevention through vaccines and better management of illness, it still focuses mostly on children seen at clinics or hospitals while little is done to prevent severe illness and mortality through specific community-based nutrition programmes (Tomkins, 2000: 137). Tomkins (2000: 137) maintains that the same problems are inherent to integrated programs like “Safe Motherhood”. Very few of these programmes include any consideration of nutrition other than to promote regular consumption of iron and folic acid in the antenatal period.

2.3 Accessible nutrition-related education in primary health care

2.3.1 Background

The Global Strategy for Infant and Young Child feeding that was referred to in Section 2.2.1 of this Chapter, provides a framework for action to protect, promote and support appropriate infant and young child feeding. The strategy defines responsibilities for all concerned parties: to enable mothers and families to exclusively breastfeed their infants for six months; to introduce adequate complementary foods after six months with continued breastfeeding and to implement the best feeding options for special circumstances (e.g. infants of mothers living with HIV). The strategy also recognises the intricate links between maternal nutrition and child health outcomes and promotes effective interventions to improve maternal nutritional status. (WHO, 2002b: 15).

Improving the access of caregivers to a person who can provide feeding counselling is one of the critical pillars in the strategy. While breastfeeding and complementary feeding could seem natural acts, they are also learned behaviours that could be optimised by education. The WHO (2002b: 15) refers to research that has shown that when mothers are counselled on infant feeding, exclusive breastfeeding improves dramatically in infants younger than six months. It has also been found that counselling on complementary feeding led to increased energy and nutrient intakes with older children.

Improved access to maternal health service could also have far reaching effects on their children’s lives. Maternal morbidity and mortality directly influences child well-being and could be reduced through increased access to and availability of quality maternal health care and nutrition programs for pregnant women (USAID, 1999: 5-6).

Many factors impinge on the accessibility of health services to women and their chances to receive relevant and appropriate health and nutrition education that will contribute to their own and their children’s well-being. Health education and more specifically nutrition education models and approaches could be of

importance in determining the accessibility of the messages delivered during the education process. On the other hand a well developed and formulated message can only have an impact if the health service is available and accessible.

2.3.2 Health education and health promotion

2.3.2.1 The link between health education and health promotion

“Health education is central to primary health care, which in turn is the primary means of achieving ‘Health for All’. Therefore, health education is a vital duty of health and other community workers who take part in primary health care” (WHO, cited in Tilford & Tones, 1994:11).

Tones and Tilford (1994: 11) define health education as “any intentional activity, which is designed to achieve health, or illness related learning, i.e. some relatively permanent change in an individual’s capability or disposition. Effective health education may, thus, produce changes in knowledge and understanding or ways of thinking; it may influence or clarify values; it may bring about some shift in belief or attitude; it may facilitate the acquisition of skills; it may even effect changes in behaviour or lifestyle”.

Tones and Tilford (1994: 2) state that the original concept of health promotion may be found in the 1946 WHO’s definition of health but that the ideological basis of the term health promotion as it is used today could be found in the Ottawa charter of 1986. Tones and Tilford (1994:4) summarise this ideological basis of the WHO formulation on health promotion as follow:

- Health should be viewed holistically as a positive state; it is an essential commodity, which people need in order to achieve the ultimate goal of socially and economically productive lives.
- Health will not be achieved nor illness prevented and controlled unless existing health inequalities between and within nations and social groups have been eradicated.
- A healthy nation is not only one which has an equitable distribution of resources but one which also has an active empowered community which is vigorously involved in creating the conditions necessary for a healthy people.
- Health is too important to be left to medical practitioners; there must be a ‘reorientation of health services’. It is important also to recognise that a wide range of public and private services and institutions influence health for good or ill. Moreover, medical services frequently do not meet the needs of the public; they often treat people as passive recipients of care and are thus fundamentally depowering. The main modus operandi of health promotion is one of enabling not coercing; the focus should be on co-operation rather than on compliance.
- People’s health is not just an individual responsibility; the physical, social, cultural and economic environments in which individuals live and work, largely govern health. To cajole the individual into taking responsibility for his or her health, while at the same time ignoring the social and environmental

circumstances that conspire to make them ill, is a fundamentally defective and unethical strategy. It is in short victim blaming. For these reasons, the building of 'healthy public polity' is considered to be at the very heart of health promotion.

Figure 2.2 provides an adapted version of Tones and Tilford's (1994:6-7) "anatomical" analysis of health promotion and the symbiotic relationship it has with health education. The three central elements that they feel could be manipulated include environmental influences, health related decision making and health services (shaded in the figure). Two deliberate strategies for producing change namely lobbying and education (A and B in the figure) are indicated. Of these two strategies Tones and Tilford (1994: 7) consider education to have potentially the more powerful and multifaceted role.

As is evident from Figure 2.2 Tones and Tilford (1994: 7) suggest that health is influenced by, environmental factors, physical, socioeconomic and cultural (C in figure). A key aim of health promotion is to "engineer" these various environmental factors in order to maximise opportunities for health (D in figure). A public policy emphasising health is necessary to change the environment to one that is health promoting (E in figure). A health-promoting environment may function at the macro level, nationally or internationally or it may just be at the local or organisational level. For example for a clinic to promote breastfeeding a health promoting environment will involve one where the atmosphere is supportive with no conflicting messages appearing on infant feeding posters on the walls.

According to Figure 2.2 education is shown as having a four-fold function (F – I) in health promotion and together with policy (E) is central to the achievement of good individual, community and national health status (Tones & Tilford, 1994: 7).

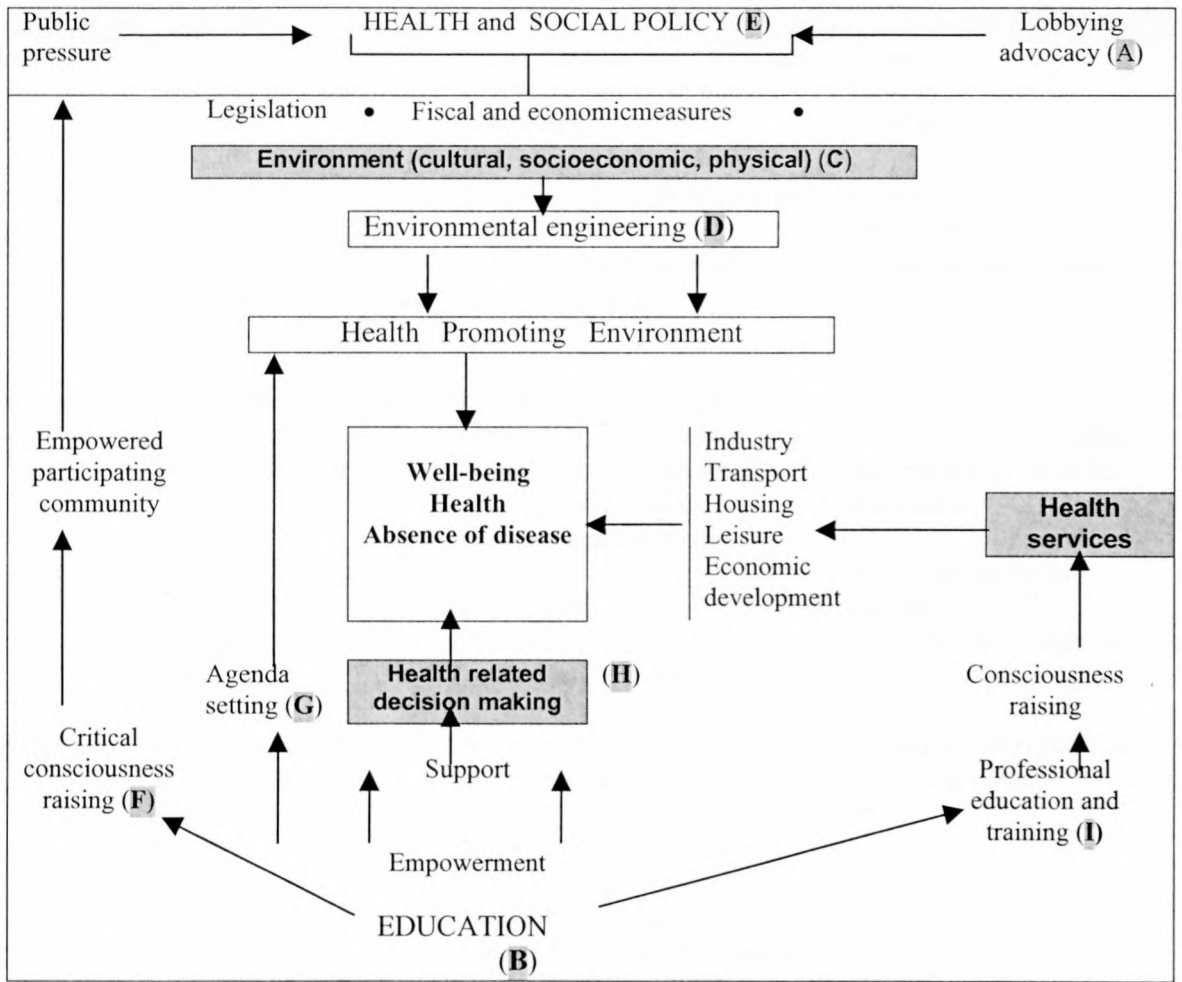


Figure 2.2: The contribution of health education to health promotion (Tones & Tilford, 1994: 7)

2.3.2.2 Approaches to health promotion

Health promotion can be approached in different ways. Naidoo and Wills (2000:91) name five different approaches: medical or preventive; behavioural change; educational; empowerment and social change which reflect different ways of working. Naidoo and Wills (2000:91) suggest that practitioners should be aware of the values implicit in the approach they adopt because by doing that they begin to clarify their view of the purpose of health promotion as well as which strategies are associated with different aims. Neglecting to do so could have the result that practitioners “merely respond to practice needs and their health promotion work is limited to narrow tasks” (Naidoo & Wills, 2000: 92).

Table 2.4, adapted from Naidoo and Wills (2000:92) presents a summary of the different approaches using the example of promoting healthy eating.

Table 2.4: Approaches to health promotion (Naidoo & Wills, 2000: 92)

Approach	Aims	Strategies	Worker/client relationship
Medical	To identify those at risk from disease	Primary health care consultant, e.g. measurement of body mass index	Expert led Passive, Conforming client
Behaviour change	To encourage individuals to take responsibility for their own health and choose healthier lifestyles	Persuasion through one-to-one advice Information dissemination, mass campaigns	Expert led Dependent client Victim-blaming ideology
Educational	To increase knowledge and skills about healthy lifestyles	Information dissemination Exploration of attitudes through small group work Development of skill, e.g. women's health group	May be expert led May also involve client in negotiation of issue for discussion
Empowerment	To work with clients or communities to meet their perceived needs	Advocacy Negotiation Networking Facilitation, e.g. food co-op	Health promoter is facilitator Client becomes empowered
Social change	To address inequalities in health based on class, race, gender geography.	Development of organisational policy, e.g. hospital catering policy Public health legislation e.g. food labelling Fiscal controls e.g. subsidy to farmers to produce lean meat	Entails social regulation and is top down

According to Naidoo and Wills (2000: 102) these approaches primarily describe what practitioners do. A more analytical way of identifying appropriate types of health promotion is to develop models of practice. These models can encourage practitioners to think theoretically and come up with new strategies and ways of working. It can also help with the process of prioritising and locating more or less desirable types of interventions. Naidoo and Wills (2000: 103) state that all these models seek to represent reality in some way and to show in a simplified form how different things connect. Although there is a “proliferation of models” in health promotion literature with large areas of overlap, little consensus exists on terminology or underlying criteria (Naidoo & Wills, 2000: 103) and no ideal model could be specified for all situations.

2.3.3 Nutrition education

According to the American Dietetic Association (ADA) nutrition education is an integral part of all health promotion, disease prevention and health maintenance programs. The ADA used the definition of Contento and others to define nutrition education as being any set of learning experiences designed to facilitate the voluntary adoption of eating and other nutrition-related behaviours conducive to health and well-being (ADA, 1996: 1183).

Gillespie and Allan (ACC/SCN, 2001: 75) state that the term nutrition education tends to imply a didactic and often top-down approach that has seldom been effective in the long term. This comment is supported by Savage King and Burgess (1993: 376) and the ADA (1993: 1184). According to these authors the reasons why nutrition education is not always effective could be because some programs merely disseminate information. They teach skills without motivating the target audience attitudinally or behaviourally and some of the advice given is not practical or appropriate for developing countries.

Instead of nutrition education Gillespie and Alan (ACC/SCN, 2001: 75) use the term “communications for behavioural change”. This approach has drawn from the literature on social marketing to improve the relevance and effectiveness of nutrition education. It functions on the basis that new ideas, services, or products can best be introduced if the intended beneficiaries see them as “fulfilling their own aspirations and well-being”. People will not accept new ideas designed solely from specialists’ concepts. Therefore communicating for behaviour change should follow a disciplined series of programme development and implementation phases. Each phase involve steps designed to learn from the community itself. These steps include the following: formative research to formulate the whole programme’s strategy and testing those strategies; designing, testing and improving messages; designing, testing and producing communication materials; and monitoring and making necessary revisions in programme strategies to better address people who have not tried or who have stopped desired practices.

In this process attention should be focused on behaviour and understanding existing attitudes, perceptions and practices. The social context in which practices exist and the obstacles that retard implementation of the desired practices should be understood. Furthermore rigorous discipline should be enforced in the message development process. This is necessary to ensure that messages always call for and motivate a desired action; surmount all known obstacles convincingly; offer meaningful benefits and are remembered (ACC/SCN, 2001: 77).

Smitasiri (1998: 51) supports the importance of community participation in the above approach. According to this author community participation in planning nutrition-related messages is important if nutrition education that is “grounded in the reality of the people” is to be achieved. A UNICEF working paper (UNICEF, 1999: 5) on strategies to enhance child survival, growth and development through home and community health care, also emphasised that key strategies to achieve optimum child well-being must include conducting a “participatory situation assessment and analysis” on care and care-seeking behaviour in the community in question. The results of the analysis must then be used to adapt general recommendations on child feeding, appropriate home care and care-seeking practices to the local situation.

Nutrition education for the poor presents a special challenge (Rusness 1993:79). A significant part of the difficulty lies in attempting nutrition education without dealing with the root problems of poverty and powerlessness. According to Rusness (1993: 79) nutrition goals can only be incorporated into the

broader efforts to move people out of poverty and into a better state of nutritional well-being and self-sufficiency when nutrition-related issues are seen in conjunction with the major perceived problems of the poor. Hamm and Bellows (2003: 37) supported these remarks with their recommendations that nutrition educators must (1) familiarise themselves both with the food needs of the community and with the political economy that influences the access to food; (2) embrace knowledge that comes from the community and use it as a compass for action and (3) understand and address not only the dietary food needs but also the social, economic and environmental barriers to the ability of individuals and groups to access supplies of food locally.

Gillespie and Allan (ACC/SCN, 2001: 77) in their overview of the effectiveness of large scale nutrition interventions make specific recommendations about what should be included in successful nutrition education (or communication for behaviour change) programs. These recommendations are summarised in Table 2.5.

Table 2.5: Specific nutrition education related recommendations (ACC/SCN, 2001: 77)

Recommendation	Comment
Find a balance between food and practices	Unless breastfeeding techniques and complementary feeding practices are both addressed providing food alone has a minimal effect
Target changes in feeding practices	Very specific behavioural recommendations must be developed for each age group of children, an important step that can be achieved only on the basis of thorough qualitative research
Do not ignore the first days of life	Bad practices begin with pre-lacteal feedings
Expect the worst characteristics of daily feeding pattern during and immediately following illness	Many mothers reduce food when children are ill and the concept of “recuperative feeding” very seldom exists.
Recognise the extent to which families can do more for themselves	Poverty and lack of coping skills may be so prevalent that the mother, family and community cannot change their practices enough to have a significant nutrition impact.
Clearly define the barriers to change	Both environmental and attitudinal barriers need to be identified.

The discussion of nutrition education as an intervention strategy clearly shows the need to incorporate a broader view of nutrition education into programme planning with a focus on the interaction between individuals, food and their multi-faceted environment (Hehir, 1993: 77).

2.3.4 Accessibility of health services

2.3.4.1 Introductory comments

One of the principles, on which a successful strategy for primary health care (and therefore nutrition services as an essential part of primary health care) should be based, is accessibility of the service. Dennill *et al.* (1999:6) describe an accessible national health service as a service that is within the reach of all people in the country. To accomplish this, services on the local level must be:

- Geographically accessible so that health services exist within a reasonable distance (the WHO suggests 5-10 km) and that transport should be available where necessary
- Financially accessible to the individual and the community.
- Functionally accessible, in that the appropriate type of care is available to meet the needs of the specific community

Field (2000) adds the aspects of personal mobility (very young children or the aged) and service awareness to the above list. According to this author service awareness involves attitudes to health, personal health values and knowledge about the availability of health care.

Another aspect of accessibility that could refer to either the service as a whole or specific aspects of a service, is that it must first and foremost be available in order to be accessible (WHO/UNICEF/UNFPA: 1999: 9). This seems to be closely linked to the description of functional accessibility (Dennill *et al.*, 1999: 6) and is of specific importance in relation to nutrition components in primary health care services. The need for availability is illustrated by investigations by Kanani (1998: 1124) into the management of national nutrition programmes within the primary health care system in one of the states of India. It was evident that low priority was given to nutrition-related aspects of the programme with health workers concentrating on immunisation and family planning. Although an integrated programme exists certain services were neglected, rendering them unavailable and therefore inaccessible to clients.

Implicit in the description of a service that is accessible is that it must be utilised. Client satisfaction with services provided or the perceived quality of the care received, plays an important role in the decision of clients to access health services. Various studies have found that a satisfied client is more likely to utilise health services, comply with medical treatment and continue with the health provider (Westaway, Rheeder, Van Zyl & Seager, 2003). Haddad, Fournier, Machouf and Yatara (1998:381-394) refer to Donabedian's description that user satisfaction "can be regarded as the patient's judgement on the quality and the goodness of care"

2.3.4.2 Quality of care and service utilisation

Perceived quality of care has been identified by many studies as one of the principal determining factors of utilisation and non-utilisation of services. The latter has been identified as a major problem in several developing countries, and can often be traced back to a perceived lack of quality (Haddad *et al.*, 1998: 381).

According to Kanani (1998: 1224) health care of good quality encompasses the three areas of structure (organisational settings of care); process (skills deployed in delivery of services) and outcome (effects of care given on health and well-being of patients). Haddad *et al.* (1998: 381) note that most evaluation studies dealing with quality of care, base it on one of the two following perspectives. One perspective is the “technocratic” perspective of health care professionals that relies on a normative definition of quality where services are judged to be of good quality as soon as defined standards are reached. The other one involves evaluating quality of care from the perspective of the community. In the latter perspective the recipients of PHC services play a central role in the definition and assessment of quality.

Kanani (1998: 1225) proposes that in the context of caring for the health of children, quality of care may be viewed from the following two perspectives: Firstly overall services and management system of an organisation and secondly the point of service delivery, that is, the provider-client interaction and outcome. This viewpoint is supported by Westaway, *et al.*, (2003) who determined in a study of diabetic patients attending clinics that patient satisfaction is a bi-dimensional construct with an emphasis on “interpersonal relationships and organisational characteristics”.

2.3.4.3 Overall services and management system of an organisation

Various factors have been identified concerning quality of care and organisational characteristics:

Respecting standards is one of the aspects that is important in the provision of quality care. “Respect” refers to compliance with measurable technical norms, to the way services are organised and whether health policies support the standards. Table 2.6 summarises the WHO/UNICEF/UNFPA (199:11) recommendations in relation to standards.

Table 2.6: Criteria for measuring “respect for standards” (WHO/UNICEF/UNFPA,1999:11)

Aspect	Discussion
National policies	Must be in compliance with declaration of international conventions and legal instruments
Integrated and continuous care	A lifecycle approach to women’s care is necessary as well as integration of services
Infrastructure	Good basic infrastructure with quality and quantity of personnel, drugs, supplies and equipment will ensure good quality health care and enable women to use the health services effectively.
Written guidelines	Written protocols of care facilitate the training of staff at all levels of the health care system and improve their performance. Additionally such protocols can provide the basis for the evaluation of staff performance. These guidelines should be based on international state-of-the art information and should be adapted to the local context.
Performance criteria	Must be established for each aspect of health services

According to Kanani (1998: 1226) **the services provided must also meet client's needs in a culturally appropriate and timely manner** to ensure utilisation of services by child caregivers. Vlassoff and Moreno (2002: 1717) write that there is growing recognition that people who are given relevant, accurate and complete information about the purpose of health intervention as well as the need to change behaviours are more likely to adopt and sustain the activities themselves. These authors refer to the example of the South African health education initiative, 'Soul City', a multi-media project involving television, radio and booklets that provide socially relevant health information to its audience. It is rooted in a township setting and is based on the real life experiences of people living in a poor Johannesburg slum community. The scripts are developed by a professional team, but are discussed with township members before they are finalised. Evaluation of the project has shown that it has affected the behaviour of up to 87% of those interviewed.

Educational and counselling needs have to be defined through dialogue with clients. In deciding on educational and counselling activities, account also has to be taken of characteristics of clients and facilitators and the particular constraints of the context in question (Tones & Tilford, 1994:174).

Services must also focus on the marginalised and socio-economically deprived sections of the population. Acceptance of a programme by the truly needy groups, is crucial for its success (Kanani, 1998: 1227). Getting these groups to utilise the service is a special challenge as it has been shown that the most disadvantaged of the population often has the poorest access to services, and has fewer or no expectations (Leon, 2003: 70). This could be due to the social isolation of these groups (see discussion in Section 2.4.1.1).

A balance between short-term and long term goals must also exist in child health programmes. There is often conflict in development programmes between gaining acceptance of community members by meeting their immediate needs and the long term goal of the programme (Kanani, 1998: 1227). For example a mother may be more interested in having her child's diarrhoea cleared up than spending time listening to health education aimed at improving personal and environmental hygiene practices. For a programme to attain a "high quality of care" these conflicts need to be resolved.

To achieve quality of care it is essential that **human, financial and material resources are efficiently managed in child health programmes** with particular focus on empowering the health service providers at all levels (Kanani, 1998: 1227). According to the WHO/UNICEF/UNFPA (1999:13) the provision of health services entails constant interaction between the health personnel and the users. It is important for staff to feel wanted and empowered to respond effectively to the needs of their clients. In addition to supervision and training, involving staff in problem-solving and giving them the tools to solve problems will motivate them to improve their performance and the quality of care.

A mechanism for health services provider-client partnership should be developed to ensure that health service providers and community representatives are partners in child health programmes. Such a partnership can play a central role in empowering child caregivers with essential knowledge and skill to improve health and nutrition of children (Kanani, 1998: 1229). For people to be empowered they need to recognise and understand their powerlessness; feel strongly enough about their situation to want to change it and feel capable of changing the situation by having information, support and life skills (Naidoo and Will, 2000: 98). These principles need to be taken into account when striving for active involvement of women in making decisions about their own and their children's health care (WHO/UNICEF/UNFPA, 1999:15).

While client participation is an important aspect to strive for, Murray (1999: 440) warns that traditional methods to encourage public participation such as public meeting, patient participation groups and complaints procedures, have met with limited success. Simons-Morton, Crump & Davis (1996:291) also stated earlier that individuals and groups whose lifetime experience has been one of alienation and helplessness are not likely to become empowered suddenly after attending a few consciousness-raising groups. Theoretically though individuals in groups should develop motivation and skills through empowerment education that will enable them to advocate for social reforms.

Other methods also exist that could involve clients. Rapid appraisal methods have according to Murray (1999:440) the potential to bring lay perspectives into health service planning while Quality Improvement (QI) techniques have also been used successfully in developing countries to bring improvements in services by working with clients (Smits, Leatherman & Berwick, 2002:439). According to these authors health care staff, even those working in conditions of isolation and extreme poverty, can form teams, analyse problems, test changes and find solutions if they are given the training the time and the support from their leaders.

2.3.4.4 Point of service delivery in child health programmes

Client-provider interaction and the appropriateness of the physical infrastructure in which care is delivered are the two important aspect of quality of care at the point of service delivery.

The components of health care that bring satisfaction at the point of service delivery have been identified by various studies. They include technical and interpersonal competence, partnership building, immediate and positive non-verbal behaviour, social conversation, courtesy, consideration, clear communication and information, respectful treatment, frequency of contact, length of consultation, service availability and waiting time (Westaway *et al.*, 2003). According to the WHO/UNICEF/UNFPA (1999:15) one of the most important aspects is that clients must be respected as individuals, irrespective their race, age, marital status or abilities. They need to be treated with dignity and have their privacy and confidentiality ensured.

The availability of medicine at the service point as an aspect of the physical infrastructure appears to be a key aspect for clients. Haddad *et al.* (1998: 381-394) found that availability of drugs even took precedence

over other attributes of quality. Cleanliness, maintenance of contact and follow-up service are also important aspects of service at the point of delivery (Westaway *et al.*, 2003: 377-344).

Kanani (1998:1224) refers to Bruce and Jain who defined quality in terms of the way individuals are treated by the system that provides the service. These authors warn that client knowledge and satisfaction with the care received, should not be viewed simply as bridges to continued use of the services but also as valued end products of conscientious management and caring service.

2.4 Women's access to resources and the well-being of their children

According to De la Rocha and Grinspun (2001: 55) changes in the labour market have led to the erosion of work opportunities and the growth of the informal sector in many countries. These developments combined with cutbacks in public provision of social benefits and services have forced households to organise their labour, time and other resources to protect and, if possible, increase their (food) consumption. The capacity of households to adapt and ward of vulnerability varies with factors such as household size, composition and its stages in the domestic cycle. Many cope very well, "in no small measure because of strategies devised by women" but the pressures faced by many poor households are stretching these capacities to their limits (De la Rocha & Grinspun, 2001: 55).

Women need to be supported in their strategies to ward of "vulnerability" and according to Kurz and Johnson-Welch (2000: 3) future reductions in the high rates of malnutrition world-wide will be limited unless new approaches are adopted in nutrition programs. One approach that these authors maintain deserves concerted attention is strengthening the ability of women to carry out their roles of improving and sustaining the nutritional status of their family members.

Women acquire or use nutrition-related resources according to three set of activities: (1) economic activities, including wage earning, self employment and agricultural production; (2) food management activities, including processing and preparing food; and (3) care giving activities, including feeding practices, health promotion, and health seeking behaviour. Women need adequate resources to effectively carry out these three sets of activities (Kurz & Johnson-Welch, 2000: 5-6).

The need for strengthening women through improving their access to resources has been articulated as follows by Pick (1994:52-53): "In her own eyes, in the values of society, and often in the plans of public and private social agencies, women are seen as providing the family's safety net, the compensatory mechanism to ensure family welfare, even though women have limited decisionmaking authority in much of the world...Women are also expected to expand their productive role in order to contribute more to family income, alleviate family instability and make up for inadequate earning of the husband. In times of economic uncertainty, women's responsibilities become more demanding despite limited time and energy. Available

evidence suggest that ‘women are spent out; they have no more hours to spend, no higher proportion of their income to devote to others’”.

Among the resources that could assist women to effectively carry out the three sets of activities mentioned in a previous paragraph are production-focused inputs, labour saving technology, micro-finance, social networks and support and women’s own human capital (Kurz & Johnson-Welch, 2000: 13). Of these only social networks and support and women’s human capital are discussed.

2.4.1 Social networks and support

Kurz and Johnson-Welch (2000: 17) describe social network and support as “drawing on others labour”. According to these authors this is often done through a network of friends and family, civic participation and group membership. These networks provide women with direct access to labour; financial assistance; food; childcare information and contacts, or assist women in an intermediary capacity to access those resources. Men as a form of social support for women are for example described by Kurz and Johnson-Welch (2000: 17) as an under-utilised source of social support. Kinship ties and community networks based on social exchange and solidarity allow for the pooling of resources and services that could make women’s undertakings more efficient or productive. It however also provides people with a crucial buffer during emergencies and crises (De La Rocha & Grinspun, 2001: 81).

De La Rocha and Grinspun (2001: 81) however warn that “however important these social networks and mutual support may be, the fact remains that such ‘community aspects’ of survival are limited”. These resources have definite limits and it has been found that it diminish under the pressures of poverty. Growing stresses on kinship and neighbourhood ties can erode and later exhaust these relationships of mutual help and solidarity that provide critical safety nets for the poor. This can then result in the household becoming increasingly isolated, a phenomenon that De La Rocha and Grinspun (2001: 82) note has received little attention despite being an important outcome of poverty.

Engle, Castel and Menon (1996: 628) report that it was found in Jamaica that mothers of adequately nourished children had mutually supportive associations with support networks, but that mothers of malnourished children were more likely to be isolated. These authors also refer to research that was done in Yemen that described the interaction of chronic economic problems, social isolation and a mother’s inability to cope. Engle *et al.* (1996: 628) quote the following from the latter research findings: “disorganised mothers may be saved by strong social support and sufficient financial resources. Conversely, the problems of a psychologically fragile mother are sure to be exacerbated by the stresses of poverty and isolation”. These findings emphasise the importance of investing in women’s human capital, the next resource to be discussed.

2.4.2 Women's human capital

Women need to be strong themselves in mind and body i.e. to improve their own “human capital in order to improve their ability to earn income and care for their families, is” (Kurz & Johnson-Welch, 2000: 17). Women's human capital is strengthened by investment in their leadership capabilities, education, nutrition and health (Kurz & Johnson-Welch, 2000: 17, Baker *et al.*, 1996). Investing in these aspects of women's “capital” enable them to process information better, to adopt new practices, to use health services, and interact effectively with health care professionals (Kurz & Johnson-Welch, 2000: 17).

Engle *et al.* (1996: 628) noted that women in “weak household bargaining positions” either with men or other women may not only lack the social and financial support but also the confidence and perceived self-esteem to gain and apply health information. External contacts and activities that increase her social support and self-esteem may however mitigate disadvantageous family circumstances. Engle *et al.* (1996: 628) refer to research that indicates that mothers who work outside the home exhibit better nutritional outcomes. These effects may be related to their better income and status, but may also be because of psychosocial skills gained from the external environment that can be applied within the domestic domain to gain resources for children.

According to Kurz and Johnson-Welch (2000: 3) investing in women's human capital is the most fundamental aspect of a woman's resources approach for achieving optimum child-wellbeing. This is because it is women's “human capital” that drives and maximises the utility of the other resources available to them.

3 Concluding remarks

Rapid urbanisation leads to unique nutrition-related issues for poor children, which renders poor urban children especially vulnerable to develop nutrition-related health problems. Like other children, these children have the right to good health, including nutrition. Attempts to address these rights have been focussed on PHC of which nutrition services should form an essential part. Ideally these initiatives should form part of an integrated approach to health such as the IMCI strategy.

Optimal accessibility of health care including nutrition education must be ensured to contribute to the nutritional well-being of children. Underlying this need is the general concept of accessibility of health services, which relates to factors such as quality of care, organisational aspects and infrastructure at the point of service delivery. Nutrition-related education should also be targeted and relevant and the messages developed in consultation with the community. Finally women need to have access to resources if the nutritional well-being of their children is to be ensured. For these purposes emphasis should be placed on the utilisation of social networks and support but especially on building women's human capital.

Chapter 3: Research Design and Methodology

The aim of this chapter is to give an overview of the literature relevant to the research process followed in this study. A background discussion of literature concerning the methodology employed in the different phases of the study is provided, while detailed descriptions of methods and procedures followed in the various steps are discussed in the chapter dealing with the relevant phase of the research.

1 The link between theory and method

“The search for truth does not imply a search for certainty or infallible and absolute truths. It does imply a search for the most valid or best approximation to the world (Babbie and Mouton, 2001:16).” Research or “the search for truth” is conducted in many different ways. According to Locke, Silverman and Spirduso, (1998: 121) the number and complexity of research methods has increased dramatically in the last decades, particularly in the social sciences. Many options acceptable to the scientific community now exist, making a better matching of research tools to the particular research question possible.

Research studies may differ from each other in various ways namely (a) in the initial assumptions they make about the nature of the world (producing paradigmatic differences such as qualitative and quantitative research), (b) the organisation of the study and (c) the procedures used to collect data (Locke *et al.*, 1998:115).

For many social scientists the choice of a particular research method is inextricably linked to the paradigm or theoretical perspective that provides the framework for thinking about the social world and inform their research (Pope & Mays, 1999). In the relevant literature a paradigm refers to the beliefs, norms and values which guides scientific action (Smaling, 1992: 4). Babbie and Mouton (2001: 49) use the term “methodological paradigm” to include both the actual methods and techniques as well as the underlying principles and assumptions regarding their use. According to them “three broad methodological paradigms” have been dominant in social research in recent years: the quantitative, qualitative and participatory action paradigms (Babbie & Mouton, 2001: 49).

Pope and Mays (1999) state that the distinctions between the various theoretical stances are often presented as clear cut but in practice the contrasts are often less apparent. These authors suggested that while many social scientists feel that research should be theory driven, others have suggested that the link between theory and method is overstated. Guba and Lincoln (1994: 105) for example stated that it is possible that the term qualitative research is an umbrella term superior to the term paradigm and that it is a term that ought to be

reserved for a description of types of methods. From their perspective, both qualitative and quantitative methods may be used appropriately with any research paradigm.” Smaling (1992:9) in a similar argument stated that choosing a qualitative or a quantitative research method seems to be undetermined by paradigms.

Newman and Benz (1998: 14) on the other hand argue that research paradigms exist on an interactive continuum rather than as a dichotomy (either quantitative or qualitative). They describe the basis of the interactive continuum as follows: “If we accept the premise that scientific knowledge is based upon verification methods, the contributions of information derived from a qualitative (inductive) or quantitative (deductive) perspective can be assessed. It then becomes clear how each approach adds to our body of knowledge by building on the information derived from the other approach.” According to these authors evidence of such a continuum is demonstrated by an increasing number of researchers who apply multiple methods to their research (Newman & Benz, 1998:19).

The reality of the latter situation is underlined by De Vos (2002a: 364) who stated that many researchers often have to use both approaches. De Vos (2002a: 364) refers to Mouton and Marais who wrote that the phenomena that are investigated in the social sciences are so enmeshed that a single approach cannot succeed in assessing human beings in their full complexity. “By adopting the point of view of convergence and complementary we may eventually be in a position to understand more about human nature and social reality” (De Vos, 2002a:364). Creswell (in De Vos, 2002a:366-367) proposed three models for combining quantitative and qualitative approaches. The approach followed in the present research is in line with the two phase model proposed by these authors. A quantitative case control study was firstly conducted to determine the causal factors for growth failure, based on risk ratios, in a study population (De Villiers, 1998). A qualitative approach was subsequently followed to gain more insight into the target population in order to make recommendations to alleviate the problem of growth failure.

It is therefore clear that the choice of method and how it is used is as likely to be determined by the research question or pragmatic or technical considerations as by the researcher’s theoretical stance. According to Pope and Mays (1999) this may be particularly the case in health services research. Because of its applied nature health research tends to be geared towards specific practical problems or issues and this rather than theoretical considerations may determine the methods employed.

According to Sofaer (2002: 329) the use of rigorous qualitative research methods has been on the rise in health services and health policy research. The author quotes the editor of a 1999 special issue of the journal “Health Services Research” who stated that the growth in the use of qualitative methods “is consistent with developments in the social and policy sciences at large, reflecting the need for more in-depth understanding of naturalistic setting, the importance of understanding context and the complexity of implementing social change”. According to Sofaer (2002:329) health care is delivered in “naturalistic settings” within a wide range of professional, organisational and community contexts. Work to improve quality within these contexts

has already benefited from the increased use of qualitative and mixed method research and can do so even more in the future.

Manderson (1997) maintains that the growing awareness of the shortcomings of survey data in exploring the social and cultural dimensions of health related behaviour, the use of health services, the reasons behind reported actions and the attitudinal and structural factors that influence actions also contributed to the increasing favour for qualitative methods in health research.

In the context of reproductive health programmes, including maternal and child health, Manderson (1997) argues that the development and delivery of integrated health services for women should go further than just the capacity of government to deliver such services. It should include attention to community barriers and access to services. Although demographic and epidemiological data will influence the provision of integrated health services at primary care levels, the development and operationalisation of such programmes must take account of local needs, demands and capability, bearing in mind the perspective of client communities. The use of qualitative methods is ideal to incorporate women's own views regarding priority health problems, use of services and the appropriate delivery of health information into the planning of such services (Manderson, 1997).

However Sofaer (2002: 333) emphasises that the qualitative methods used in health care research often do not conform to what basic social scientists would call pure ethnography or grounded theory research. In health care research (and therefore in the nutrition field) qualitative methods are used in a highly applied field. Clearly clarified research questions and the use of conceptual frameworks to guide data collection and analysis are therefore not considered inappropriate. Sofaer (2002: 333) states that the discovery-oriented character of qualitative methods can persist even when conducting research in a systematic and purposeful manner. "The 'openness' in more structured qualitative research pertains not to what you want to learn but rather to what you actually do learn."

According to Pope and Mays (1999) some of the misunderstandings about qualitative research concern the terms "qualitative research" and "qualitative methods". Although it is sometimes used interchangeably, qualitative research refers to the theoretical approach and qualitative methods to the specific research techniques used to gather data. In the process followed in this research, use was made of qualitative methods, although from a theoretical stance it would not be classified as "pure" qualitative research.

2 Research design

Research designs can be classified into empirical and non-empirical studies. Empirical studies can further be classified into studies using primary data and studies that analyse existing data. The classification can be taken even further by classifying design types according to the degree of control that the researcher aims for

in the study (Babbie & Mouton, 2001:78). Applying this classification to the present study, the design chosen can be described as an empirical design that uses primary data with low control exercised by the researcher.

The research problem or question guides the research design chosen. According to Schensul (1999) social science research is increasingly conducted in naturalistic (i.e., community, clinical, or institutional settings) rather than laboratory settings because “important problems call for accessing community populations and understanding health and risk behaviour in context.” This last part of the comment is especially true for the present research that was undertaken in Duncan Village.

The aim of this research was to gain a better understanding of the target population so that message topics for nutrition-related education at PHC clinics in the identified focus areas could be identified. A further aim was to gain insight into accessibility issues in this regard. A research design that allows for further exploration of previously identified issues but also allows for evaluation that is formative and developmental in nature was needed to achieve these aims. The type of evidence needed to attain the stated aims furthermore required the participation of the target population. It was therefore decided to use a **participatory research design**, in particular **the consultative nutrition research approach** as developed by the USAID Bureau for Africa’s Health and Human Resources Analysis for Africa (HHRAA) Project (Dickin, Griffiths & Piwoz, 1997).

Participatory research (PR) is operationally defined by Kanani (1996: 29) as “research conducted with community groups with the aim of enhancing awareness, facilitating problem analysis and planning future programmes or improving ongoing ones”. Participatory research developed directly as a result of an increased emphasis on participation in development projects in general. The disenchantment and crisis of confidence caused by the failure of development policies in the 1970s resulted in development analysts and experts recognising the importance of participation (Babbie & Mouton, 2001: 65).

As the participatory approach developed, variations evolved, one of these was the methodology of participatory action research (PAR) which is now considered one of the three major methodological paradigms in social research (Babbie & Mouton, 2001: 48). These authors recommend that PAR be seen as a specific variety of PR in terms “of the mode of participation implied” as is illustrated in Figure 3.1. The approach followed in this research is highlighted in the Figure 3.1.

Figure 3.1 also explains De Koning and Martin’s (1996: 3) comment that different interpretations are given to participatory research. According to these authors it is important to avoid adopting a purist attitude. At the same time it should be recognised that participation should “genuinely be empowering” and that the participatory research process must not just be a situation where local people work with the researcher for the latter’s convenience.

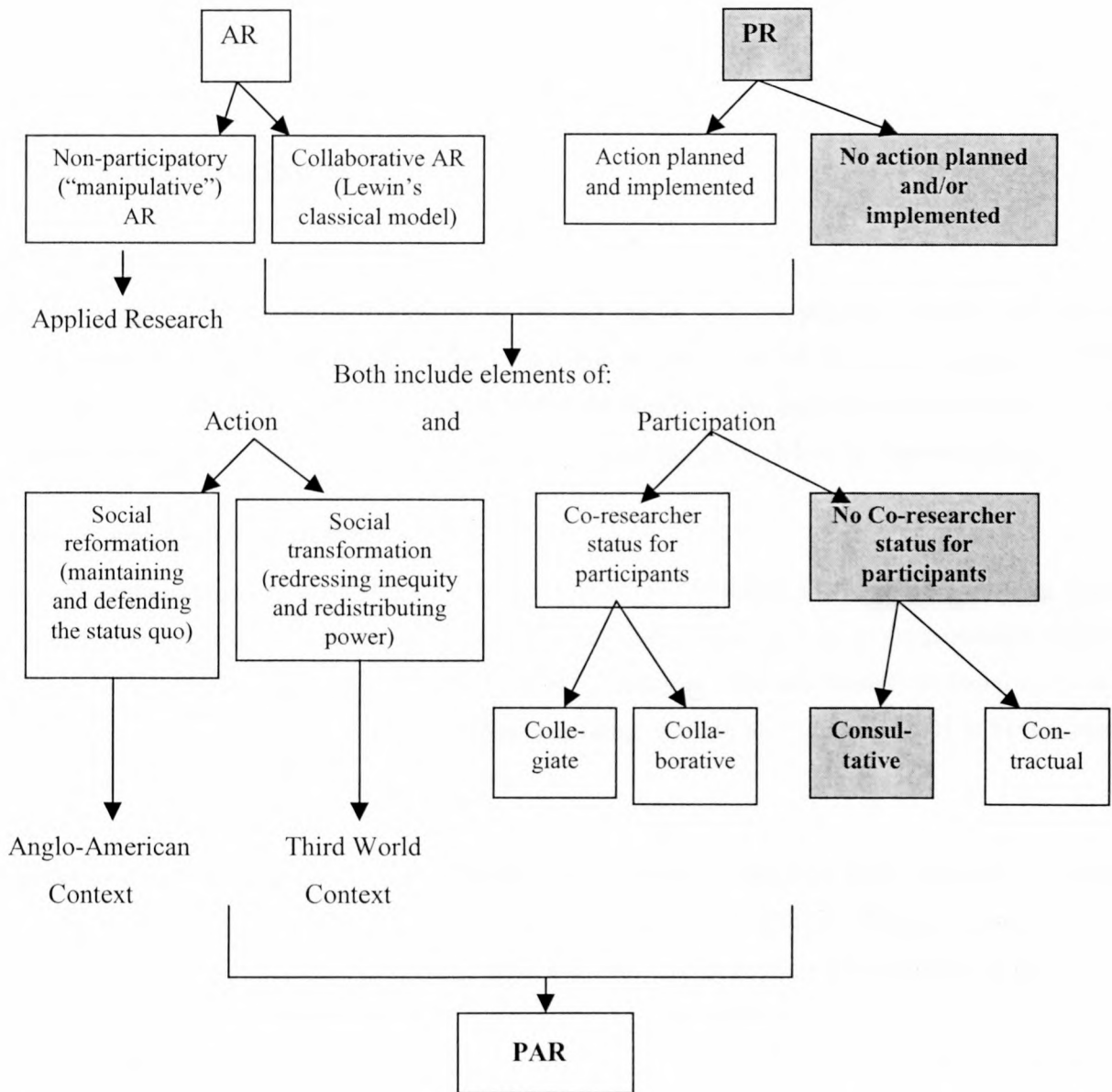


Figure 3.1: The relationship between participatory (PR) and action research (AR) (Babbie & Mouton, 2001: 48)

Dicken *et al.* (1997) describe consultative research as a type of formative research that uses several quick, interactive information-gathering methods with mothers and other key people who are likely to be beneficiaries or participants in a programme. The term formative research refers in evaluation terminology to the gaining of a better understanding of the target population (Schensul, 1999) or according to Dicken *et al.* (1997) it describes investigations conducted for programme design and planning. The goal of consultative research is to identify feasible, acceptable, and effective strategies to improve health-related behaviours, with programme beneficiaries playing an active role in the process (Dicken *et al.*, 1997). The methods used may be quantitative or qualitative.

The Designing by Dialogue guide (Dickin, *et al.*, 1997) describing the use of this approach in planning

programs to improve young child feeding was used as a point of departure for the consultative research process. However the particular research design described by Dicken *et al.* (1997) was adapted in order to attain the aims of this research.

3 Research methodology

3.1 Sampling

Sampling theory is the scientific foundation of generalising or inferring properties about an entire set of objects, events or group of people on the basis of a few observations (Bless & Higson-Smith, 1995: 85). Good sampling in scientific research implies a well-defined population, and adequately chosen sample and an estimate of how representative of the whole population the sample is (Bless & Higson-Smith, 1995: 87).

3.1.1 Approaches to sampling

Two main types of sampling methods exist. The ideal situation is to follow a **probability sampling** approach according to which names or households are selected randomly from everyone in the population (Babbie & Mouton, 2001:166). Although the ideal, this kind of sampling is often not feasible in social research and researchers must often rely on **non-probability sampling**. Babbie and Mouton (2001:166) describe the following four types of non-probability sampling.

Reliance on available subjects involves stopping people “at a street corner or some other location” (Babbie & Mouton, 2001:166). According to these writers this is a risky sampling technique and even when the method is justified on grounds of feasibility, great caution must be exercised in generalising from the data that is generated.

Purposive or judgmental sampling entails sampling based on the researcher’s knowledge of the population, its elements and the aims of the research (Babbie & Mouton, 2001: 166). According to Dicken *et al.* (1997:4.16) purposive sampling is often the best choice when doing qualitative research because of the small number of sites and the small sample sizes involved. These writers emphasise that purposive sampling means that a site may be selected on purpose because it has characteristics representative of the programme it aims to serve. It does not mean that it is chosen because it is convenient for the research team. Individual participants should be chosen randomly from these sites.

Snowball sampling involves collecting data on the members of the population that can be located and asking them about other members of the population whom they might know. According to Babbie and Mouton (2001:167) this is the technique most commonly used in qualitative field research and is appropriate when the members of a special population are difficult to locate. This procedure results in samples with questionable representativeness and is used mostly for exploratory research (Babbie & Mouton, 2001:167).

Quota sampling involves the description of characteristics of the target population in a matrix after which relative proportions are assigned to each cell. The researcher then collects data from people who have the characteristics of the different cells until the process is completed. Quota sampling aims to address problems with representativeness, but also has inherent problems, for example bias may exist in the selection of elements in a given cell (Babbie & Mouton, 2001:167).

Elements of all four non-probability sampling techniques were incorporated into the sampling techniques used in the different phases of the research (Chapter 4: Section 2.1.3, p 87 and Chapter 5: Section 1.3, p 133).

3.1.2 Selecting the sample

According to Dickin *et al.* (1997: 4.9) the selection of a sample for consultative research requires the following steps: choosing population segments; identifying appropriate sampling units within these segments; choosing categories of participants; choosing the age groupings for children of participants as well as selecting research sites. The methodology involved with sample selection in this study was simpler than described in the Designing by Dialogue manual because of the study's narrow focus on Duncan Village.

Population segments and units: "A population segment is a group of people defined by characteristics that affect the topic of interest" while population units are determined by the scope of the research as well as factors which influence maternal roles, child feeding practices, and/or access to channels of education and communication (Dickin *et al.*, 1997: 4.9). The following specific questions need to be asked to guide decisions about selecting population segments: (1) where are the problems greatest and who is most likely to benefit from the programme (in this case the recommendations) and (2) what groups (categorised by geographic area etc.) are the focus of the research? For this research the answers to these questions were pre-determined by the aim of the research.

Research sites: Dickin *et al.* (1997: 4.16) describe research sites as the actual sites where research will be conducted. The sites should be representative of the programme area in terms of all the characteristics that are likely to affect the recommendations to be made. These sites could be chosen purposively from the population units.

Categories of participants and data sources: Various categories of people in the population unit or other data sources e.g. other research data or local government statistics can provide insight into the research questions. Different categories and the participants in these categories are chosen according to specific characteristics determined by the research questions. In this study this process was guided by the following questions suggested by Dickin *et al.* (1997: 4.12): "Who influences the growth of children and whose input is

needed to answer the research questions?” The identified categories of participants were different for the different phases of the study and the selection procedure for each phase is described in the chapter dealing with the particular phase. It is important to note that participant categories can evolve as each step in the research process is completed and the need for more information from a different category of participant is noted or different sources of information are identified (Dicken *et al.*, 1997: 4.12)

3.1.3 Determining the sample size

In a previous section it was noted that researchers in the social science often have to rely on non-probability sampling. According to Babbie and Mouton (2001: 288) sampling in studies where qualitative methods are used are usually purposeful and directed at certain inclusive criteria. Once the study population have been determined the sample size are often determined by pragmatic factors like how much time or money is available.

Interviews: “How many is enough?” is a question asked frequently about the number of interviews when researchers make use of qualitative methodology. According to Greeff (2002: 300) there are two criteria for “enough”. The first of these is *sufficiency*, referring to whether there are sufficient numbers to reflect the range of participants and sites that make up the population so that others outside the sample may have the chance to “connect to the experience of those in it”. The other criterion is saturation of information. The point of saturation refers to the point in the study where the researcher starts to hear the same information repeatedly and no new information emerges (Seidman in Greeff, 2002: 300). Dicken *et al.* (1997: 4.17) agrees with the latter criteria and state that because there is no statistical process for calculating the sample size, interviews could be stopped after a certain point if no new or useful information is yielded by the interviews. The researcher may however also decide to add interviews conducted with a certain type of participant based on early findings.

Kelle and Laurie (1995:23) report that increasing sample sizes may have positive benefits in a qualitative setting. One of these benefits is that larger samples allow for multiple comparisons between purposively selected cases. This is crucial for qualitative studies to identify patterns and to develop theoretical categories. Dicken *et al.* (1997; 4.16) provide guidelines for the minimum number of participants that should be included per category to ensure a large enough sample. Decisions about sample size must however be taken within the constraints of budget and time (Dicken *et al.*: 1997:4.17).

Focus groups: The number of focus group meetings necessary for a particular study is variable and depends on the research aims or purpose of the study. Greeff (2002: 312) refers to the recommendation of Krueger that as a rule of thumb four group meetings should be held with re-evaluation after the third. In general the goal is to conduct only as many groups as are required to provide a trustworthy answer to the research question. Regarding group size Morgan (1997) suggests that enough participants must be chosen so that a

focus group can continue even if some members choose to remain quiet. Enough participants must also be chosen so that the individual dynamics in the group do not outweigh the group dynamics. Dicken *et al.* (1997:7.4) recommend that each group should include six to eight participants.

Sample requirements are also influenced by the particular focus group application used in a study (see Section 3.2.3.2 of this Chapter).

A summary of the various samples used in the different phases of this study is included at the end of this chapter (See Table 3.6) while the particular details of the selection procedure for each sample is discussed in the relevant chapter.

3.2 Methods of data collection

According to Babbie and Mouton (2001: 326) both quantitative and qualitative methods may be used in the participatory research design, but it is commonly accepted that it gives preference to qualitative rather than quantitative analysis. According to these writers there is evidence that participatory research uses methods “deriving from anthropological traditions as well as sociological traditions which have a more qualitative, interpretative and inductive nature”.

Some of the reasons for the preferential use of qualitative methods in participatory research are that they facilitate change agents’ in-depth understanding of a given research situation; it focuses on subjective experience and is congruent with reliance on local knowledge (Babbie & Mouton, 2001:326).

The methods used for collecting data of a more qualitative nature may fall in one or both of two main categories, namely interviews or observation (Babbie & Mouton, 2001: 326). Although focus group discussion is seen as a group interviewing technique, individual interviewing and focus group discussion will be dealt with separately. Both these techniques were used in this research (see Table 3.7 at the end of the chapter).

3.2.1 Interviews

Qualitative interview studies address questions that differ from those addressed by quantitative research. Britten (1999) uses the following example to illustrate this statement: A quantitative epidemiological approach to the sudden infant death syndrome may measure statistical correlates of national and regional variations in incidence. In a qualitative study by contrast mothers of babies from different cultures could be interviewed in order to understand their child rearing practices and hence discover possible factors contributing to a low incidence of sudden death in a particular population. Asking respondents directly to express their views through interviews or questionnaires is the most frequent method of gathering information in social research. An interview involves direct personal contact with the participant who is asked to answer

questions relating to the research problem (Bless & Higson-Smith, 2000:103).

Different types of interviews are used depending on the research design. Structured interviews involve administering structured questionnaires. The interviewer is trained to ask questions that mostly have a fixed choice of responses in a standardised manner. Though qualitative interviews are often described as being unstructured, the term unstructured is misleading as no interview is completely devoid of structure. If there were not structure it could not be certain that the data gathered would be appropriate to the research question (Britten, 1999). The following interviewing techniques can be used depending on the level of structure that needs to be built into the interview:

The non-scheduled interview: With this technique respondents are asked to comment on broadly defined issues. The respondents are free to expand on the topic as they see fit and the interviewer will only intervene to clarify, but never to direct the interview. The non-scheduled interview is useful in exploratory research where the research questions cannot be narrowly defined (Bless & Higson-Smith 2000: 105). This corresponds to what Babbie and Mouton (2001: 289) refer to in qualitative studies as basic individual interviewing. These authors also further distinguish between basic individual interviewing and depth individual interviews. The latter may cover only one or two issues, but in more detail. The interview begins with a question and further questions from the interviewer would be based on what the interviewee said and would mostly consist of clarification and probing for detail (Britten, 1999). With depth interviews the researcher is not studying the content of the depth interview but “rather the process by which the content of the conversation came into being” (Babbie & Mouton, 2001:291).

The non-scheduled structured interview: This type of interviewing is structured in the sense that a list of issues that are of importance is compiled before the interview. The list will contain some precise questions and their alternatives or sub-questions, depending on the answer to the main questions, but the researcher will be free to formulate other questions as judged appropriate. It is important to note that this type of interview presupposes some prior information and understanding of the problem under investigation, and also a need for more specific information (Bless & Higson-Smith, 2000: 105).

Semi-structured interview: These interviews are used in the Rapid Assessment Process (RAP) and contain similarities to the non-scheduled structured interview (Beebe, 2001:35). This author advocates that only short guidelines that were prepared in advance should be used in semi-structured interviews and that these guidelines should not be relied on too much. The semi-structured interview as used in the RAP therefore falls somewhere between the non-scheduled and the non-scheduled structured interviews.

The scheduled structured interview: This is the most structured way of getting information directly from respondents and is based on a questionnaire with set questions. The wording and the sequence of the questions are fixed and the questionnaires are presented to respondents in exactly the same way. A range of

criteria exists to which the questionnaire must comply for valid data to be collected in this way.

The questions in qualitative interviews should be open-ended, neutral, sensitive and clear to the interviewee. Patton (cited in Britten, 1999) listed the following six types of questions that can be asked: questions based on behaviour or experience, on opinion or value, on feeling, on knowledge, on sensory experience and those asking about demographic or background details. Most interviews will start with questions that the respondent can answer easily and then move on to more difficult or sensitive questions.

Qualitative interviews require considerable skill from the interviewer (Britten, 1999). Hunt and Eadie (1987: 15) consider the interview as a communication activity and advise that the interviewer should have good interactive skills consisting of the ability to role-play, invent/edit, manage, interpret and empathise. The interviewer should also be able to maintain control over the interview and this could be done by knowing the purpose of the interview, asking the right questions to get the information needed and giving the appropriate verbal and non-verbal feedback (Britten, 1999).

According to Britten (1999) qualitative interviewing is a flexible and powerful tool that can open up many new areas for research. It is however important to remember that answers to interview questions about behaviour will not necessarily correspond with observational studies, as what people say they do is not always what they can be observed doing.

3.2.2 Observations

Beebe (2001: 49) emphasises that interviews need to be conducted in a relevant setting where listening can be combined with observing. This is necessary because interviewing goes together with looking, interacting and attending to more than the actual interview. Beebe (2001: 49) describes participant observation as an essential ethnographic technique that requires more than just sitting and watching. It also requires that relationships among different events be systematically explored and recorded. Although it may seem a straight forward technique Bless and Higson-Smith (2000:103) warn that observation must be done in a systematic way and follow scientific rules, if usable, quantifiable data are to be obtained.

The rules that should be followed for observations include the following:

- it must be planned systematically, specifying what and how to observe;
- it should be recorded in a systematic, objective and standardised way and
- it should be subjected to control in order to maintain a high level of objectivity.

3.2.3 Focus group discussions

Kitzinger and Barbour (1999: 4) define focus groups as follows: “Focus groups are group discussions

exploring a specific set of issues. The group is ‘focused’ in that it involves some kind of collective activity”. These authors make a clear distinction between the broader category of group interviews and focus groups. In focus groups researchers encourage participants to talk to one another and to comment on each other’s experiences and view points. They however qualify this distinction by saying that any group discussion may be called a focus group as long as the researcher is actively encouraging of, and attentive to the group interaction. Babbie and Mouton (2001: 291) agree and state that focus groups are generally used in two ways within the qualitative paradigm. The first is what is referred to as “get-ten-for-the price-of one way” where individual responses of the group members are requested and recorded. The second way allows “a space in which people may get together and create meaning among themselves”.

Focus groups are ideal for exploring people’s attitudes and experiences around specific topics (Kitzinger & Barbour, 1999: 5). Many African cultures make use of small groups to address concerns within the community and the focus group method could sometimes be a method of choice in the African context (Bless & Higson-Smith: 2000:111).

An advantage of group discussions is that it can often generate more critical comments than interviews (Kitzinger, 1999). Using a method that facilitates the expression of criticism and at the same time explores different types of solutions can be invaluable if one is seeking to improve services. According to Kitzinger (1999) focus groups as a method is especially appropriate when working with particularly disempowered patient populations who are often reluctant to give negative feedback or may feel that any problems result from their own inadequacies. Kitzinger (1999) concludes that group data are neither more nor less authentic than data collected by other methods, but focus groups may be the most appropriate method for researching particular types of questions for example the study of attitudes and experiences.

Fern (2001: 13) provides a general conceptual framework for focus group processes (Figure 3.2) that can serve as a “road map to guide us through the maze of issues in focus group research”. However, the author warns that it is a hypothetical framework as many of the relationships have not been tested empirically.

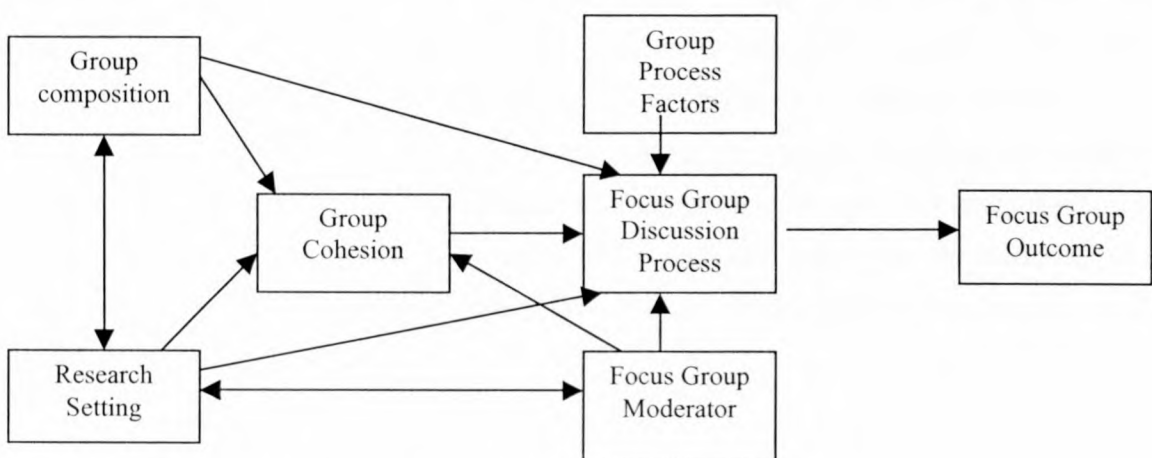


Figure 3.2: The general focus group process framework (Fern, 2001:12)

Fern (2001: 14-18) explains the different concepts included in this framework as follows:

Group cohesion refers to the sense of closeness and common purpose among group members. It is important in focus group research because it provides the reason for the focus group participants to contribute to the discussion. The framework indicates that the personal characteristics of the participants, the focus group moderator and the setting all affect group cohesion. To achieve group cohesion the participants need to have a “collectivist cultural value orientation”. Their social class, gender and cultural value orientation should therefore be the same.

The focus group discussion process is characterised by different stages. The first stage is one of social integration followed by the mirror reaction when individual participants realise that others share similar ideas or anxieties and this serves to relieve their anxieties. The third stage is referred to as “the condenser phenomenon”. This involves “an activation of the collective conscious and unconscious” and makes it easier for participants to talk about issues raised in the group discussion. The last stage is one of “exchange” in which information and explanations are shared. Most time should be spent on this stage during the focus group discussion.

The focus group outcome refers to the success in achieving the researcher’s goals and has three components: task performance effectiveness (e.g. quantity, quality and the cost of information), the user’s reaction and lastly the group member relations (cohesive, compatible and lively group). Whether the outcome is a success depends on the researcher’s qualitative judgement about these three outcome components.

The research setting: This refers to the space in which the group is conducted and includes the ambient, human and material aspects of the environment.

The focus group moderator: According to Caruso (in Fern, 2001: 75) a focus group of professional moderators determined that the important moderator characteristics include: personality, sensitivity, insight, ability, empathy, warmth, listening skills and analytical skills. Prior education should include psychology, sociology or some combination of these. The moderator should be someone the group can accept and relate to. Fern (2001: 75) also refers to recommendations by Vasquez and Han that focus group moderators should be from the same ethnic and racial background as the respondents. This allows the moderator to establish greater rapport, increase participants’ willingness to participate, which contributes to increased reliability and validity of the information collected.

3.2.4 Focus group application

The use of focus groups has not only increased in frequency but also in the number of disciplines using them (Fern, 2001:4). According to Fern (2001:4) focus group research can be adapted for three different types of research tasks namely exploratory, experiential and clinical. This author further distinguishes between theory applications and effects application of focus groups. Theory application is conducted for the purposes of theory development and theory confirmation while effects applications is conducted for decision-making purposes.

The application of focus groups is summarised in the following table adapted from Fern (2001: 6).

Table 3.1: Application of focus groups

Exploratory		Clinical		Experiential	
Effects application	Theory application	Effects application	Theory application	Effects application	Theory application
Creating <i>New ideas</i>	Generating <i>Theoretical constructs</i>	Unveiling <i>Motives</i>	Explaining <i>Beliefs Feelings Behaviours</i>	Sharing <i>Life experiences</i>	Triangulating <i>Mail surveys Telephone interviews Face-to-face interviews</i>
Collecting <i>Unique thoughts</i>	<i>Hypothesised relationships</i>	Exposing <i>Resistance to persuasion</i>		Eliciting shared <i>Attitudes Preferences Intentions Behaviour</i>	
Identifying <i>Needs Expectations Issues</i>	Developing <i>Models Hypotheses Theories</i>	Uncovering <i>Predispositions Biases Prejudices</i>	Revealing <i>Reasons for preferences</i>	Understanding <i>Language Knowledge Experiences</i>	Confirming <i>Models Hypotheses Theories</i>
Discovering <i>New uses for existing products</i>		Analysing <i>Predilections towards aberrant behaviour</i>		Evaluating <i>Strategies and programs Advertising Surveys</i>	
Explaining <i>Puzzling survey results</i>					

The exploratory approach and the clinical tasks are similar to each other in that the information they generate tends to be unique. The creative efforts or unique experiences of the participants of the focus groups and the creativity of the researcher are usually requisites for exploratory tasks (Fern, 2001: 149). While clinical tasks are concerned with either suppressed or unknown information, experiential tasks deal with information that is known to the individual respondents. The term experiential refers to “the thoughts, feelings and behaviour shared by members of a culture, race/ethnic groups, community or familial groups” (Fern, 2001: 174). With experiential tasks the researcher is more interested in differences across individuals than in their sameness and generally not interested in generalising beyond the population of interest (Fern, 2001:8).

The focus groups conducted in the present research were used for experiential effect application with specific reference to *sharing* which refers to the life experiences of participants and *eliciting* that refers to extracting or evoking the shared attitudes or feeling of participants (Table 3.1).

The use of the experiential task approach in focus group research creates specific methodological issues:

Group cohesion is important because the normative behaviour in these types of focus groups is sharing everyday experiences. To achieve group cohesion it is important to have homogeneous groups. This is achieved by recruiting members with similar life experiences for each particular group.

With regard to **group size**, the purpose of experiential tasks is to access shared perspectives of the group members and as the group size increases, so does the probability that only shared information will be brought up for discussion. Fern (2001: 182) therefore recommends 10 to 12 people per group. Because cohesive groups promote conformity a narrower range of responses can be expected from such groups (Fern, 2001:183).

The number of groups in experiential tasks is guided by the number of issues on the discussion guide. The more issues that need to be discussed, the more groups will be needed. Furthermore groups should be run until no more new information is forthcoming. Fern (2001:183) recommends four to six groups per “break characteristic” with “break characteristic” referring to the specific characteristics that were used to select participants for a specific group e.g. number of children a mother has.

In experiential research it is especially important that the **moderator** must blend in with the group and be able to establish rapport with the group. The moderator must be more of a participant than a leader and be very receptive to the viewpoints of the other group members (Fern, 2001: 187).

4 Data processing

4.1 Approaches to analysis

“Data analysis is the process of bringing order, structure and meaning to the mass of collected data. It is a messy, ambiguous, time-consuming, creative and fascinating process. It does not proceed in a linear fashion; it is not tidy (De Vos, 2002b: 340)”. According to Fielding (cited in Pope, Ziebland & Mays, 1999) “good qualitative analysis will be able to reflect some of the “truth of a phenomenon” by reference to systematically gathered data whereas poor qualitative analysis is anecdotal, unreflective, descriptive without being focused on a coherent line of enquiry”.

According to Dey (1993: 1) different researchers have different purposes, and they may pursue different

types of analysis to achieve their purposes. Dey (1993: 2) states that because there are so many different approaches to qualitative research it is reasonable to wonder if there is sufficient common ground to identify a “common core to analysing qualitative data” analysis. Tesch (1990: 78) however managed to reduce the multiplicity of perspectives to three basic orientations that may be used to create some order in qualitative data analysis types. These include the characteristics of language, as communication or as it mirrors culture; the discovery of regularities or descriptive/interpretative approaches and lastly the comprehension of the meaning of text/action or theory building approaches (Table 3.2).

Table 3.2: Research interest as it relates to data analysis (Tesch, 1990: 78)

Research interest						
1	The characteristics of language	a.	As communication	<i>i</i>	<i>With regard to its content</i>	
					<i>ii</i>	<i>With regard to its process</i>
		b.	As it mirrors culture		<i>i</i>	<i>In terms of cognitive structures</i>
					<i>ii</i>	<i>In terms of the interactive process</i>
2	The discovery of regularities	a.	As the identification and categorisation of elements and the establishment of their connections			
		b.	As the identification of patterns			
3	The comprehension of the meaning of text or action	a.	Through the discovery of themes			
		b.	Through interpretation			

The sequence of the items in the outline by Tesch (1990: 78) is not arbitrary. From the top of the table to the bottom the approaches become less structured, less formal and more “humanistic”. Some of the studies that fall under the “characteristics of language” are so structured that they are more quantitative in nature than qualitative (Tesch, 1990: 78).

The research interest of the Duncan Village Nutrition Project could be categorised as being part of research that aims for the discovery of regularities (point 2 in Table 3.2). Tesch devised the map in Figure 3.3 to further describe research that aims for the discovery of regularities.

The focus of the Duncan Village Nutrition Project follows the highlighted path in the diagram: discerning of patterns → as deficiency ideologies → qualitative evaluation. “Discerning patterns as deficiencies” is according to Tesch (1990:65) shorthand for saying that these types of research are not used for the development of theoretical notions, but for “practical scrutiny of human situations”. It is often also used for the formation of alternative solutions where problems are found to exist.

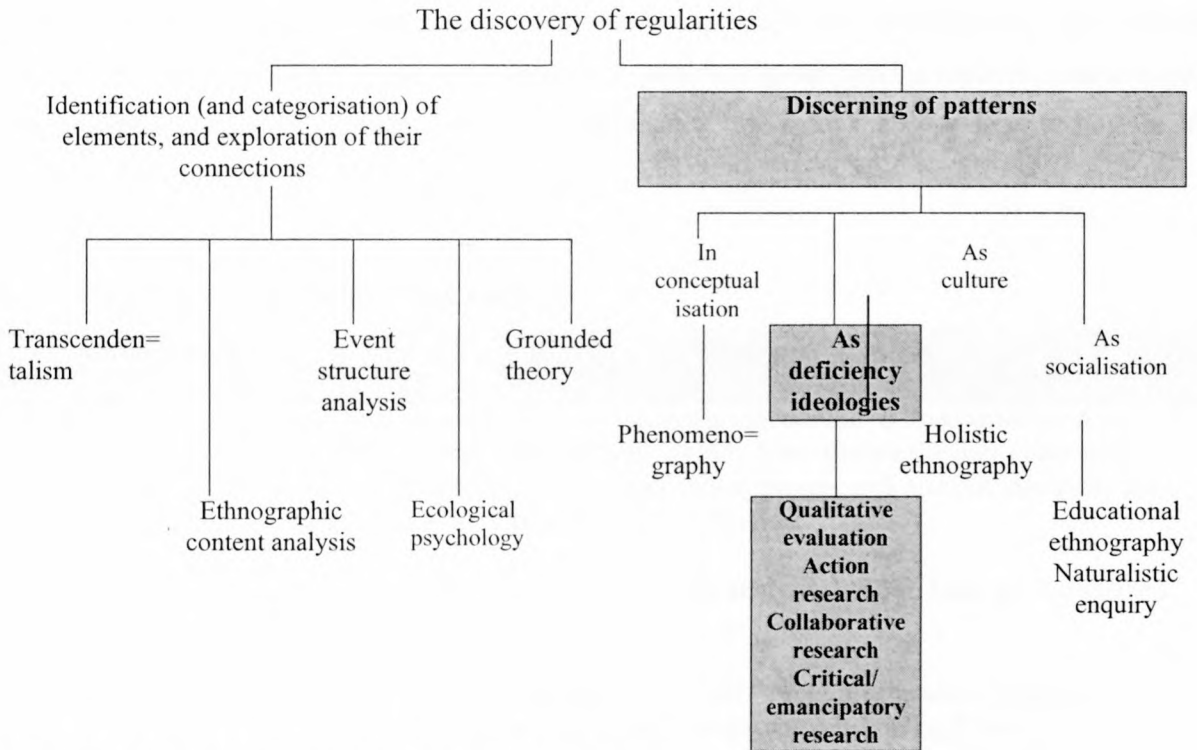


Figure 3.3: Research that aims at the discovery of regularities (Tesch, 1990:63)

Tesch (1990: 84) describes one feature that distinguishes the two subgroups within this “discovery of regularities” cluster from each other: For some researchers it is important to establish linkages between/among the elements that they have identified and classified, while others aim mostly at systematic and insightful description of the phenomenon being studied. However the differences in analysis approaches between the two subgroups in the discovery of regularities are slight (Tesch, 1990: 84). The “connections sub group” perhaps places more emphasis on the relation of the parts to the whole and see memo-writing and category development as a first phase with code application as a second phase. The “pattern subgroup” seldom establishes conceptual categories for organising the data beforehand. Tesch concludes (1990: 92) that “the distinctions between the two phases blur in practical application”.

4.2 The process of data analysis

According to Dey (1993: 30) the aim of analysis is not just to describe data but to describe the objects or events to which the data refers. Such description forms the basis of any science. Description furthermore lays the basis for analysis, but analysis also lays the basis for further description. Dey (1993:53) therefore describes the process of qualitative analysis as an “iterative spiral” that starts with data that are described, classified, connected and lead to the compilation of an “account”. This account is the most important

objective of the analysis and to produce an “intelligible, coherent and valid account” it is important that the analysis be done in a theoretical and systematic way (De Vos, 2002b: 340).

Five steps are suggested for qualitative data analysis namely (1) Collecting and recording data; (2) managing data; (3) reading and memoing; (4) describing, classifying, interpreting and (5) representing and visualising (De Vos, 2002b: 340). This author presents this analytical spiral in a linear form but reminds researchers that the steps presented also move in circles. Table 3.3 contains a summary of the steps described by De Vos (2002b: 340 – 344).

Table 3.3: The process of qualitative data analysis

Step	Description
Data collection and recording	Data must be recorded in a systematic manner that is appropriate and will facilitate analysis. Data analysis already starts during the data collection process. It therefore involves analysis at the research site but also away from the site following a period of data collection.
Managing data	This step presents the first loop in the analytical spiral. Data are transcribed and organised during this phase.
Reading and writing memos	During this step the researcher must get “a feel for the whole database”. Transcripts should be read in their entirety several times. During the reading process memos (short phrased, ideas or key concepts) could be added to the data.
Describing, classifying and interpreting	<p>This step is the most important aspect of qualitative data analysis. Qualitative research uses analytical categories to describe and explain social phenomena. These categories may be derived inductively, that is obtained gradually from the data, or used deductively, either at the beginning or part way through the analysis as a way of approaching the data (Pope <i>et al.</i>, 1999).</p> <p>The process of forming categories can be described as follows: It “involves noting regularities in the setting or people chosen for study. As categories of meaning emerge the researcher search for those that have internal convergence and external divergence. That is, the categories should be internally consistent but distinct from one another. Here the researcher does not search for the exhaustive and mutually exclusive categories of the statistician, but instead seeks to identify the salient, grounded categories of meaning held by participants in the setting”.</p> <p>Interpretation involves making sense of the data. Several forms of interpretation could be involved such as interpretation based on hunches, insight and intuition. It might also be an interpretation within a social science construct or idea, or a combination of personal views as contrasted with a social science construct or idea.</p>
Representing and visualising	In the final phase of the spiral researchers present the data in text, tabular or figure form. Hypotheses or propositions that specify the relationship among categories could also be presented.

Although focus groups do not demand distinctive analytic techniques, the analysis of focus group data could present particular difficulties that could be minimised by the following (Frankland & Bloor, 1999:145):

- A clear definition of the focus of the study, in order to concentrate data collection on a narrow spectrum of projected analytical topics
- Careful attention of the moderator to obvious ambiguities, latent disagreements and ‘unfinished business’ that arise from the groups
- Acceptance by the analyst that some seemingly deviant cases must be dismissed as irresolvable ambiguities from which no analytic inferences should be drawn.
- A systematic approach, analytic induction or some other system, must be undertaken in analysing the data.

Focus group data similar to interview data, can present the researcher with a “rich, complex and extensive data set” (Frankland & Bloor, 1999:145). Many of the potential advantages can however be lost in the absence of appropriate methods of analysis. Webb and Kevern (2001:798) stress the importance of considering at the research planning stages (1) the underlying assumptions of the methodological approaches that may be used to “underpin focus group research” and (2) methods to be used to analyse and report the data generated.

Analysis can be done by hand by the researcher or with the aid of computer programs. Those in favour of using the computer argue that the rigour of data analysis can be improved by using computer-aided qualitative data analysis software (CAQDAS) (Babbie & Mouton, 2001: 502-503).

4.2.1 Data analysis by hand

Analysing data by hand is a process that is advocated by researchers who feel that every time an intervention is made to data the researcher is one more step further removed from it (Babbie & Mouton, 2001: 504). Dey (1993: 61) describes certain disadvantages of using computer-based analysis that could also be construed as advantages of analysing by hand. The danger exists that when using computer software the tasks that cannot be done by the software are ignored and that the analysis is then reduced to what the computer can do. Another reservation that is expressed is that the use of a computer can encourage a “mechanistic” approach to analysis where the roles of creativity, intuition and insight in analysis are eclipsed in favour of a routine and mechanical processing of data.

Pope *et al.* (1999) describe the general process of data analysis with or without the assistance of computer software and state with specific reference to the aspect of grouping categories together that the repeated physical contact and handling of the data in “old-fashioned” methods like cardex systems and creating matrices and spreadsheets could be very valuable. The process of re-reading the data and sorting it into

categories means that the researcher develops an intimate knowledge of the data, even if the process is “laborious”.

4.2.2 Computer-aided qualitative data analysis software (CAQDAS)

CAQDAS offers the possibility of more efficient data coding and management than the word processing software previously used (Marshall, 2002: 58). Marshall (2002: 58) refers to Richards and Richards who noted that despite the subtle and intuitive nature of qualitative analysis, CAQDAS has contributed “powerful techniques for managing not only documents but also concepts, and for constructing and expressing theories”. A number of software packages are available for qualitative analysis. One of the best known packages, and commonly used in South Africa, ATLAS.ti (Babbie & Mouton, 2001: 509) was used for the analysis of the data of Phase 2 of this research.

According to Muhr (1997:1), the designer of ATLAS/ti, it is a “powerful workbench for the qualitative analysis of large bodies of textual, graphical and audio data. It offers a variety of tools for accomplishing the tasks associated with any systematic approach to ‘soft’ data, e.g. material, which cannot be analysed by formal, statistical approaches in meaningful ways. In the course of such a qualitative analysis ATLAS/ti helps you to uncover the complex phenomena hidden in data in an exploratory way.” Figure 3.4 (compiled from Babbie & Mouton, 2001: 510-514) presents an overview of the general working procedure of ATLAS/ti

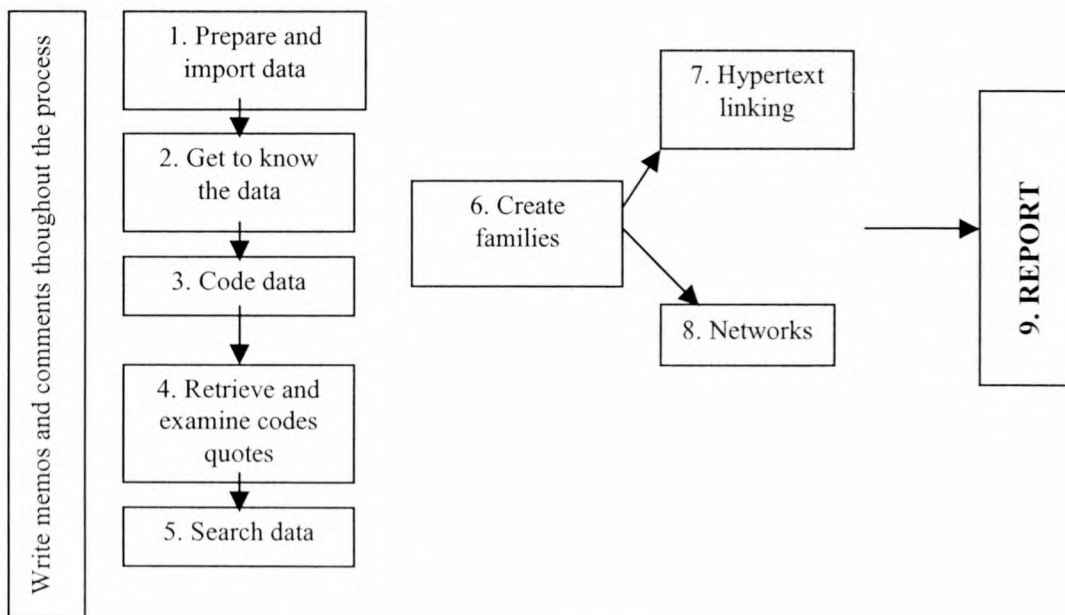


Figure 3.4: General working procedure of ATLAS/ti

Babbie and Mouton (2001: 511) explain the components of the process in Figure 3.4 as follows:

Preparing and importing texts: Text files have to be saved in a specific text format which are then

imported as primary documents into the program. The primary documents are imported into a hermeneutic unit, the term used to refer to the specific project.

Coding the data: Coding is the classification of a selected segment of textual data by means of a label or summary term that expresses some essential quality of the phenomenon as reflected in the data. The program allows for six forms of coding (Table 3.4), the names of which reflect the impact of ideas and terminology of Grounded Theory (see Figure 3.3) on the design of the programme (Muhr, 1997: 39).

Table 3.4: Coding techniques supported by ATLAS/ti (Muhr, 1997: 39-44)

Coding techniques	Description
Open coding	A quotation is selected and given a name. Codes' names must be as concise as possible
Free coding	Code is free of association with text (e.g. a predetermined code)
Quick coding	Assigning the currently selected code
In-Vivo coding	The selected text is registered as a quotation and used as the code's name
Code-by-list	Use already assigned codes from the code list
Auto-coding	Primitive coding – searches for particular words

Retrieving codes and quotes: Codes, their attached quotations and all primary documents from which they were derived, are all simultaneously visible on the screen and facilitates “the iterative spiral” of qualitative data analysis.

Organising families: Muhr (1997:56) refers to families as “containers for objects of type” for primary documents, codes and memos. Families serve a variety of purposes. One important objective is to cope with possibly large amounts of objects by classifying them into sub-sets.

Networks: ATLAS/ti allows the data analyst to create visual images of data in relation to other data, so that data can be presented in the context of its inter-relationships.

5 Validity and reliability of qualitative research

There has been much debate among qualitative researchers over whether qualitative and quantitative methods can and should be assessed according to the same quality criteria (Mays & Pope, 1999). Kelle and Laurie (1995: 20) quote a qualitative researcher who stated that “We don’t do validity and reliability”. With this statement the opinion is expressed that the epistemological foundations of the qualitative paradigm would under no circumstances allow the application of these standards. The explanation for this type of position could be because the supporters of this viewpoint feel that individuals and collective actors can interpret reality in different ways. Multiple realities therefore exist that are valid in their own terms and cannot be judged from outside. However in health research such a position would according to Murphy (cited in Mays & Pope, 1999) “preclude qualitative research from deriving any unequivocal insights relevant to action and would therefore, command little support among applied health researchers”.

The other extreme view in the debate about the meaning and proper use of the terms reliability and validity in qualitative research are those of scientists who repudiate any validity claim regarding qualitative findings (Kelle & Laurie, 1995:21). The middle ground between these two extremes maintains that every result of an act of scientific enquiry “does to a certain extent represent an image or a model of a real world process”. As such it must be open to an assessment in order to examine the validity of its results (Kelle & Laurie, 1995:21).

According to Mays and Pope (1999) the question should then be asked whether the same quality criteria for qualitative and quantitative research can be used. There are two opposing positions in this argument namely that of subtle realism and those of the anti-realists (Mays & Pope, 1999). Advocates from the position of the anti-realists argue that since qualitative research presents a distinct paradigm that generates a distinct form of knowledge, it is inappropriate to apply criteria derived from an alternative paradigm. When the different quality criteria and concerns of the anti-realists are examined it becomes clear that many of these criteria are not exclusive to qualitative research (Pope & Mays, 1999). There is therefore an argument for the position of subtle realism that both qualitative and quantitative research could be assessed against the same standards even if it means that the assessment may have to be modified to take into account the distinctive goals of qualitative research. For example qualitative research frequently does not seek to generalise to a wider population for predictive purposes, but seeks to understand specific behaviour in a naturally occurring context (Mays & Pope, 1999).

Mays and Pope (1999) refer to a comprehensive review of the literature on qualitative research in health technology assessment that supports the case for assessing such research according to its validity and its relevance. Validity in the qualitative paradigm is defined as the extent to which the account accurately represents the social phenomena to which it refers while relevance is defined in terms of the capacity of the

research to help some group of practitioners solve the problems they faced.

Another approach to validity issues in qualitative research is suggested by Babbie and Mouton (2001:273) who state that the quantitative approach aims to control the various sources of error that might affect the ultimate validity of the research results. Objectivity is obtained through maximum control of extraneous variables. One of the ways objectivity is understood in the qualitative paradigm is that the researcher is acknowledged as the most important “instrument “ in the research process and this places a responsibility on the researcher to be unbiased in his or her interpretations and descriptions (Babbie & Mouton, 2001: 273).

Table 3.5 (column 3) lists the criteria suggested by Newman and Benz (1998: 30, 50) that could be used to analyse predominantly qualitative research for its design validity. The criteria are also brought into relation with Babbie and Mouton’s (2001: 276) impression of the quantitative and qualitative notions of objectivity that are listed in columns 1 and 2. Column 4 provides an explanation of the criteria.

Table 3.5: Quantitative and qualitative notions of objectivity and design validity criteria

	1.	2.	3.	4.
		Qualitative (Babbie and Mouton. 2001: 277).	Design validity criteria for predominantly qualitative research (Newman & Benz, 1998:30)	Explanation of criteria (Babbie & Mouton: 276-278, Newman & Benz, 1998: 50-56, Beebe: 2001: 17-58)
Quantitative				
Internal validity		Credibility: Refers to the compatibility that exists between the “constructed realities that exist in the minds of the respondents and those that are attributed to them”	Prolonged engagement	Refers to whether observation was long enough to get an accurate reflection of the culture or history
			Persistent observation	Refers to whether sufficient time was spent on-site to get an adequate picture of consistency of behaviour
			Triangulation	Refers to the four basic types of triangulation namely the use of different data sources, the use of different researchers, the use of multiple perspectives to interpret a single set of data and lastly methodological triangulation or the use of multiple methods to study a single problem.
				Triangulation is not the combination of different kinds of data per se, but rather an attempt to relate different sorts of data in such a way as to counteract various possible threats to the validity of the analysis.

(continued on the next page)

	1.	2.	3.	4.
Quantitative		Qualitative (Babbie and Mouton, 2001: 277).	Design validity criteria for predominantly qualitative research (Newman & Benz, 1998:30)	Explanation of criteria (Babbie & Mouton: 276-278, Newman & Benz, 1998: 50-56, Beebe: 2001: 17-58)
			Referential adequacy	Refers to whether the researcher used enough supportive material (e.g. references, records and interviews)
			Peer debriefing	Refers to whether the researcher talked to any other professional to get another perspective on what was experienced.
External validity		Transferability: Refers to the extent to which the findings can be applied in other contexts or with other respondents (Babbie & Mouton, 2001: 277)	Thick description	Refers to the issue of transferability in a qualitative study, which depends on "similarities" between sending and receiving contexts. To enable the reader to make judgements about transferability the researcher must collect "sufficiently detailed descriptions of data in context and report them with sufficient detail and precision".
			Purposive sampling	The aim of purposive sampling is to maximise the range of specific information that can be obtained from and about that context, by purposely selecting locations and informants that differ from one another.
			Structural relationships	Refer to the importance of logical consistency between different data sets. When attempting to interpret data and formalise conclusions, the researcher should support these insights, as far as possible by interweaving different data sets.
			Theoretical sampling	Refers to whether the researcher "followed where the data led". First tentative explanations could for example suggest other data sources.
Reliability	Dependability		Overlap methods	Refer to the same process as triangulation. Typically undertaken to establish validity. If validity is demonstrated it would be equivalent to the demonstration of reliability. (continued on the next page)

	1.	2.	3.	4.
Quantitative		Qualitative (Babbie and Mouton. 2001: 277).	Design validity criteria for predominantly qualitative research (Newman & Benz, 1998:30)	Explanation of criteria (Babbie & Mouton: 276-278, Newman & Benz, 1998: 50-56, Beebe: 2001: 17-58)
			Inquiry audit (Babbie & Mouton)	Refers to examination of the documentation of critical incidents (documents and interview notes) and a running account of the process (e.g. daily journal) of the inquiry by an auditor. In determining its acceptability the auditor also attests to the dependability of the inquiry.
Objectivity		Confirmability	Audit trail	Refers to whether the researcher has good documentation, so that another researcher can easily replicate the research.

In addition to the above criteria for ensuring validity in the design, Hammersley (cited in Mays & Pope, 1999) argued that good quality qualitative research must be relevant in some way to a public concern. Research could be relevant when it either adds to knowledge or increases the confidence with which existing knowledge is regarded. Another important dimension of relevance is the extent to which findings can be generalised beyond the setting in which they were generated. Greater representativity can be achieved through proper sampling techniques or by including enough descriptive detail for the reader to be able to judge whether or not the findings apply in other similar settings (Mays & Pope, 1999).

6 Summary of study samples and methods used in Phase 1 and 2 of the research

A summary of the categories of participants and data used in Phases 1 and 2 of the research is presented in Table 3.6.

Table 3.6: Categories of participants and data sources for Phase 1 and 2

Population segment	Mothers with 0 –24 month old children living in Duncan Village and attending local government clinics in Duncan Village		
Population Units	The 3 catchment areas of the clinics in Duncan Village		
Research sites			
Phase 1	The 3 local government clinics (Sites 1, 2 and 3)) Gompo Centre for the Aged		
Phase 2	Buffalo city Municipality Obstetric unit at Frere Hospital Convenient site for mothers from all 3 population units		
	Categories of participants/ data sources	Sub-categories	
Phase 1	Step 1	Health workers	<ul style="list-style-type: none"> ▪ Professional nurses ▪ Nutritionist ▪ Social worker
		Representative from Non-governmental Organisations (NGOs)	<ul style="list-style-type: none"> • Baby care centre • Adult education NGO • Female church leader
	Step 2-4	Mothers	<ul style="list-style-type: none"> • Mothers with 6 week old children • Mothers with 14 - 18 week old children • Mothers with 8 - 12 month old children • Mothers with 18 - 20 month old children (3 sub-categories: undernourished, well nourished and overweight children)
		Family members	Grandmothers
Phase 2	Step 5-6	Mothers living in Duncan Village	<ol style="list-style-type: none"> 1. Mothers who do not attend clinic/mothers with children with incomplete immunisations 2. Mothers with children with complete immunisation 3. Pregnant women attending antenatal clinic 4. Pregnant women not attending antenatal clinic <p><i>Subcategory 1 and 2 to be further broken down into the following 3 categories:</i></p> <ul style="list-style-type: none"> • Mothers with children younger than 10 months • Mothers with children >10 and <20 months • Mothers with one child only
		Health workers	<ul style="list-style-type: none"> • Health workers from obstetric unit at Frere Hospital • Registered nurses – DV clinics • Community Health workers – DV clinics

A summary of the methods that were used during the different steps of the research for data collection is presented in Table 3.7.

Table 3.7: Summary of data collection methods for Phase 1 and Phase 2

	Participant	Research technique
Background DVDH study (Completed in 1998)	Mothers	Structured questionnaire
	Mother and child	Anthropometric and biochemical evaluations
Phase 1		
Step 1	Key-informants	Non-scheduled structured interview
Step 2 - 4	Mothers	Non-scheduled structured interview
	Mothers	Observations
	Mothers and grandmothers	Focus group discussions
Phase 2		
Step 5	Mothers	Focus group discussions
Step 6	Health care workers	Focus group discussions

Chapter 4:

Phase 1 – Determination of relevant nutrition-related messages topics

The main aim of Phase 1 of the research was to determine message topics in the previously identified focus areas that could be included in nutrition-related education to be given to mothers and pregnant women attending PHC clinics in Duncan Village. This chapter describes the consultative process that was followed to obtain the necessary information for the formulation of the topics. The formulated message topics, as well as the help topics that were subsequently formulated, are presented together with the rationale behind the formulation of each topic. Figure 4.1 repeats the research framework and objectives for Phase 1 of the research.

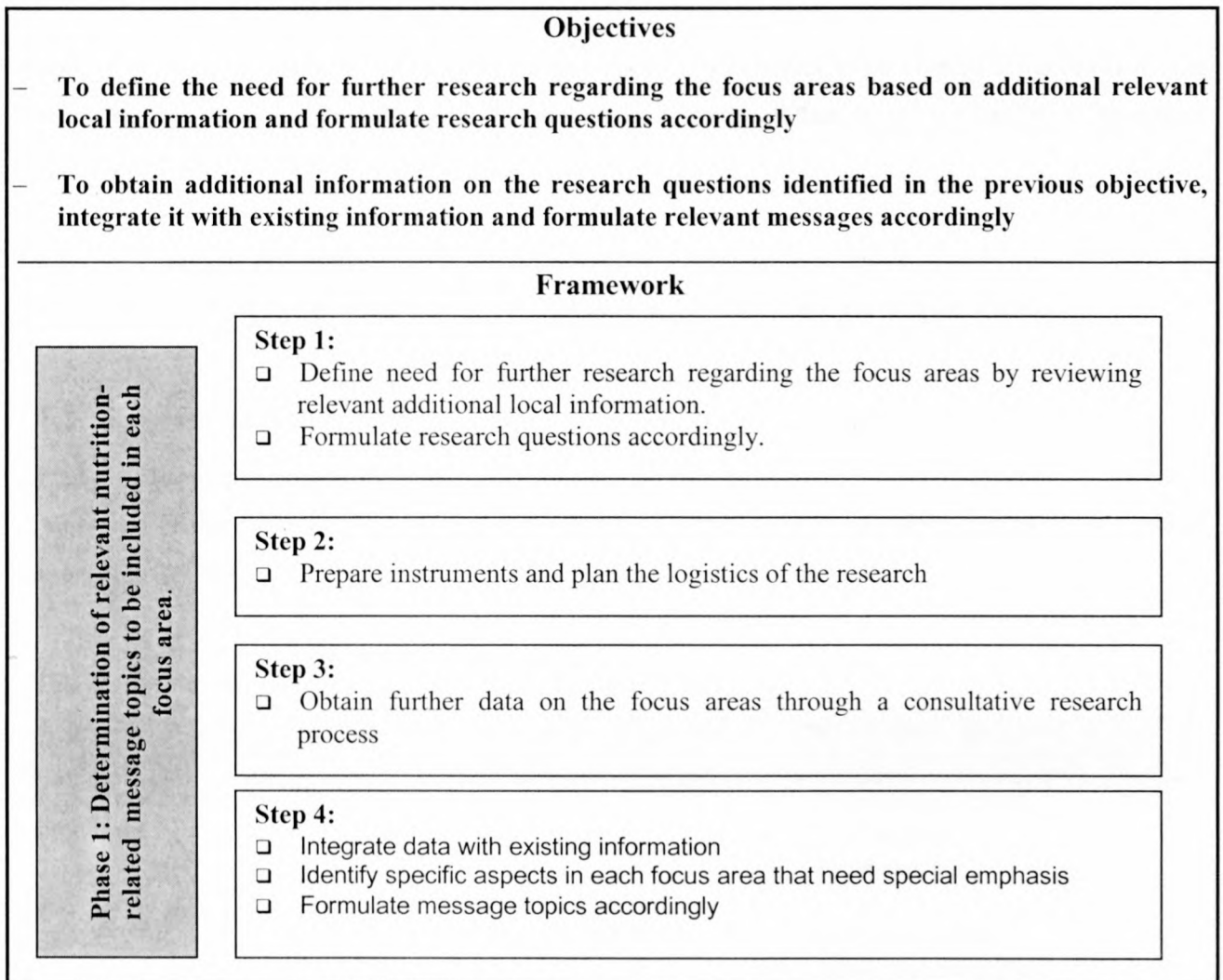


Figure 4.1: Objectives and research framework for Phase 1 of the research

1 Define the need for further research

This step in the research focused on obtaining additional information regarding the focus areas from any relevant research. This included data that was not necessarily directly nutrition-related but which could give insight into the target population. Interviews were also conducted with key-informants in East London.

1.1 Methods and procedures (Phase 1: Step 1)

1.1.1 Review of relevant published research

1.1.1.1 Data sources

A literature search and discussion with local academics was conducted to identify relevant papers and reports published after completion of the previous DVDH study in 1998. Only one study that was relevant to the present research was found, namely the Duncan Village HIV/AIDS Community Assessment.

Although the National Food Consumption Survey (1999) also completed two enumerator areas (EA's) in Duncan Village, these data are included in the national and provincial data. It was not feasible to have these data extracted and analysed separately.

1.1.1.2 Analysis procedure

The data sources were perused and any information relevant to the focus areas was documented.

1.1.2 Key-informant interviews

1.1.2.1 Participant categories

A summary of the different categories of participants included in this exploratory step of the research is presented in Table 4.1.

Table 4.1: Main categories of participants for Phase 1: Step 1

Phase 1: Step 1	Main categories of participants/data source	Sub category
Key-informant interviews	Health workers	<ul style="list-style-type: none"> – Professional nurses – Nutritionist – Social worker
	Representative from relevant NGO	<ul style="list-style-type: none"> – Baby care centre – Adult education NGO

1.1.2.2 Sampling

A field trip was undertaken and personal visits were made to each key-informant to schedule the appointments. Participants were chosen purposively for their local knowledge and/or influence (Table 4.2).

Formal permission was obtained from the Buffalo City Municipality (then still the East London Transitional Local Government) to interview staff at the clinics in Duncan Village. At the end of each interview the key-informants were requested to identify any other individuals who should be interviewed. However, no new informants were identified in this way.

Table 4.2: Key-informants and their relationship to the Duncan Village community

Key-informant	Relationship to the Duncan Village community
Professional nurse x 2	Heads of two of the local government clinics in Duncan Village
Professional nurse	Head of the paediatric section of the Duncan Village Day Hospital
Dietician	Head of the Amatole District Nutrition Office of the Eastern Cape Department of Health
Social worker	Employed at the Child Welfare Association in East London and responsible for Duncan Village
Church leader	Female leader in the Baptist church in Duncan Village
Community leader	SANCO (South African National Civic Association) member responsible for the health desk of the local branch
NGO representative	Executive officer of ACETE, a well-known non-governmental organisation working in the area and involved with adult education
NGO representative	The director of the Salem Baby Care Centre, a non-governmental organisation operating in close proximity of Duncan Village

1.1.2.3 Question guide and fieldwork

A question guide was developed for the key-informant interviews (See Addendum A). The previously identified focus areas were used as a point of departure for the development of the guide.

The interview guide aimed to capture perceptions and knowledge of the key-informants on the following issues:

- Current feeding practices and possible constraints and motivations for changing behaviour
- Current health and hygiene practices and possible constraints and motivations for changing behaviour
- Current resource management practices and possible constraints and motivations for changing behaviour
- Health care providers' knowledge, attitudes, and skills related to counselling on child feeding, nutrition and other care behaviours
- Individuals, services, and media that may influence child feeding and care behaviour
- Description of channels through which services and educational programmes could be delivered
- Data on experiences and effectiveness of previous or current programmes to improve child nutrition

Guidelines by Dicken *et al.* (1997) were used to compile the questions on feeding practices and an UNICEF document (1999) guided the formulation of the other questions.

Questions included in the guide were structured but open-ended. The question guide was pilot tested with a professional nurse in charge of a clinic in an area adjacent to Duncan Village and some changes were made, especially concerning feeding practices.

The researcher conducted the interviews and the interviews were tape-recorded as far as possible to facilitate the process and allow for a free flow of thoughts on the different subjects. However in some cases time constraints and other circumstances made it impossible to record the interviews and brief notes were made during the interviews.

1.1.2.4 Data analysis

The data from the key-informant interviews were qualitatively analysed by hand. A number was assigned to each respondent and each respondent's answer was recorded under the relevant question. The answers were then interpreted, integrated and related to other relevant research under the headings of the six previously identified focus areas (De Villiers & Senekal, 2002: 1240). Research questions were subsequently formulated to guide the research necessary for obtaining the required additional information to ensure the formulation of appropriate message topics in each of the focus areas.

1.2 Results

1.2.1 Review of relevant published local research

Findings and recommendations of the Duncan Village HIV/AIDS Community Assessment prepared for the Duncan Village HTA (High Transmission Area) Project (Pakade, Mahlalela, Ngcaba & Weir, 2001) are presented in Textbox 4.1:

Textbox 4.1: Findings and recommendations of the Duncan Village HIV/AIDS community assessment

Findings

- Women are frequent visitors to shebeens, bars or taverns.
- Women younger than 20 were more likely to visit sites that were most frequently mentioned as sites where people go to meet sexual partners. Alcohol was also available at these sites.
- The majority of the women visiting these sites were unemployed or only employed occasionally.

Recommendations

- Focus interventions in the poorest densely populated areas with temporary housing. In these environments the population is particularly vulnerable to the effects of poverty and disease.
- Focus interventions in sites where half or more of the women visiting the site are younger than 18.

1.2.2 Key-informant interviews

1.2.2.1 General comments

The interview process was considered to be completed after nine interviews had been conducted as no new information was emerging. It became clear that little is known about the actual practices of mothers in Duncan Village. Most of the key-informants – even the nutritionist from the Department of Health - did not seem to have an in-depth knowledge of the actual practices of mothers in Duncan Village. Their responses seemed to be guided by experiences with their own children or by what they thought mothers do or alternatively by what mothers are taught to do.

The key-informant from SANCO did not have much knowledge of health and nutrition practices in Duncan Village, but his help was eventually essential in gaining access to the community during the further steps of Phase 1.

The data obtained from the key-informant interviews are presented in the following sections according to the previously identified focus areas. Some of the focus areas were combined for these purposes. The presentation of the key-informant data is followed by a summary of constraints to the improvement of child feeding in the target population as perceived by the key-informants.

1.2.2.2 Focus area 1: Self development (including the status of women)

The social worker was the most informative about issues concerning the self-development of mothers. She stated that when mothers come to see her it “is all about material needs”. According to her, mothers often do not have good caring practices because they are engaged in a struggle for survival. They will be out looking for food while older siblings have to look after the baby. The nutritionist also commented that people in Duncan Village are demotivated, they do not have jobs or food, “so they do not care about anything – not even about their children”. Education levels and alcohol abuse are other self-development-related issues that were mentioned by key-informants as constraints to improving child feeding in Duncan Village.

1.2.2.3 Focus areas 2 and 3: Household food security and resource management

All key-informants except the nutritionist thought that education around resource management could be useful to mothers. The nutritionist expressed her doubts as they have tried to teach people to think “food before they think of other things” with doubtful results. Some of the other respondents thought that there is a need to educate mothers about managing existing resources through simple budgeting or wise buying so that they could learn not to buy brand names and do bulk buying. Most respondents also thought that mothers should receive education on how to access the child support grant, as “it is not easy to get the grant”. The social worker thought that mothers who do receive the child support grant do not spend it wisely and that they should be taught the skills of vegetable gardening and bartering as “they cannot buy everything”.

According to the key-informants very little aid is available to mothers in Duncan Village. Except for the

child support grant and irregular food handouts, mothers must survive by managing meagre resources. According to the social worker, financial support from fathers for children is a problem in Duncan Village.

Family members, including the father, as well as health workers were mentioned as individuals who could influence child feeding and care behaviours and could therefore probably be described as support systems available to mothers. A variety of services were mentioned in this regard with only one key-informant mentioning clinics while churches and NGOs were more often mentioned.

1.2.2.4 Focus areas 4 and 5: Feeding practices and nutrition education

Various problems concerning child feeding were highlighted during the interviews. Poverty and **inadequate breastfeeding** were mentioned as problems. The social worker mentioned that many children she sees get *inembe* (roasted flour with water) from a bottle while very young children sometimes get solid food because there is no special food for them to eat. It is assumed that this practice takes place because of inadequate breastfeeding.

The key-informants mostly agreed that breastfeeding is usually initiated at birth, although the nutritionist stated that she believes that if the babies are born at home water is often given at first. This was echoed by the social worker who said that mothers learn from their mothers that colostrum is not good to give and that they then rather give water and Rooibos tea during the first few days. However others said that mothers do not know about colostrum.

It also seems as if breastfeeding has a “poor image” in the township especially with young women. The nutritionist expressed concern about whether mothers really believe that “breast is best” or if asked they just repeat it because they have seen or heard the message repeatedly. The social worker’s statement “mothers have no choice they must breastfeed because they have no means” raises the question of whether mothers breastfeed just because they have no money to buy formula. And if they do get the chance to buy formula, do they buy it whether it is a sustainable practice for them or not?

The majority of the key-informants reported that mothers think that they do not have enough milk. Many mothers will start giving formula because of this perception. Other common problems mentioned that could lead to formula feeding include mothers complaining that they are wet all the time because of the milk leaking; the baby does not want the breast and painful breasts.

Continued breastfeeding was not identified as a problem by key-informants. The social worker’s feeling was that mothers breastfeed for a long time, not because they want to, but because they have nothing else to give.

All key-informants reported that water is given from early on, often immediately after birth. The purpose in new-born babies is to clean the stomach and with older babies to prevent constipation. Glucose is often

added to the water.

Key-informants reported that many mothers **supplement breast milk** with formula from very early - sometimes from as early as two weeks old. While the registered nurse at the clinic said that no *inembe* is given, the social worker and church leader reported that *inembe* is given from early on. According to the social worker, mothers really would like to give formula but as they cannot afford it they give *inembe*. There seems to be a perception that formula is good for the growth of the baby. The following problem areas concerning early supplementation were identified by the key-informants: food is given from a very young age; commercial cereals are given because of advertisements and food is often given before milk because of “the soothing effect of the food on the tummy”. All these practices could lead to inadequate breastfeeding practices.

Other feeding practices that were reported by key-informants are as follow:

- *Introduction of family food:* Only one key-informant reported early introduction of family food.
- *Quality of food:* The nutritionist reported that mothers give an inadequate variety of foods.
- *Quantity of food:* The key-informants reported that inadequate distribution of food still exists in households, but that it is probably not such a problem with very small children as their food gets cooked separately. Mothers know when their children have had enough if they refuse to eat any further or they feel the child’s stomach.
- *Encouragement of feeding:* Some key-informants reported that children are sometimes force-fed.
- *Feeding during illness:* The key-informants indicate that mothers do continue to breastfeed if a child is ill and that they seek help at the clinic if a child is ill - although not necessarily help about feeding their child.
- *Convalescence:* According to the key-informants, mothers do not know about a recovery period during which extra nutrition is needed.

The key-informants identified no available **support centres** for breastfeeding except the clinics. The problem with the clinics seems to be that the mother is only seen when the baby is six weeks old and breastfeeding problems develop before this stage. This also leads to the situation where mothers decide to stop breastfeeding without consulting the health worker.

Very little information was obtained about **individuals and any other factors that influence child feeding** practices in Duncan Village. Grandmothers, private doctors, traditional healers and the radio were identified as possible role-players in this regard. Key-informants were doubtful about the role of the media in influencing mothers.

1.2.2.5 Focus area 6: Health and hygiene management

In general key-informants thought that problems exist in the area of personal as well as child hygiene management. They all felt that mothers could improve hygiene management even in the Duncan Village situation.

One of the professional nurses at the clinic thought that there are no problem with mothers' home health practices, but the professional nurse at the day hospital (where they deal with sick children) thought that mothers' health practices leave a lot to be desired.

Key-informants thought that mothers in general are relatively good in making use of health services but it was mentioned that "they are always late" (to arrive at the clinic) and that not all mothers take their children for immunisation.

Concerning the question of home based health protection, poor hygiene, overcrowding and child abuse were reported as problems. The social worker mentioned that they see more cases of neglect than actual violence against children.

1.2.2.6 Perceived constraints to the improvement of child feeding in the target population

Constraints like poverty, education levels, alcohol abuse and the need for further investigations into these matters were mentioned in the previous sections (see Sections 2.2.2 – 2.2.5).

However, additional constraints were identified which involved the health facilities where mothers could be exposed to messages aiming at improving child feeding. The nutritionist reported that although they are extensively involved with the training of primary health workers, almost all the health workers they train say that they cannot give nutrition education because of workload and time constraints. This was supported by a comment from one the registered nurses that videos probably would be the best way of conveying messages to mothers because she cannot guarantee that all mothers are reached by nutrition education.

The nutritionist also felt that the health workers do not have good attitudes, skills or nutrition knowledge, attitude and skills with respect to child feeding. Mothers should be taught to use what they have at home and make the food more energy dense. More practical advice by healthcare providers is therefore necessary.

When key-informants were asked about practical and feasible solutions to address these problems, constant supervision, in-service training and modification of attitudes were identified as things that could be done. However, the nutritionist also commented that she does not think that clinics are the best places to offer nutrition education because the "mother is just thinking about the baby and the nurse is just thinking about the long queue". According to her, community-based education would be ideal.

Other constraints mentioned by some key-informants are that economic and environmental conditions in Duncan Village have left people without hope and motivation. It is therefore important to know the target group and the socio-economic conditions in which they find themselves before any nutrition intervention programme is planned. The key-informant from the adult education and training non-governmental organisation was also adamant that any programme must take a modern approach and not try to teach people to go back to traditional survival practices.

1.3 Discussion: The need for further research

The previous DVDH study concluded that the most important determinants of growth failure in the study area are related to the mother's caring capacity, which seems to be determined by her period of residence in Duncan Village, her status in the household (head of household, role in decision making), her educational status, her nutritional knowledge and her health (general and reproductive). Care about ensuring food security at the child level (including feeding practices), utilisation of health services and the general hygiene of the child seemed to be particularly problematic (De Villiers & Senekal, 2002: 1240). The search for relevant published research and key-informant interviews were conducted to ascertain the need for further research into these issues and to formulate relevant research questions before message topics could be formulated.

From the interviews it was evident that most of the key-informants did not have an in-depth knowledge of the actual practices of mothers in Duncan Village. Their responses seemed to be guided by experiences with their own children or by what they thought mothers do or alternatively by what mothers are taught to do. Akor, Arthur and Antwi (2000: 13) reported similar experiences in the Ghana Country Study where it was found that key-informants' statements about mothers' understanding of the causes of ill-health in children reflected the health workers' own misconceptions and negative assumptions about women's beliefs. This could be considered a major constraint in effective nutrition-related education as it is only when communication of basic nutrition information is based on a proper understanding of existing knowledge, attitudes and practices that women can be empowered to successfully address malnutrition (Chatterjee & Lambert, 1990: 95).

Despite the lack of actual knowledge about feeding practices, various research needs could be identified from the key-informant interviews. In the following discussions the important issues in each of the six focus areas identified in the DVDH study are presented in a textbox followed by a discussion of the need for further research in the particular focus area.

1.3.1 Focus area 1: Self development (including the status of women)

Textbox 4.2 presents the conclusions from the DVDH study concerning self-development issues of mothers.

Textbox 4.2: DVDH conclusions regarding self-development

Improving mothers caring capacities through

- Improving the status of mothers
- Improving the decision making capacity of mothers
- Improving the education level of women in Duncan Village
- Improving mothers' caring attitudes
- Improving psychological well-being of women
- Prevention of teenage pregnancies
- Prevention of alcohol abuse and tobacco smoking

In the DVDH study (De Villiers & Senekal, 2002: 1237) it was found that growth failure children were 10 times more likely to have had a mother who drank regularly. There was also a strong trend for the mothers of the growth failure children to be younger than 18 years. The comments of the key-informants and the data of the HIV/AIDS community assessment supported the findings of the DVDH study, especially regarding the problem of alcohol abuse. It seems as if mothers and potential mothers engage in high risk activities like drinking and meeting new sexual partners at sites where alcohol is consumed and that many young girls are involved in these activities. The potential effect of alcohol abuse on the health of both mother and child makes this an issue on which additional information is needed.

The interviews showed that many mothers in the township face desperate circumstances and that there is a need for more information concerning the concept of "being a good mother in Duncan Village".

1.3.2 Focus areas 2 and 3: Resource management (including support structures) and household food security

The important issues concerning resource management and household food security in the DVDH study are presented in Textbox 4.3.

Textbox 4.3: DVDH conclusions regarding resource management and household food security

Resource management

- Improvement of support networks available to women

Household food security

- Improvement of food security on the individual child level

The information obtained in the key-informant interviews support the conclusion from the DVDH but point to a need to further investigate mothers' strategies to improve household food security and the way they

manage their resources, including the support structures available to them. The role of the child support grant in improving food security at the individual (child) level and the need for education about the grant is one of the important aspects that needs to be investigated.

Support for this research need comes from the work of Hamm and Bellows (2003: 42) who stated that there is a need for nutrition educators to familiarise themselves both with their community's food needs and with the political economy that influences access to food in the community. In addition they need to understand and address not only the dietary food needs but also the social, economic and environmental barriers to securing access to local food sources.

1.3.3 Focus areas 4 and 5: Feeding practices and Nutrition education

The important issues identified in the DVDH study concerning feeding practices and nutrition education are presented in Textbox 4.4.

Textbox 4.4: DVDH conclusions regarding feeding practices and nutrition education

Feeding practices

- Improving dietary intake with special reference to protein and energy
- Improving feeding practices

Nutrition education

- Improving the nutritional status of pregnant women and prospective mothers
- Improving mothers' knowledge of nutrition and feeding practices

It is clear from the interviews that the key-informants could not supply enough detailed information about child feeding practices of mothers in Duncan Village. The need for in-depth, quality information in this regard is reflected in the recommendation of the ACC/SCN (2001: 77) that very specific behavioural recommendations should be developed for each age group of children - a step that can only be achieved "on the basis of thorough qualitative research". An aspect that should receive specific attention in further qualitative research is the fact that not receiving supplemental feeding while being breastfed is a risk factor for growth failure in the target area. Seen in the light of the universal recommendation of exclusive breastfeeding, this could reflect inadequate breastfeeding and other feeding knowledge and practices.

The possibility that breastfeeding might have a poor image among young women, as well as the specific problems experienced by young mothers, should be further investigated in the next phase of the research.

1.3.4 Focus area 6: Health and Hygiene practices

The important issues identified in the DVDH study concerning mothers' personal and child-related health and hygiene practices are presented in Textbox 4.5.

Textbox 4.5: DVDH conclusions regarding health and hygiene practices

- Improvement of the health of women that migrate to Duncan Village
- Improvement of the personal health habits of women in Duncan Village with specific reference to alcohol and tobacco use
- Improvement of mothers' caring capacities regarding hygienic practices
- Improvement of the nutritional status of pregnant women and prospective mothers
- Improved availability and utilisation of health services

The key-informant interviews supported the findings of the DVDH study. Although the key-informants indicated that problems exist in the area of personal as well as child hygiene management and that they felt that mothers could improve hygiene management even in the Duncan Village situation, not enough is known about mothers' actual health and hygiene practices to ascertain specific problem areas.

The importance of very specific information about hygiene practices is supported by findings from Zeitlin (cited in Range, Naved and Bhattarai, 1997:11) in Bangladesh where cleanliness of the child, mother and surroundings were significantly correlated with child nutritional status and morbidity. According to Zeitlin the effects of cleanliness may be attributed to a complex set of connections, among these are the morale of the mothers and her organisational and management skills. Some hygiene practices could also be cultural as was found in Bangladesh. More information is therefore needed to identify specific message topics.

As was mentioned in Chapter 1, the municipal clinics as already existing structures in the primary health system, managed and run by trained health workers offer the most sustainable facility to deliver messages to mothers who want to improve the nutritional status of their children. However some key-informants expressed their concerns about the clinics as a venue for nutrition education. Therefore more information should be obtained about the accessibility of the clinics to the mothers as well as their expectations of the clinics.

1.4 Formulation of research questions

The results of the integration of the DVDH recommendations and the key-informant interviews clearly point to a need for more information about specific practices and issues before message topics for nutrition-related education can be formulated. It was evident that the six focus areas could be collapsed into four areas as was done in the preceding discussion of the results. In reality it is not feasible to separate household food security and resource management (including support networks) in nutrition-related education. This is supported by the findings of the Poverty Strategies Initiative (PSI) studies of the United Nations Development Program (UNDP) that revealed that falling incomes and rising poverty erode the capacity of poor people to be part of social networks of support, leaving them unable to engage in and maintain social exchange. By cutting people off from vital sources of support they become socially isolated. Social isolation, a critical but often

neglected outcome of poverty, makes them even more vulnerable to adverse shocks and crises (De la Rocha & Grinspun, 2001: 85). Managing resources and accessing support are therefore closely linked to household food security. As the possibility of changing feeding practices is directly linked to nutrition education, combining these two focus areas into one is justified. The close link between health and hygiene for people living in adverse environmental conditions (Chelala, 2000: 6) also justify combining these two focus areas.

The broad research questions that were formulated to obtain appropriate additional information in each of the four focus areas are presented in Table 4.3.

Table 4.3: Research questions to obtain appropriate additional information

Focus area	Research question
Self-development	What does it mean to be a good mother in Duncan Village?
Household food security and resource management	<p>What can be done to improve the household food security of the mothers of small children in Duncan Village?</p> <p>What can be done to improve the support networks of mothers of small children in Duncan Village?</p>
Feeding practices and nutrition education	<p>What are the specific practices of mothers in Duncan Village concerning breastfeeding?</p> <p>What are the specific practices of mothers in Duncan Village concerning supplementing breast milk?</p> <p>What are the specific practices of mothers in Duncan Village concerning complementary feeding practices?</p> <p>What are the specific practices of mothers in Duncan Village concerning their dietary intake while pregnant or breastfeeding?</p>
Health and hygiene management	<p>What are the specific practices of mothers in Duncan Village concerning personal and child health?</p> <p>What are the specific practices of mothers in Duncan Village concerning personal and child hygiene?</p> <p>What is the role of health workers in providing messages aiming to optimise the nutritional well-being of children?</p> <p>What are the expectations and experiences of mothers concerning the clinic service?</p>

2 Obtain additional data and formulate message and help topics

2.1 Methodology (Phase 1: Step 2)

The aim of this section of the research was to obtain additional information based on the research questions formulated in Section 1.4. The primary method used for this purpose was non-scheduled structured interviews that included a minor observation component. These were followed by focus groups with other mothers as well as grandmothers as a form of checking research. The information obtained in this process was integrated with relevant data from the previous DVDH project to facilitate the formulation of appropriate message topics

2.1.1 Preparation for the research

Permission for the sections of the research that were to be conducted at the municipal clinics was obtained from the Buffalo City municipality. The South African National Civics Organisation (SANCO) in Duncan Village was also approached to obtain their support and the researcher attended a meeting of the executive committee to which she presented the aims and the objectives of the study. The committee pledged their full support and offered to advertise and interview suitable candidates from the community to be fieldworkers. It was not possible to embark on the study without the support of SANCO. Permission was also obtained from the Gompo Centre for the Aged, situated in Duncan Village, to conduct focus groups with grandmothers attending the centre.

2.1.2 The study population

The steps described by Dicken *et al.* (1997: 4.9 – 4.17) for the selection of the sample (see Chapter 3: Section 3.1.2, p 52) was implemented as follows:

2.1.2.1 Population segment, units, research sites and categories of participants

Population segment: The aim of the present study was to contribute to the nutritional well-being of 0-24 month old children who lives in Duncan Village and attend PHC clinics in the area, bearing in mind the results of the DVDH study (De Villiers & Senekal, 2002). The most important determinants of growth failure found in the DVDH study were related to the mother's caring capacity (De Villiers & Senekal, 2002: 1240). To facilitate the formulation of recommendations for improving nutritional well-being of young children more information about the situation and practices of mothers with 0–24 month old children living in Duncan Village was needed. Mothers with 0–24 month old children who attend PHC clinics in Duncan Village are therefore the priority group or the population segment this particular project focused on. The catchment areas of the three local clinics served as the population units.

Research site: In this part of the present study all three clinics in the area were included as research sites to

ensure an even spread of participation from all areas in Duncan Village. Not all categories of participants could be sampled from the three clinics and grandmothers who live in the population units (catchment areas of the three clinics) had to be sampled and consulted elsewhere (see Table 4.5). A centrally situated welfare centre for the aged was therefore purposively selected as a fourth research site.

Categories of participants: Participant categories are determined by the question: “who influences child feeding in the area?” Although mothers have the greatest influence on child feeding, Dicken *et al.* (1997: 4.12) recommend that for methods other than Trials of Improved Practices (TIPs), categories other than mothers and primary caregivers, e.g. grandmothers could be included.

Table 4.4 provides a summary of the study population for Step 3 of Phase 1 during which additional information about the previously identified focus areas was obtained.

Table 4.4: The study population for Step 3 of Phase 1

Aspect	Description
Population segment	Women living in Duncan Village or adjacent areas without clinics
Population unit	Mothers attending the Duncan Village municipality clinic with their 0–24 month old children
Research sites	<ul style="list-style-type: none"> – Three local government clinics in Duncan Village – Gompo centre for the aged
Categories of participants (Also see Table 4.5)	<ul style="list-style-type: none"> – Mothers with 6 week old children – Mothers with 14-18 week old children – Mothers with 8-12 month old children – Mothers with 18-20 month old children 3 sub-categories: <ul style="list-style-type: none"> • undernourished children • well nourished children • overweight children – Grandmothers

2.1.3 Sampling

All research sites were chosen purposively for this part of the study, while a combination of the sampling techniques discussed in Section 3.1.1 of Chapter 3 (p 51) was used to select participants at the sites.

2.1.3.1 Interview participants

According to Dicken *et al.* (1997: 4.16) there are no definitive rules for calculating sample sizes in qualitative research, but including at least two or three individuals per participant category in each

population unit is recommended. To ensure that mothers from all the areas of Duncan Village were included, it was decided to randomly select two mothers from each research site (clinic) for each of the six participant categories (see Table 4.5). It was not quite possible to adhere to this plan for various reasons. First it was not logistically feasible for one person to sample at all three research sites and conduct the interviews at the same time. Second it was not feasible to find children in the 18–20 month old category that fit the selection criteria at the clinics and the co-ordinator had to purposively select these children from the community. After completing 31 interviews, the researcher and the interviewer decided that no new information was forthcoming and that the process could be terminated without any detriment to the project.

Sampling sheets were developed for all categories of participants in the interviewing process. The names of mothers of all children attending the particular immunisation clinic (new or follow-up) who complied with the selection criteria for a specific participant category were listed on the sampling sheet. Two names were then randomly selected from the list. Appointments were scheduled with these mothers to do the interviews at their homes. If these mothers were not available for any reason, another mother was randomly selected from the list. This process was repeated at all three research sites. If two mothers were not found on a particular day, the process was repeated on another day until two mothers were found for a particular research site. A mother could be selected even if she was not the person who brought the child to the clinic, as long as she was available at home to be interviewed.

2.1.3.2 Focus group participants

The clinic that serves the largest section of the Duncan Village community (Site 3) was purposively selected as the site where the focus groups with mothers would take place. It was planned that focus groups would be conducted with each participant category and that each focus group would have six to eight randomly selected participants as recommended by Dicken *et al.* (1997: 7.4). It was also envisaged that all the participants could either be selected on a particular day or that they could be selected from a list that was compiled on different clinic days and invited to attend the focus group on a specific day. The latter proved to be impractical, as it was difficult to get the mothers to return to the clinic and was therefore not used for any of the focus groups with mothers.

The narrow selection criteria for the different participant categories made it difficult to find six to eight mothers of the same category on the same day at the same place. One of the problems with getting enough participants was that the focus groups had to be conducted before the nurses saw the mothers. Therefore only one focus group was conducted with each of the participant categories A, B and C. Also, for some of the focus groups, four mothers had to suffice. The planned focus group with the mothers of eighteen month old children was abandoned after several attempts were made to get enough mothers together to conduct the focus group. Very similar information emerged from the three focus groups that were eventually conducted and it is believed that very little new information would have emerged from more focus groups.

Grandmothers were selected on two different days at the Gompo Centre for the Aged. A list of all the grandmothers attending on a specific day and who complied with the selection criteria was entered on a sampling sheet and names were then randomly selected from the list.

2.1.4 Summary of the sample characteristics

A summary of the categories of participants, the selection criteria and the number of participants for the interviews and focus groups from each site is presented in Table 4.5.

Table 4.5: Categories of participants, selection criteria, number of participants for the interviews from each site and number of focus groups

Cat	Participants	Selection Criteria ⁴	Sampling	No of interview participants/ Site			No of focus groups
				1	2	3	Only site 3
A	Mothers with 6-8 week old babies	Must still be breastfeeding	Selected randomly.	2	2	2	1
B	Mothers with 14 to 18 week old babies		Selected randomly	2	2		1
C	Mothers with children 8 months to 1 year		Selected randomly	2	2	2	1
D1	Mothers with stunted or wasted children	Child must have a z-score of below -2SD for either weight for height or height for age	Selected purposively	2		3	
D2	Mothers with well-nourished children	Child must have a z-score of > -1SD and < 1SD for both weight for height and height for age	Selected purposively	4	1	1	
D3	Mothers with overweight children	Child must have a z-score of > 2SD for weight for height	Selected purposively	2		2	
				Site 4			
E	Grandmothers	Older women from Gompo centre for the aged who have children	Selected randomly				2
				14	7	10	5

2.1.5 Consent

Each participant was briefed by the co-ordinator about the aim of the project and permission was obtained to record the interview. Each participant then signed a consent form.

2.1.6 Measuring instruments

In the manual by Dicken *et al.* (1997: 5.1) that was used to guide the planning of the study the use of in-depth interviews is recommended for obtaining information about nutrition-related attitudes and practices of mothers and other family members, health workers or influential people. The in-depth interviews referred to by Dicken *et al.* (1997:5.1) correspond closely with the non-scheduled structured interview as described by Bless and Higson-Smith (2000: 105) (Chapter 3: Section 3.2.1 p 54) and will be referred to as such in the study.

The measuring instruments developed for the study include a question guide for the non-scheduled, structured interviews with an observation schedule included in the guide. Four different focus group guides were developed for the different participant categories.

2.1.6.1 Development of the question guide

The first draft of the question guide was developed from the key-informant questionnaire as well as information obtained during the key-informant interviews. The question guide was structured to facilitate analysis, but allowed for the phrasing and ordering of the questions to vary from interview to interview depending on the development of the particular interview. This means that the interviewer could ask for elaboration and explanation of new topics or relevant issues that arose during the conversation (Dicken *et al.*, 1997: 5.4). The draft of the question guide was subsequently discussed with experts in the field of child health and nutrition, including dieticians and community nursing professionals. The fieldworker⁵ and the researcher pilot tested the final draft of the question guide on three mothers including a young mother from Duncan Village.

The major topics in the question guide are listed in Textbox 4.6. A full copy is included in Addendum A.

Textbox 4.6: Major topics in question guide for non-scheduled structured interviews

- General and background information
- Anthropometric information
- Socio-demographic information
- Support systems
- Feeding practices including breastfeeding
- General caring practices
- Mother's nutrition
- Resource management including household food security
- Health management
- Hygiene Management

⁴ For all the participant categories with mothers, the participant had to be the mother of the child.

⁵ The person that co-ordinated the fieldwork participated in the actual fieldwork by conducting all the interviews and also served as the moderator for the focus groups in both phases of the study.

To facilitate effective observation the question guide included an “observation schedule” that was based on the recommendations by Dicken *et al.* (1997) as well as information about living conditions in Duncan Village. The aim of the observations was not to produce quantifiable data, but to interpret the observations qualitatively with the data obtained during the interview. The fieldworker interviewed mothers at their homes, which is in line with Beebe’s (2001: 49) recommendation that interviews be conducted in a relevant setting where listening can be combined with observing. The importance of this aspect in the study became especially apparent where interviews were conducted in homes that also served as shebeens (taverns) and the interviewer could observe and subjectively interpret the conditions in which some children are raised in Duncan Village. The observation schedule included observations about the house and environment, feeding practices, food available in the home that is meant specifically for the child, clinic card, medicines in the home, hygiene practices and a general impression of the mother and her situation.

All interviews were tape-recorded and a **data sheet** based on the question guide was developed on which data was to be transcribed from the tapes as soon as possible after the interview had taken place. The observations also had to be noted on the data sheet immediately after the interview.

The question guide is in English, although the interviews were conducted in Xhosa. Translation of the question guide was not deemed necessary, as the same fieldworker, who is proficient in both English and Xhosa, conducted all the interviews.

2.1.6.2 Development of the focus groups guides

The aim of the focus group discussions with the mothers was to check the findings of the interviews with people who had not already participated in the research. Checking research is recommended if the research has raised new issues or if the sample was too small to generalise the findings. Checking research data can therefore confirm and broaden the results of the exploratory data (Dicken *et al.*, 1997: 7.1). However the focus group discussions with the grandmothers did not only serve to check the data obtained from the mothers but also provided a different perspective and a deeper understanding of the data collected from the mothers during the interviews.

Separate focus group guides were developed for each of the categories of participants included in this phase of the study (see Addendum A). The focus group guides were developed using guidelines by Dicken *et al.* (1997) and perspectives gained through the key-informant interviews. The general format of the guides was tested on a group of mothers in East London and then repeated with a group of Xhosa speaking mothers at a clinic in Khayamandi in Stellenbosch. The researcher, the study leader and an interpreter (a nutrition advisor in the area) attended the focus group that was moderated by the designated moderator. Recommendations concerning changes to the guides as well as the moderation of the groups were made and implemented.

The guide also included a form on which socio-demographic information of focus group participants could be recorded.

2.1.6.3 Development of a comprehensive manual

A research protocol was compiled that provided guidance to the co-ordinator on each step of the research process. This included tasks to be completed before the data collection could commence, sampling and the methods to be used.

A comprehensive procedural guide (manual) was developed to train and guide the fieldworkers and co-ordinator. An overview of contents of the manual is presented in Textbox 4.7. A copy of the manual is available on compact disk on request.

Textbox 4.7: Content of the Duncan Village Nutrition Project Manual

Part 1: Protocol Phase 1 – step 3

Part 2: Question Guide: Non-scheduled structured interviews

Part 3: Data sheet: Non-scheduled structured interviews

Part 4: Consent form

Part 5: Sampling sheets

- *Sample sheet 1: Category A: Mothers with 6 week old children*
- *Sample sheet 2: Category B: Mothers with 14-18 week old children*
- *Sample sheet 3: Category C: Mothers with 9 month old children*
- *Sample sheet 4: Category D: Mothers with 18 month old children*
- *Sample sheet 5: Category E: Focus group – Grandmothers*

Part 6: Focus groups

- *Socio-demographic information of focus group participants (Questionnaire)*
- *Focus group guide 1:
Category A: Mothers with 6 week old children*
- *Focus group guide 2:
Category B: Mothers with 14-18 week old children
Category C: Mothers with 9 month old children
Category D: Mothers with 18 month old children*
- *Focus group guide 3:
Category E: Grandmothers*
- *Focus group guide 4:
Category F: Community Health Workers*

Part 7: Sampling tools

- *Guide for using table of random numbers*
- *Random numbers*
- *Method of taking anthropometric measurements*
- *Z-scores for anthropometric measurements*

2.1.7 Appointment and training of fieldworkers

A Xhosa speaking student in her final year of social work studies was appointed on a part time basis to co-ordinate the programme, conduct the interviews and moderate the focus group discussions. The person appointed was ideally suited for the position as her educational background was highly applicable, she was already trained in individual and group interviewing, she was in her late twenties with three children of her own and knew the Duncan Village community through experiential work done as part of her studies. She therefore knew how to blend in with the community - one of the key characteristics needed by a focus group moderator (Fern, 2001: 75). Her personal characteristics also complied closely to what is required from a moderator as described by Fern (2001: 75) (see Chapter 3: Section 3.2.3 p 56).

The SANCO executive committee interviewed and appointed two local women to assist with the sampling and accompany the co-ordinator to the homes of the mothers to be interviewed.

During a morning session at one of the clinics in Duncan Village, the co-ordinator and fieldworkers were trained on the sampling procedure including completing the sampling sheets, doing random selections and doing the anthropometric measurements. At this session it was decided that the co-ordinator would do all the sampling herself with the assistance of one of the fieldworkers.

To ensure that the training that the co-ordinator had received concerning individual and group interviewing complied with the expectations of the researcher, a guide on managing a focus group was included in the manual and discussed with her. The co-ordinator also conducted an interview and focus group with the researcher present and procedural issues were agreed upon.

2.1.8 Data collection (Phase 1: Step 3)

2.1.8.1 Interviews and observations

All interviews took place in the homes of the respondents and were tape-recorded. The interviewer used the question guide to guide the interview but a free discussion of all questions was encouraged. No notes were made during the interview to facilitate the free flow of thoughts.

Observations during the interview were guided by the observation schedule included in the interview guide. The observations had to be entered on the data sheet as soon as possible after the interview while it was still fresh in the mind of the interviewer. The interviewer also made general notes on her impression of the mother and her situation as she observed it during the interview.

The data was often collected in hazardous conditions. Some of the areas visited to conduct interviews are highly dangerous crime-ridden areas and the interviewer could only go in together with the fieldworker selected by SANCO. Quite a number of interviews were also conducted in shebeens where the

interviewer had difficulty conducting the interviews, but could experience and observe first hand the conditions in which mothers found themselves in Duncan Village.

2.1.8.2 Focus group discussions

Focus group discussions were conducted at the clinic in Jabavu Street (Site 3) and Gompo Welfare Centre for the Aged (Site 4). The setting where focus groups take place can influence the nature and content of member interaction (Baker & Hinton, 1999: 87). Dicken *et al.* (1997: 7.8) recommend that the group discussions should be held in a place where the participants will feel comfortable enough to converse “candidly”. According to these authors health related topics should probably not be discussed in a health clinic. However, the sampling procedure made the clinic environment the only viable venue for the focus groups with the mothers and every effort was made to ensure that the participants felt comfortable. The focus group discussions with the grandmothers were held at the homes of participants at their request.

The focus groups were moderated by the co-ordinator and she was assisted by one of the fieldworkers who was responsible for general preparations, note-taking and noting the socio-demographic information of participants. The focus group discussions were recorded.

2.1.9 Data analysis and presentation (Phase 1: Step 4)

A visual summary of the analysis process is presented in Figure 4.2 followed by a discussion of the process.

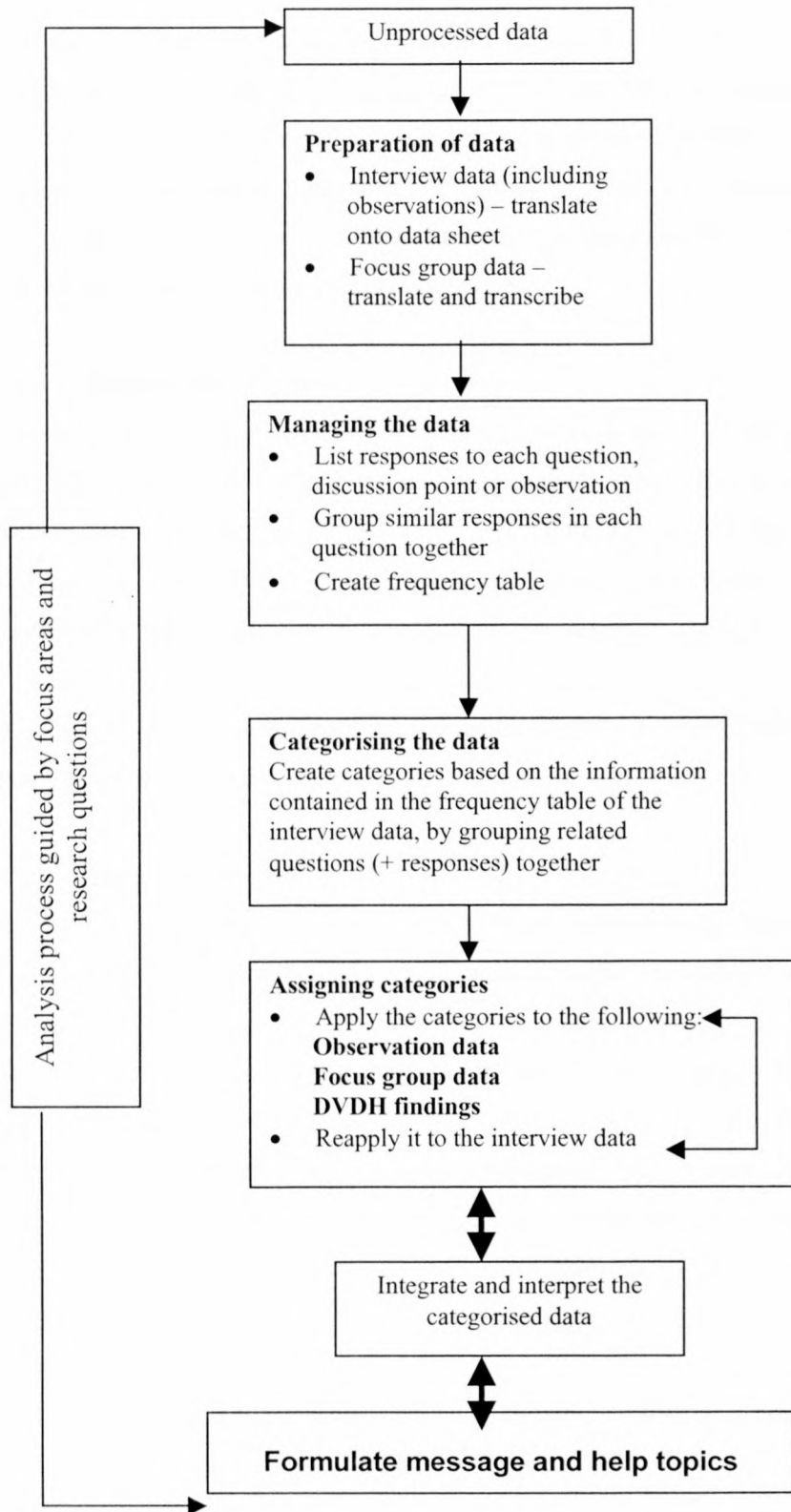


Figure 4.2: Data analysis process for the formulation of message and help topics

2.1.9.1 Factors guiding the analysis

The focus of this part of the study was determined by previous research in which six focus areas for intervention were identified. These six areas were collapsed to four during Step 1 of Phase 1 of the research. During this step a set of research questions were also formulated to guide the collection of additional data

necessary to formulate message and help topics to be included in nutrition-related education for the well-being of young children attending PHC clinics in Duncan Village. The focus areas and the research questions gave a specific focus to the research and the unprocessed data was available in these broad predetermined categories. The product of the analysis processes namely the formulation of the message topics is therefore necessarily also presented in these broad categories or focus areas. The analysis process followed between these two structured ends however followed an interpretative process where data was studied, managed and categorised until the important aspects became clear.

2.1.9.2 Preparation of data

Interview data was translated from the tapes into English from Xhosa by the interviewer and transferred directly onto a data sheet. Observation data were already recorded on this data sheet immediately after the particular interview. Although the observation schedule was part of the interview guide, it is treated as a separate data set because the observations were not made in the predetermined categories (families). *Focus group data* was transcribed and translated but not transferred to a specific data sheet.

A Xhosa speaking nutrition expert repeated the translation of three of the interviews to ensure reliability of the data preparation process.

2.1.9.3 Managing the data

The researcher became thoroughly familiar with the interview, the observation and the focus group data through a process of listing all answers from participants for each question, discussion point or observation.

Related responses were then grouped together to provide a narrowed down list of responses to each question. Frequency tables were then compiled for all three data sets (for the observation data only where applicable). The frequencies for the interview data were tabulated in the participant categories. Although the numbers of participants were too small to come to any conclusions about the significance of difference between participant categories (which was also not the aim), these trends were useful in the later stages of analysis when different data sets were integrated and interpreted.

The frequency of responses was also useful in creating categories in the next phase of the data analysis procedure.

2.1.9.4 Categorising and interpreting the data

The responses in the frequency table guided *categorising of the data*. Questions and the responses that could shed light on a specific research question were grouped together to form a category. For example responses to questions on feeding practices could shed light on hygiene management issues and were therefore grouped together with questions and responses on hygiene management. These *categories were applied* to the focus group data, the observation data as well as the DVDH findings and reapplied to the interview data. The

application of the categories is recorded in Column 2 of the tables in Addendum B.

All the information from all sources was then studied, *interpreted and integrated* for each category to come to a conclusion on key-factors that should be included in message topics aiming to improve the nutritional well-being of young children attending PHC clinics in Duncan Village. During this interpretation process the categorising process continued and as the important issues became clear in each category, sub-categories were created as needed. An example is Tables 6 – 10 in Addendum B where the overall category is general breastfeeding practices and some of the sub-categories that emerged during the interpretation process include initiation of breastfeeding, sustained breastfeeding and special needs of young mothers. These sub-categories emerged during the interpretation and integrating process and are typical of the iterative nature of qualitative data. As new sub-categories emerged, the data was revisited again to check it with the new categories.

Two nutrition experts checked the interpretations of the findings. These steps are presented in Addendum B. Addendum B consists of 27 tables, one matrix and one figure of which the titles are given in Textbox 4.8.

Textbox 4.8: Contents of Addendum B

Table 1: Guide to the interpretation of the tables in Addendum B
Table 2: Being a mother in Duncan Village - Socio-demographic information
Table 3: Being a mother in Duncan Village - General caring practices
Table 4: Being a mother in DV - The needs of babies as seen by mothers and grandmothers
Table 5: Being a mother in Duncan Village - Support networks available to mothers
Table 6: Breastfeeding practices - Initiation and duration
Table 7: Breastfeeding practices -Frequency of breast-feeding
Table 8: Breastfeeding practices - Grandmothers' perspective
Table 9: Breastfeeding practices - Advice and support
Table 10: Breastfeeding practices – Supplementing breast milk with other milk
Table 11: Introduction of liquids - Giving water
Table 12: Introduction of liquids – Giving other liquids
Table 13: Introduction of complementary food – When and Why?
Table 14: Introduction of complementary food – Advice and support
Table 15: Introduction of complementary food – Specific practices and problems
Table 16: Introduction of complementary food - Family food
Table 17: Introduction of complementary food – Milk versus food
Table 18: Introduction of complementary food – If child will not eat
Table 19: Introduction of complementary food – Foods that are good for children
Table 20: Feeding practices – Grandmothers' perspectives
Table 21: Household food security: Income and employment
Table 22: Household food security and resource management: Child grant
Table 23: Household food security and Resource management – Procuring food
Table 24: Resource management – Grandmothers' perceptions
Table 25: Health management – Mothers' health and nutrition
Table 26: Health management – Child health
Table 27: Hygiene management

Matrix 1: What other liquids (tea, water, and herbal drinks) have been given to the child up to now?

Figure 1: Summary of all references in the 5 focus groups about “a good mother”

2.1.9.5 Formulation of message topics

The final step in the analysis process was the formulation of message topics that should be included in an intervention programme aiming to ensure optimum growth in young children attending primary health care centres in Duncan Village. During the analysis process it became clear that some of the identified key factors were not suitable for nutrition-related message topics but rather give insight into the situation that mothers find themselves in or to their specific needs. It was evident that these key factors could be used by health workers to identify vulnerable mothers and they were then formulated as “help topics”.

These message and help topics are based on the key factors identified during the integration and interpretation of the data. The topics and the rationale for each message or help topic are included in the Results and Discussion section (Section 2.2 p 99 in this chapter).

2.1.10 Validity of the research

The measures that were taken to ensure design validity or objectivity in this part of the research are presented in Table 4.6. These measures are based on the guidelines discussed in Chapter 3: Section 5, p78.

Table 4.6: Quantitative and qualitative notions of objectivity and design validity criteria

Design validity criteria	Application in Duncan Village Nutrition Project
Credibility	
Prolonged engagement	The researcher worked in the health system in the community for longer than 10 years. The research project followed on the DVDH study. Involvement with the research question therefore stretched over a period of 15 years.
Persistent observation	Same as above. Interviews and focus groups were conducted until data saturation was evident (i.e. no new information was forthcoming).
Triangulation	Data triangulation: Different data sources, namely the findings of the DVDH study, the key-informant interviews, other relevant research data from Duncan Village, the interview data as well as observation and focus group data were considered. Methodological triangulation: Non-scheduled structured interviews, observations and focus groups were used to collect data.
Referential adequacy	Relevant literature was identified and integrated with the data for the identification of message and help topics
Peer debriefing	Two experts in nutrition gave professional and expert interpretations and feedback.

(continued on next page)

Design validity criteria	Application in Duncan Village Nutrition Project
Member checks	No member checks were done. However checking research as recommended by Dicken <i>et al.</i> (1997: 7.1) was done as the interviews were checked with focus groups consisting of people who had not already participated in the research.
Transferability:	
Thick description	Data collected was analysed and reported as far as possible with detail and precision. Reporting was done within the context the data was collected.
Purposive sampling	Comprehensive guidelines for doing a consultative study to improve young children's nutrition (Dicken <i>et al.</i> , 1997) were followed to ensure that different categories of participants who could influence the nutrition of young children in Duncan Village were interviewed and consulted. Research sites were also carefully chosen.
Structural relationships	The different data sets that were used were interpreted together in Step 3 of Phase 1 of the research. An interwoven interpretation was done and is available in Addendum B.
Theoretical sampling	The data of the first project done in Duncan Village (De Villiers, 1998) led the researcher to the data sources that were used in Phase 1 and the data from phase 1 led to the selection of the data sources used in phase 2
Dependability	
Inquiry audit	The study leader, the co-study leader did a thorough inquiry audit.
Confirmability	
Audit trail	<p>The following are available for auditing:</p> <ul style="list-style-type: none"> Raw data in the form of recorded interview and focus group and written field notes Data reduction and analysis products (data preparation, data analysis, data reconstruction and syntheses products) Process notes Materials relating to intentions and dispositions Instrument development information <p>(The last four are all contained in the final dissertation)</p>

2.2 Results and discussion

2.2.1 Presentation of results and discussion – general guiding comments

A textbox with the suggested message (MT) and/or help topics (HT) is presented at the beginning of each focus area. This is followed by a discussion of the rationale behind the formulation of the topics. This discussion refers to the data included in Addendum B from which the relevant message or help topic has been formulated. The reference to the specific table in the addendum is given in Arial italic e.g. [Table 1/AddB].

In some instances the message topics contain a main message topic followed by sub-message topics that need special attention or that are not usually contained in “standard” messages about the particular aspect. For example the main message will be MT1 while the sub-message topic will be referred to as MT1a. These sub-message topics could appear anywhere in the discussion of the various focus areas but are linked to the relevant main topic in the following way: MT1 is “**Being a good mother**” another message contained in this topic would therefore be indicated as follows: **MT1b: Being a good mother:** Development of confidence in own strength and capacity to love so as to be a “good mother” even in Duncan Village.

2.2.2 Focus area 1: Self development (including the status of women)

2.2.2.1 Final message and help topics

The final message and help topics that have been formulated concerning “self-development” of women are given in Textbox 4.9.

Textbox 4.9: Message and help topics for self-development	
Message topics	
MT1:	Being a “good mother”.
MT1a:	Being a good mother: What will your baby’s needs be?
MT1b:	Being a good mother: Development of confidence in own strength and capacity to love so as to be a “good mother” even in Duncan Village.
MT1c:	Being a good mother: Birth control, not as a separate topic but as a thread in all MT1 messages
MT2:	Mother’s education
MT2a:	Attain the highest level of education possible before having children
MT2b:	Mothers should try to improve their education through available education programmes
Help topics	
HT1:	A strong rural background of the client will often be the premise from which education must take place
HT2:	Mothers must be good caring mothers in an area where extremely poor environmental conditions exist and where unemployment is rife
HT3:	When giving nutrition-related education to very young mothers use messages that are meaningful to the mother’s frame of reference

2.2.2.2 Rationale for formulated message and help topics

Status of mother: Many of the women interviewed and those who took part in the focus group discussions have strong rural backgrounds [Table 2/Add B]. The risk for growth failure that was previously found to be related to having a mother who was not born in Duncan Village or a city makes this an important aspect to consider when dealing with clients with strong rural backgrounds (HT1).

Most mothers participating in the interviews experienced conditions in Duncan Village (DV) as very bad and that people were suffering especially from unemployment [Tables 2&21/Add B]. This is of importance where self-development of mothers is concerned as it serves as the background against which mothers must

be “good, caring” mothers (HT2). Many mothers who participated in the interviews and focus groups expressed the feeling that they were not happy being mothers. Being unhappy was not in all instances being unhappy about being a mother, but rather being a mother in Duncan Village [Table 2/Add B]. Feelings about motherhood seem to be closely linked to conditions and hardships experienced in Duncan Village and are important when trying to address mothers’ psychological well-being, caring attitudes and helping them to be “good mothers” in Duncan Village (MT1b). One grandmother said: *“mothers seem to love their babies but it is not easy to raise children in Duncan Village”* [Table 3/Add B, also see Table 19/Add B].

Caring attitudes: The grandmothers painted a picture of some young mothers as being uncaring mothers. According to them many young mothers take their babies to the shebeens, leave them unattended and/or do not give the babies the tender loving care that they need. Many mothers did report leaving their babies in the care of somebody else at times and the interviewer found one 18 month old child all alone at home. One grandmother observed: “instead of doing what is good for the baby, young mothers do what is good for themselves and make their lives easier” [Table 3/Add B]. Mothers can however be assisted in becoming good caregivers by teaching them the principles of “being a good mother” (MT1). Grandmothers and mothers described in the focus groups what they see as “being a good mother”, one participant for example described a good mother as a mother that *“gives her baby her heart”* [Figure 1/Add B]. This caring and loving person described by the participants can be further explored and presented as a role model to mothers.

The importance of using a suitable frame of reference when relaying nutrition-related messages to young mothers will also become evident in the discussions of the next focus areas. It is important that the image of a good mother used in the education of very young mothers is one that they would want to imitate (HT3) [Tables 5 & 8/Add B].

Education on the principles of being a good mother should not only be available to pregnant women but also to young girls who often fall pregnant without considering the sacrifices that will be expected from them if they want to be good, caring mothers. However, education alone on what is “a good mother” will not make vulnerable mothers “good mothers” and some mothers will have to be helped with practical issues that are blocking their way to “good motherhood”. For example there may be an inability to access support or manage resources [Table 5 & 22/Add B]. The message topics identified in the next focus area on resource management could assist in this process.

In answer to a question about the needs of their babies after birth, most mothers and grandmothers felt that love, care and proper nutrition was important for babies. The concerns and worries that some of the mothers had after giving birth concerning clothing and feeding indicate that there is a need for mothers to be prepared for events following the birth of their babies [Table 4/Add B]. Health workers can help pregnant mothers even in the depressed Duncan Village circumstances to prepare themselves for what will be expected from them after the birth of their children. Being prepared can assist in optimising mothers’ caring attitudes and

psychological well-being after the birth of their babies (MT1a and MT1b). The importance of this is illustrated by the fieldworker's description of one young mother and her baby: *"The mother is very young, does not know how to breastfeed, has no basic knowledge on how to care for her child. The child has a runny tummy and his stomach looks like a rugby ball"*. Although it is important for young mothers with no support to be prepared and know what the needs of their babies are going to be [Table 5/Add B], there is also another side to this aspect. Young mothers must learn to have confidence in themselves so that even if they have the support of a grandmother, they could be good mothers by themselves and provide the care needed by their children [Table 5/Add B] (MT1a and MT1b). The DVDH study findings that a child with growth failure had a much higher risk of having a mother who was not the head of the household or biological mother as the primary caregiver provide strong support for these message topics.

Education level: Attaining a schooling level higher than grade nine has been identified as an important key factor. This aspect also ties in strongly with the concept of "what is a good mother". In the focus group discussions with grandmothers it was stated: A good mother must make sure that she attends school for her children's future" [Table 2/Add B and Figure 1/Add B]. It is suggested that linking this aspect to self-development and not to food security could have a more positive motivating effect. Young girls and women probably see other young women in Duncan Village with matric qualifications, but not able to find formal employment. This message will differ depending on the target group. Firstly it should be addressed to young girls still at school urging them to attain the highest qualification possible before they have their children (MT2a), second it should aim to motivate mothers to improve their level of education through adult education programmes (MT2b).

Number of children: Although not previously identified as a risk factor for growth failure mothers with undernourished children who were interviewed had more children than other mothers interviewed with the children of the same age group [Table 2/Add B]. This, together with the challenge of being a good mother in Duncan Village, the unhappiness with being a mother and the many obstacles to being a good mother in Duncan Village, makes birth control an essential part of messages about "being a good mother" (MT1c).

2.2.2.3 Discussion

Booth *et al.* (2001: 99) paint a bleak picture of being a mother in a poverty-stricken urban environment and describe life for most women living in slums as "a continual battle for survival". Therefore it is very important that any nutrition-related messages presented to mothers attending the PHC clinics in Duncan Village must include the root problems of poverty and powerlessness, as recommended by Rusness (1993: 79). This means that when an attempt is made to help mothers to fulfil their potential as "good mothers", the social, economic and environmental barriers to being a good mother must be taken into account.

The idea of "being a good mother" is closely related to the concept of "care". "Care" refers to behaviours performed by caregivers that affect nutrient intake, health and the cognitive and psychosocial development of

the child (Engle, Menon & Haddad, 1996: 2) Six major categories of resources for care can be identified from the literature (Engle *et al.*, 1996: 3). Two of these are related to the message topics identified for this focus area, namely (1) education, knowledge and beliefs and (2) mental health, lack of stress and self-confidence of the caregiver. Education, knowledge and beliefs represent the capacity of the caregiver to provide appropriate care while the physical and mental health of the caregiver represent “individual-level factors that facilitate the translation of capacity to behaviour” (Engle *et al.*, 1996: 3).

A lack of resources for care could be one of the reasons for the finding of De Villiers and Senekal (2002: 1240) that mothers who were not born in Duncan Village had an impaired capacity to care for their children. This is reflected in the higher risk that these children have of suffering from growth failure. Women coming from the rural areas to an urban area could find themselves living in a nuclear family without support of relatives (Booth *et al.*, 2001: 99). However many other factors could also play a role, for example Myer and Harrison (2003: 268) found that rural women in KwaZulu-Natal tend to seek antenatal care only late in their pregnancies and do not return for follow-up care. If these women then migrate to urban areas, they take the “legacy” of poor maternal care with them.

The importance of these resources for care is also emphasised by Kurz & Johnson-Welch, (2000: 3). According to these authors, women’s ability to provide care and improve and sustain the nutritional status of their family members can be strengthened by improving their “human capital”. Women need to be strong in mind and body. Improving their education is one way of strengthening their human capital (Kurz & Johnson-Welch, 2000:17).

It is not only formal education, but also non-formal education that has an influence on “empowered behaviour” and therefore the self-development of women (Moulton, 1997: 4). In a literature review on formal and non-formal education, Moulton (1997: 36) concluded that both formal and non-formal education, is linked to demographic change through two mediating sets of variables: (1) Participants are “empowered” through their learning experience, and (2) their empowerment leads to changed behaviours related to child-bearing and child-raising. These behaviour changes eventually result in lower rates of fertility and child sickness and death.

Special consideration of young women or adolescent girls is important in the self development focus area because of the following factors: According to the WHO (2002a: 5) reproductive health problems are the major cause of death among women aged 15 to 19 years. Early pregnancies furthermore also have immense negative consequences on educational attainment, employability and the income-earning potential of young women (WHO, 2002a: 5).

The very young mother who already has a child also needs special support (see Section 2.2.4.3 in this chapter). The specific life stage of the mother must be taken into account when they are presented with educational messages aiming to improve their capacity to care for their children. A suitable frame

of reference for any relevant messages should be used. Although adolescent development is moulded by the social and cultural context in which it occurs, it is a time of transition to adulthood in all cultures (Crockett, 1997: 23). Young people living in disadvantaged environments could be faced with many difficulties in this transition. These difficulties include low access to jobs, a lack of exposure to conventional role models and an increased risk for unhealthy behaviours (Crockett, 1997: 39). The difficulties could be aggravated by the “exceptional capacity” of peers to influence health-compromising behaviours (Brown, Dolcini & Leventhal, 1997: 184).

The importance of being strong in mind and self-confident as emphasised by (Kurz & Johnson-Welch, 2000:17) is as important for the young or adolescent mother without any support as it is for the young mother living with the grandmother of her child. Black and Nitz (1996: 218) found that although multigenerational families may be protective for some teen parents and their young children, grandmothers’ co-residence was not associated with maternal warmth. According to findings of Caldwell and Antonucci (1997: 230) the more involved grandmothers were in providing child-care support, the lower was the self-esteem of the adolescent mother.

2.2.3 Focus area 2: Resource management (including financial and other support structures) and household food security

2.2.3.1 Final message and help topics

The final message and help topics that have been formulated concerning resource management and household food security for mothers are given in Textbox 4.10.

Textbox 4.10: Message and help topics for resource management and household food security

Message topics

MT3: Income generation

MT3a: Generating an own income is important for you and your child

MT3b: How can an income be generated?

MT3c: Where to get help for a business

MT4: The child support grant

MT4a: The child support grant: How to obtain the grant

MT4b: The child support grant: How to manage the grant

MT5: Support available if household food security fails

MT1d: **Being a good mother:** The good mother will use her available resources to the best advantage of her child.

Help topics

HT 4: Find the mothers who have been isolated from the health system because of poor household food security.

HT 5: Fathers could be an important source of support for mothers and a way should be found to educate them.

HT 6: Grandmothers are important sources of advice and support to young mothers. They should therefore also be reached with messages on good feeding practices.

2.2.3.2 Rationale for formulated message and help topics

The key factors involved in household food security and the management of resources are closely linked to some of the key factors contained in the previously discussed focus area, namely the status of women.

Improving household food security: A participant in the grandmothers' focus groups stated: *"We cannot tell that they know how to spend money wisely because some do not even have money to spend."* Most mothers have no income of their own, they do not know how much income is available in their households and they have no input in decisions around spending of money [Table 21/Add B]. It is suggested that if mothers have an own income to control, their status in the household and their role in decisions on what should be available for their children may improve (MT3a).

Earning an income through formal employment is not available to many people in Duncan Village. Unemployment was pointed out as the major hardship that people in Duncan Village experience and many mothers indicated that they had no money to spend on themselves or their children [Table 21/Add B]. It therefore seems as if many households try to achieve food security by managing scarce resources. One grandmother stated in a focus group discussion that "a good mother must try to have the means even if she has no income". *"Trying to have the means"* often takes the form of buying and selling, finding temporary "jobs" or being helped by relatives [Table 21/Add B].

Improving household food security and therefore food security on the individual or child level as well as improving the status of mothers could be attempted through addressing the following:

- making mothers aware that generating an income of their own is important (MT3a)
- making mothers aware of ways of generating an income (MT3b)
- helping mothers who have or want to start up micro-enterprises, e.g. food micro-enterprises to be aware of what their customers want or where they could get appropriate training to optimise their business (MT3c).

Child support grant: Another way of improving household food security is through access to the government's child support grant. Very few mothers seem to receive the grant and a large percentage of those eligible have not even applied for it [Table 22/Add B]. Assisting mothers to get access to the child support grant is therefore of importance (MT4a).

It has been shown in the DVDH study that a mother's involvement in buying food for the household could have a positive effect on her child's nutritional status. However mothers seem mostly unaware of how an amount equal to the child support grant could be spent to the best advantage of a child [Table 22/Add B]. This points to a need to make recommendations on the wise spending of the child support grant to mothers of young children (MT4b).

Accessing support networks: In the discussions with grandmothers around the ability of young mothers to manage their resources, it was stated that: *“There are those who do not have money to buy food and clothes for their babies. They tend to hide their babies.”* [Table 21 & 24/Add B, also see Table 17/Add B]. This statement highlights the need for a non-threatening environment to be created where mothers or expectant mothers can learn about available support networks and how to access these networks if household security fails (MT5). At the same time mothers need to be made aware of ways to try and improve their household food security (MT3). It is also important for mothers who became isolated from the health system because of extreme poverty to be reached (HT4).

The good mother and resource management: Grandmothers seem to have the perception that many young mothers put their own needs before those of their small children [Table 24/Add B also see Table 23/Add B]. Managing limited resources so that the needs of small children are met as far as possible could form part of the message about “being a good mother”. For example: The “good mother” will put her baby’s needs for basic items like food and clothes first (MT1d). This message is important in view of the DVDH finding that greater involvement of mothers’ in buying food for households could be beneficial for their children’s nutritional status [Table 21 /Add B].

The role of fathers and grandmothers in mothers’ support systems: Fathers and grandmothers play an important role in the support networks available to women [Table 5/Add B]. Fathers could provide an important source of emotional and financial support to mothers and educating fathers and grandmothers in the important aspects of childcare that could prevent growth failure should be considered (HT5 and HT6). The important role of grandmothers as support will receive further attention in Section 2.2.4 of this chapter.

2.2.3.3 Discussion

The importance of income generation became clear in the Ghana Country study where the very few women who could make decisions about seeking health care for their children were urban women who controlled their own financial resources (Akor *et al.*, 2000:22). Further support for the importance of women earning an income comes from Kurz and Johnson-Welch (2000: 9). They refer to several studies that found that women spend a higher proportion of their income on food and other basic needs of the family than men. The recommendations on message topics about income generation are supported by a study done in Duncan Village by Cress-Williams (2001).

Hamm and Bellows (2003: 41) have suggested nutrition education in the form of limited-resource nutrition education and food-related job training as points of entry for the role of nutrition educators in improving community food security. The formulated message topics fit well into this recommendation.

The importance of **assisting those with no household food security** by giving advice is made clear by De La Rocha and Grinspun’s (2001: 33) explanation that while much has been made about the resilience of the

poor in the face of adversities, this resilience has severe limits. However children from families with high levels of intra-family poverty can be buffered against excessive risk by external resources from the wide society (Engle, *et al.*, 1996: 626). Further support for MT5 comes from Gross (1997) who describes a particular model that relates poverty to a set of basic needs, including food, health, education, housing, clothing, water and a social and cultural life. These resources are acquired by various means, which might include income, time and knowledge. An individual or household is deemed "poor" to the extent that there are shortfalls in the means to acquire these resources and thus satisfy basic needs.

The formulated help topic about **fathers as a support** for women is supported by Vlassoff & Moreno (2002: 1714) who write that primary health programmes have perpetuated the notion that child care is almost exclusively a woman's role. They use immunisation as an example. It is usually assumed that women are responsible for getting their children immunised and most immunisation messages are targeted at women. However a study in Ghana found that the father's participation in the decision to immunise his child not only increased the uptake, but also led to earlier uptake and timely completion. According to Vlassoff and Moreno (2002: 1714) this example illustrates that the effectiveness of a health programme can be improved by using appropriate health education messages which promote a more equal sharing of child care responsibilities.

2.2.4 Focus areas 3: Feeding Practices and Nutrition Education

2.2.4.1 Introductory remarks

The DVDH research showed that children who did not receive supplemental milk while still being breastfed were at risk for the development of growth failure. However the age of introduction of the supplemental milk was not recorded. It could therefore be speculated that the effects of either **ineffective feeding practices concerning complementary foods** or **less than optimum breastfeeding practices** or both could have been masked by this supplementation. The same explanation could be true for the other risk factor for growth failure identified in the DVDH study, namely not receiving commercial baby cereal as first food.

Since inadequate feeding practices of both the breastfed and the weaned child could lead to inadequate dietary intake, the final message and help topics addressing inadequate feeding practices concerning food, complementary food and supplements are discussed under the heading "**Feeding practices**". The message and help topics aimed only at addressing practices and problems related to breastfeeding are discussed under the heading "**Breastfeeding**".

Message topics, help topics and the discussions concerning the nutritional status of mothers are discussed as part of health and hygiene practices (Focus area 4).

2.2.4.2 Breastfeeding practices: Final message and help topics

The final message and help topics that have been formulated concerning breastfeeding practices and nutrition

education are given in Textbox 4.11.

Textbox 4.11: Message and help topics for feeding practices and nutrition education – Breastfeeding

Message topics

- MT6: Effective Breastfeeding (according to the South African breastfeeding guidelines for health workers)**
MT6a: Breastfeeding – A time to communicate and bond with your baby
MT7: Initiation of Breastfeeding – Start immediately after birth
MT8: Exclusive breastfeeding – A special act in a harsh environment

Help topics

- HT7:** Breastfeeding: Young mothers need special attention and support
HT8: Breastfeeding: Support for breastfeeding must continue for at least 2 years to ensure that age appropriate feeding practices is adhered to.
HT9: Obstetric unit health workers: Breastfeeding – Health workers must not forget that they often are the first line of information on the subject. Give special attention to young mothers

2.2.4.3 Breastfeeding practices: Rationale for formulated message and help topics

Encouraging mothers to breastfeed is an important nutrition message, which seems to be heeded by most mothers. However, sustained breastfeeding and effective breastfeeding practices could be problem areas that need to be addressed. These two issues are probably closely linked.

Initiation of breastfeeding: Immediate initiation of breastfeeding could be a problem [Table 6/Add B]. It seems important that mothers should be taught as early as possible, probably in antenatal classes, about the importance of continuous unrestrained skin-to-skin contact from soon after birth (or at least within 30 minutes). They should also be taught that they must continue the contact until the baby has suckled spontaneously (MT7).

Education received in hospital: Not all mothers received education about breastfeeding in the hospital and in many cases it seems as if inadequate advice was given. These findings are supported by the observation data. Two of the young, first-time mothers had no idea of basic child care and did not know how to hold their babies to breastfeed them. This despite having given birth in hospital and having attended clinic for their children's 6 week immunisations [Table 9/Add B]. Staff in the obstetric units remain the first reliable source of information on breastfeeding for many new mothers especially those who did not attend antenatal clinics. All mothers should be advised and instructed on effective breastfeeding during their stay in hospital (HT9).

Exclusive breastfeeding: The initiation of breastfeeding does not seem to be a problem in Duncan Village. However exclusive breastfeeding is probably not widely practised [Table 10 & 11/Add B]. Young mothers and mothers experiencing Duncan Village as a harsh environment [Table 2/Add B] could be encouraged to breastfeed exclusively by reminding them what exclusive breastfeeding could mean for their children in this

environment. Emphasising exclusive breastfeeding as a special gift that mothers could give to their children could therefore be beneficial for both young mothers for whom breastfeeding has a poor image and older mothers who start introducing food and other liquids too early (MT8).

Problems and obstacles experienced: The problems that mothers experience with breastfeeding after bringing their babies home from hospital are not unique and are well described in all breastfeeding literature. These problems could lead to less than optimum breastfeeding. They include common breastfeeding problems like sore nipples and engorgement, the perception that the baby should be weaned off the breast in case the mother gets a job or has a job and the perception of “not having enough milk” [Tables 6, 7 & 10/Add B]. Mothers also reported obstacles that they encountered while breastfeeding or things that they thought could be obstacles [Table 6/Add B]. These obstacles were mostly the same as the reported problems, but additional issues mentioned were if the mother is HIV+, a partner who felt the baby was big enough to stop breastfeeding and a few mothers who felt lazy or did not enjoy breastfeeding.

The grandmothers had their own perceptions about these reported problems. In the focus groups with grandmothers, ineffective breastfeeding and the reasons for it were brought up in answer to the question of whether they thought young mothers in Duncan Village are good mothers [Table 8/Add B]. According to the grandmothers

- *Young mothers do not give themselves special time when breastfeeding.* Grandmothers felt that a baby feels the mother’s love when she breastfeeds and that this is the time for mother and baby to get to know each other. It is therefore important that mothers talk and sing to their babies while breastfeeding. A “good mother” will therefore not only breastfeed but also use breastfeeding as a special time with her child.
- *They complain of sore nipples and swollen breasts because they do not want to breastfeed and they know there is an alternative.*
- *Young mothers do not have enough milk because they do not persevere in breastfeeding.*
- *Bottle-feeding is seen as more important than breastfeeding. Mothers do not want to look “outdated”, they want to do what their friends do, “they do not mind even if they are suffering”. This is especially a problem with very young mothers.*

These findings do point to a need by the study population for: (a) effective breastfeeding education and (b) support with breastfeeding. The obstacles together with the problems that mothers experience can be dealt with as part of the standard “effective breastfeeding” education to be given to mothers (MT6). However education alone is not enough and support should be provided on a continuous basis so that mothers who get tired of breastfeeding, are pressurised by a partner or experience other problems be helped [Table 6/Add B] (HT8).

According to some of the grandmothers, very young mothers, presumably adolescent mothers, do not want to breastfeed but “*want to do what their friends do*” [Table 8/Add B]. Special attention should be given to young mothers where reported problems could be an indication of reluctance to breastfeed because of social and emotional reasons typical to this particular life stage (HT7). Promoting breastfeeding as a special act of love could be of importance to this specific group of mothers (MT8).

The problem of HIV [Table 6/Add B page 12] must be dealt with when HIV+ pregnant mothers are counselled initially so that they can start to think about whether they want to breastfeed or not. This could be included in the standard message topic about effective breastfeeding (MT6). All relevant information must be given at that stage. Messages about breastfeeding will be replaced by individual teaching when milk formula is issued to the mother in the hospital and all other messages will still be applicable.

Another problem affecting breastfeeding experienced by some mothers that can indirectly influence breastfeeding is that a number of mothers indicated that they gained a lot of weight while breastfeeding. Quite a few others indicated that they hoped that breastfeeding would cause them to lose weight but that it did not [Table 24/Add B]. The apparent unhappiness that mothers experienced about their weight could, in some instances have a negative effect on breastfeeding and should be addressed (see Section 2.2.5: Health and Hygiene practices).

The “good mother” and breastfeeding: Another matter that warrants special attention because of the potential impact on effective breastfeeding and caring practices is the following: In all focus groups with mothers it was mentioned by more than one mother that “a good mother” will breastfeed her baby. Through breastfeeding the mother gets to know the baby and the baby receives the mother’s love while being breastfed [Figure 1 & Table 8/Add B]. Getting to know the baby through communicating with her/him through singing and talking emerged as an important theme in all discussions by grandmothers and mothers around the question of “what is a good mother?” [Figure 1/Add B] (MT6a). Grandmothers described how the “*baby gets mother’s love when she breastfeeds*” and that when breastfeeding “*the baby is happy and plays and the mother and baby can get to know each other better*” [Figure 1/Add B]. Special attention to this key factor in the delivery of standard breastfeeding education to mothers living in a harsh environment (MT8) therefore seems to be necessary.

Advice and support: Mothers seem to be mostly advised on breastfeeding by grandmothers. Health workers play a far smaller role and some mothers do not receive advice or support from anyone [Table 6/Add B]. These findings are of concern because being a grandmother does not necessarily imply good knowledge about breastfeeding. Many grandmothers in Duncan Village are quite young themselves and grew up in Duncan Village. One mother with a 6 week old child reported in the focus group that she gave her child formula milk because her mother told her so [Table 9/Add B] (also see discussion on the introduction of complementary food on p 121).

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Some grandmothers also reported that their daughters did not want to listen to them. In the words of one 60 year old grandmother: *“I would not waste my time advising today’s young mothers, because they do not take advice from us. Maybe boyfriends and husbands can do better”* or according to a 65 year old grandmother *“...you can drag a horse to the water but you can never make it drink”* [Table 9/Add B]. However there were also grandmothers who felt that they could play an important role as *“they have been influenced by their mothers who in their turn have been influenced by their mothers”*. Many of the grandmothers taking part in the focus group discussions did display proper knowledge of nutrition and health management of small children, but it cannot be assumed that all grandmothers have this knowledge.

While older women in the community could play an invaluable role, health care facilities should, according to the National Breastfeeding Guidelines for Health workers and Health Facilities (DoH, 2000) protect, promote and support breastfeeding. Mothers have also indicated that they would like to hear nutrition messages from health workers at the clinic as much as from their mothers’ (HT11).

Most mothers seem to not only understand the importance of breastfeeding but also act on it initially. However many factors soon come into play that could lead to ineffective breastfeeding practices. It therefore seems as if mothers – with special emphasis on young mothers – need more education on what to expect from breastfeeding, the special benefits for mother and baby and support with the process. Education needs to be given before and soon after the birth of the baby. However, the support process needs to be continued until at least the end of the second year of the child’s life in view of the problems with sustained breastfeeding [Table 6/Add B] (HT8).

2.2.4.4 Feeding practices: Final message and help topics

The final message and help topics that have been formulated concerning feeding practices and nutrition education are displayed in Textbox 4.12.

Textbox 4.12: Message and help topics for feeding practices and nutrition education

Message topics

- MT9: **Continued breastfeeding** - Milk will remain important in your child's diet, breastfeed effectively so that you can breastfeed as long as possible
- MT10: **Breastfeeding: Supplementing breast milk is not necessary**
- MT10a: **Breastfeeding:** What mothers should do if they want to adhere to the traditional practice of giving *isicakathi*.
- MT10b: **Breastfeeding:** It is not necessary to give water to exclusively breastfed babies
- MT10c: **Breastfeeding:** It is not necessary to give water with glucose or gripe water to breastfed babies.
- MT10d: **Breastfeeding:** Giving *inembe* as a milk substitute can be dangerous to your baby's health.
- MT10e: **Breastfeeding:** It is not necessary to give any other milk to a breastfed baby
- MT11: **Good feeding practices: Introduction of solid food**
- MT11a: **Good feeding practice:** Do not introduce food until the child is 6 months old
- MT11b: **Good feeding practice:** The good mother does not have to buy commercial baby food
- MT11c: **Good feeding practices:** Introducing solid food to your child's diet – order of introduction
- MT11d: **Good feeding practices:** Advise mothers about an acceptable energy dense first food
- MT12: Good feeding practices: general advice**
- MT12a: Good feeding practices:** Balancing milk and food intake
- MT12b: Good feeding practices:** Providing good nutrition for your child with the child support grant
- MT12c: Good feeding practices:** Providing good nutrition for your child with limited facilities e.g. cooking facilities
- MT12d: Good feeding practices:** Make feeding time a special time for you and your baby
- MT12e: Good feeding practices:** Provide a variety of food more than three times per day

Help topics

- HT10: Breastfeeding: Special support and if necessary advice about relactation to mothers who give *inembe* as a milk substitute.
- HT11: Breastfeeding and other feeding practices: Clinic staff have a responsibility to provide education and support. Mothers want to hear the messages from them.
- HT12: Good feeding practices: Introduction of food
- HT12a: Good feeding practices: Advice on delaying the introduction of food until the child is 6 months old must be given at antenatal clinic otherwise it could be too late.
- HT12b: Good feeding practices: Advice on delaying the introduction of food until the child is 6 months old – young mothers need special attention.
- HT12c: Good feeding practices: Remember to advise mothers again at the 6-week clinic visit not to start giving food too early.
- HT13: Good feeding practices: There could be other reasons than lack of knowledge for the failure of mothers to give a variety of food to their small children. Probing could be necessary.

2.2.4.5 Feeding practices – Rationale for formulated message and help topics

In the section on breastfeeding it was mentioned that initiation of breastfeeding is probably not a problem in the study population but that sustaining breastfeeding until the end of the second year of life could be. Factors that could lead to ineffective breastfeeding were discussed. These factors could lead to inappropriate introduction of supplements or complementary foods (or the other way round in some instances) and an

inability to sustain breastfeeding until at least the end of the child's second year of life.

Supplementing breast milk: The findings show that many mothers who were still breastfeeding were giving their children formula milk or at least trying to give it to them. Mothers gave this milk for a variety of reasons. Not all mothers had positive feelings about the formula milk [Table 10/Add B]. This points to the possibility that mothers will be receptive to education regarding appropriate feeding practices in which supplementing breast milk is discouraged.

The DVDH study showed that giving supplemental milk while still breastfeeding was not necessarily a detrimental factor in the determination of nutritional status of 12 to 24 month old children in Duncan Village. As was said before, the reason for this could have been because of a masking effect it had on ineffective breastfeeding or inappropriate introduction and feeding of complementary food. The DVDH study found that all the children had an insufficient dietary intake with a limited variety of foods. The only food that the control group consumed more of was milk [Table 15/Add B]. Advice about the possible detrimental effects of giving supplemental milk on efforts to sustain breastfeeding should be closely linked to education on the proper introduction of complementary food and general education on feeding a young child even in the disadvantaged conditions existing in Duncan Village. The reasons why mothers supplement breast milk must be addressed at an early stage during the standard breastfeeding education (MT6), but could be repeated as part of the messages about supplementation of breast milk (MT10e).

The previous discussion supports the need for MT10, which deals with the supplementation of breast milk as the main message topic. Because supplementation involves different liquids and foods, the need for the formulation of a number of sub-message topics became evident. These topics relate closely to exclusive breastfeeding and will in practice be presented to mothers at the same time.

Introduction of liquids: Giving *water* to the baby straight after birth or immediately after mother and child get home from the hospital seems to be a common practice. The grandmothers mentioned that a spoonful of herbal mixture (*isicakathi*) was traditionally given to a baby two hours after birth to clean the baby's stomach and that mothers now mistakenly believe that water serves the same purpose as the herbal mixture. However mothers not only give the water after birth, but also continue to give it in the mistaken belief that it is good for the baby. Many mothers also seem to be adding glucose or gripe water to the water [Table 11/Add B]. Education must be given at antenatal clinics about what the mother must do if she wants to adhere to traditional practices (MT10a). In addition, mothers must be educated on how unnecessary it is to give water as well as the disadvantages of giving water or water with additions to the breastfed baby (MT10b and c). It is important that the two issues be addressed separately: adhering to traditional practices and supplementing breast milk with water.

Other liquids: The early introduction of liquids other than milk and water is apparently not widely practised.

However the use of *inembe* as a milk substitute especially by mothers with growth failure children seems to be an important point to address [Table 12/Add B]. Mothers indicate that they use *inembe* because they do not have the means to use something else. In the key-informant interviews the social worker from child welfare mentioned the use of *inembe* as a milk substitute as a problem. The generally positive feeling mothers have about the use of *inembe* shows that the use of *inembe* fulfils a need. These “needs” need to be addressed, firstly by teaching mothers the messages contained in MT6 and MT10 (effective breastfeeding, discouraging supplementing breast milk and the dangers of adding *inembe*) and secondly also the proper introduction of complementary foods (MT11). Advising mothers who are using *inembe* as a milk substitute on relactation should also be undertaken (HT10).

The use of feeding bottles: Water and supplementary feeds are often given by bottle. Feeding bottles were observed to be present in half of the households visited. This is addressed in messages about health and hygiene management (MT18) (see Section 2.2.5 of this Chapter).

Introduction of complementary foods: Although the DVDH study did not find a relationship between the *age* of introduction of solid food and growth failure, mothers from the target group do seem to introduce food at a young age. Promoting the correct timing of this practice should be emphasised as it could aid optimum breastfeeding practices and protect vulnerable children. These message topics should be presented to mothers at antenatal clinics (HT12a) or at the latest at the 6 week immunisation visit (it could be already too late at this stage) (HT12c). Together with the education, breastfeeding support must be given.

Many mothers indicated that they started feeding their children early on the advice of their mothers (the grandmothers) [Table 14/Add B]. This supports the argument posed in the breastfeeding discussion that grandmothers will not necessarily give the correct advice because they have raised children themselves. In addition mothers indicated that they would like to hear this advice from either the clinic or the grandmother of the child [Table 14/Add B]. Despite this expressed need from the mothers, it seems as if no or very few mothers actually receive **advice or support** from health workers. The DVDH study found that more mothers with well-nourished children received advice from professional nurses than those in the growth failure group did. It must therefore be emphasised that health workers have an important role to play in advising and guiding mothers on introducing solid food to their children’s diet (HT11). However the important role that grandmothers play in giving advice and support to young mothers [Table 14/Add B] also points to a need for extending message topics on good feeding practices to older women (HT6).

The data point to complementary food being introduced at a young age. There is therefore a need for mothers to be educated on the correct age for introducing food (MT11a). The findings suggest that a lack of knowledge is not necessarily the only reason for introducing food early. One grandmother stated: “*today feeding your baby is just like a competition, especially with the mothers who fall pregnant when they are still very young. They do not want it to look as if they do not have enough money to care for their babies*” [Table 13/Add

B]. Grandmothers “blamed” the inappropriate use of commercial baby food and formula on especially young mothers who do not want to be seen as having no money or the need of these mothers to conform to what their friends do. It is therefore suggested that the image of “a good mother” as one whom does not buy commercial baby cereals or formula is promoted especially among young mothers (MT11b).

The majority of mothers gave commercial baby cereals as *first food*, but undernourished children are more likely to get other low-density energy cereal [*Table 15/Add B].* Although not receiving commercial baby cereal as first food was identified as a risk factor for the development of growth failure in the DVDH study, mothers in Duncan Village are often very poor. Advocating the use of commercial baby cereal as a first food is therefore not practical and the introduction of a suitable, but inexpensive first food should be investigated recommended (MT11d).

Adequacy of food intake: Many children received food other than cereal only after the age of nine months. A lack of knowledge could account for this practice, but there could be other reasons as well. According to one grandmother, “*young mothers give their babies (only) one type of food and funnily it is the type of food that does not need to be cooked, that is bread and sour milk*” [*Table 15/Add B].* A lack of knowledge could be addressed through education (MT11c) while more in-depth support and counselling is necessary for those mothers who do have the knowledge, but are not practising it (HT13 and MT11c). The concept of what the “good mother” would do can also be emphasised here (MT11b and HT12b).

The variety of foods and the number of meals received by many of the children on the day before the interview seemed to be inadequate [*Table 15/Add B].* The reasons given by mothers as to why children sometimes do not want to eat often referred to a monotonous diet [*Table 18/Add B].* Therefore it would seem as if many mothers know that children need variety in their diets, but perhaps lack knowledge of what variety should be offered. The grandmothers also “blamed” their daughters for giving their children monotonous diets. It is therefore suggested that mothers should be educated on what it means to give a variety of food to a young child and also the number of meals a young child should receive per day (MT12e).

As there could also be other reasons for not offering a variety of foods, the dietary guidelines should be taught with specific advice on how to utilise the child support grant to provide a variety of foods to small children [*Table 22/Add B]* (MT12b). Practical suggestions on giving a variety of foods with limited resources like cooking facilities and storage facilities [*Table 15/Add B]* (MT12c) should also be given.

A matter of concern is that even mothers with young children (14 to 18 weeks old) who were still breastfeeding at the time, said that they give food before milk and that their children drink less milk since they have introduced food. It is speculated that in the case of children younger than one year, especially those younger than 6 months, food could be given to the detriment of milk intake [*Table 14/Add B].* Mothers should therefore be taught not only the correct age for introduction of food, but also how to manage

the introduction process so that appropriate nutrient intake is maintained (MT12a).

The DVDH study found that milk intake is associated with better growth. The reason for mothers not giving milk to their children seems to be a lack of means as well as lack of knowledge [Table 17 & 19/Add B]. This points to the need for special emphasis on recommendations regarding the importance of milk in the diet and therefore the need for continued breastfeeding if you cannot afford other milk. Messages on exclusive breastfeeding (MT8) and effective breastfeeding (MT6) are of important in this regard. It is also necessary that the importance of milk in the diets of young children, not only of babies, should be emphasised with the standard effective breastfeeding education to serve as a further motivation to practice effective breastfeeding (MT9).

The DVDH study identified an inadequate general caring attitude of mothers (determined through a subjective evaluation) as a risk factor for the development of growth failure in their children. Grandmothers mentioned in the focus groups that when they were young, feeding time used to be a special time when mothers would sit their babies on their laps and sing and talk to them [Table 20/Add B]. Promoting feeding time as a special time for mother and child as a continuation of the theme: “breastfeeding – a time to communicate with your baby” could help to create or keep a bond between mother and child that will strengthen the caring attitude of the mother (MT12d).

2.2.4.6 Discussion

The need for nutrition education on most of the message topics covering breastfeeding and feeding practices has been well described in the literature and is covered by strategies like the Baby Friendly Hospital Initiative, the IMCI (Gibson & Kerry, 2002) and literature of the Department of Health (DoH, 2000). In the Eastern Cape Province there are special booklets compiled by the Equity Project which address some of these aspects (Equity Project, 2000). Despite the availability of this type of information, the results of this research still show a clear need for nutrition information. It would therefore seem that mothers are not effectively reached by breastfeeding and feeding practice messages. This could be related to various factors including method of message delivery, content of messages or culturally inappropriate coverage of the issues. Determining specific message content through a consultative process like Trials of Improved Practices (Dicken *et al.*, 1997) could assist in rectifying the matter.

The results of this research did add some new insights into additional information that should be included in “standard” feeding practices” education for mothers attending the PHC clinics in Duncan Village. These insights include the following:

Promoting **breastfeeding, as a special act in a harsh environment**, is important for all mothers. However it is especially important for very young mothers because of the specific problems they experienced. Their stage of life must be kept in mind when presenting these messages to very young mothers. Dewan, Wood,

Maxwell, Cooper & Brabin (2002: 37) stated that health education classes stressing breastfeeding in teenage clinics may be worthwhile, but enhancing positive attitudes to breastfeeding among teenagers is likely to be more dependent on improving knowledge of the complex factors which put these women off breastfeeding. These “complex factors” will have to guide the formulation of topics that target adolescents or very young mothers.

Although a message topic about what mothers should do if they want to adhere to the traditional **practice of giving *isicakathi*** has been formulated, no information about culturally sensitive nutrition-related messages in relation to early feeding has been found in any of the existing educational material. Further research into the practice of giving “*isicakathi*” is therefore needed before appropriate message content can be determined. Because mothers have adapted the traditional practice drastically and the Department of Health (DoH, 2000: 13) strongly advises against any prelacteal feeds, more information is needed so that the practice can be addressed in a culturally sensitive manner.

Information about providing **good nutrition for a child with the child support grant** is not covered in the educational literature available in the Eastern Cape, but seems important in view of the findings in the DVDH study – that there is not a direct causal link between poverty and nutritional status of the child at the household level (De Villiers & Senekal, 2002: 1235). Other researchers (Range *et al.*, 1997; Islam, 1997) have reported similar findings. Providing the knowledge of how to manage this limited resource could assist the mothers’ capacity for optimum childcare. This is supported by the model of Gross (1997) who stated that knowledge is one of the means by which the necessary resource to alleviate poverty could be acquired.

The message topic on providing **good nutrition for a child with limited facilities** e.g. cooking facilities aims at what Hams and Bellows, (2003: 41) calls limited resources nutrition education. Mothers who have no income and no electricity to provide their children with five small meals that are also safe and hygienic per day need special advice. Innovative messages should be determined through a consultative process.

Special support and, if necessary, advice about **relactation to mothers who give *inembe*** (flour water) as a milk substitute have been recommended. The data seem to point to *inembe* (if not used widely) possibly used by the poorest of the poor as a milk replacement. Although the standard breastfeeding education guidelines (DoH, 2000:13) include messages not to use *inembe*, widely distributed guidelines (e.g. to social workers) are needed for mothers who are already using it.

A guide on urban health in developing countries discussed the **problems** that could be experienced by **young, poverty stricken urban mothers** who are cut off from usual sources of support (Booth *et al.*, 2001:99). The present findings seem to confirm that in Duncan Village young mothers are subject to the problems discussed by these authors. Much had been written on the importance of focusing on adolescents as an entry point for nutrition education and other developmental efforts (WHO, 2002a). However addressing

the special needs of the young, unsupported and poverty stricken mothers in relation to nutrition-related information does not seem to be well covered. The results of this research shed more light on this particular issue.

Clinic staff have a responsibility to provide education and support to mothers. Mothers are furthermore keen to hear these messages from them. Despite the fact that much dissatisfaction has been voiced about the health workers and the services at the clinics (see Chapter 5), health workers still seem to be the most preferred source of information on feeding practices.

2.2.5 Focus area 4: Health and Hygiene practices

2.2.5.1 Final message and help topics

The final message and help topics that have been formulated concerning health and hygiene practices are presented in Textbox 4.13.

Textbox 4.13: Message topics for health and hygiene management

Message topics

- MT13: **Mothers' nutrition**
- MT13a: **Mothers' nutrition:** Food based dietary guidelines for pregnant and breastfeeding mothers
- MT13b: **Mothers' nutrition:** Prevent excessive weight gain by eating well during pregnancy and while breastfeeding

- MT14: **Mother's health**
- MT14a: **Mother's health:** Drinking is bad for you and your baby's health
- MT14b: **Mother's health:** Smoking is bad for you and your baby's health

- MT15: **Child health**
- MT15a: **Child health:** Immunisations are important for your child's health and provide you with an opportunity to see how well your child is progressing. It also gives an opportunity to seek help and support if any is needed.
- MT15b: **Child health:** A healthy child with a bright future needs the best nutrition that you can provide.

- MT16: **Hygiene practices: Practising good hygiene in Duncan Village**
- MT16a: **Hygiene practices:** Practical advice on good hygiene with limited resources
- MT16b: **Hygiene practices:** A house that is clean inside and outside is important for good health.
- MT16c: **Hygiene practices:** Clean hands and clean clothes are important for baby's health.

- MT17: **Hygiene practices: Using feeding bottles**
- MT17a: **Hygiene practises:** The dangers of using a feeding bottle.
- MT17b: **Hygiene practises:** If using a feeding bottle: how to clean it properly in an economical way.

- MT18: **Hygiene practices:** Use safe food preparation and storage methods.

Help topics

- HT14: **Obstetric unit staff:** Children of mothers who do not attend immunisation clinics are at risk of becoming malnourished. Give special attention to vulnerable mothers.

- HT15: Health workers must give special attention to mothers who have migrated to Duncan Village from the rural areas.

- HT16: Health workers must try to motivate women in the community to attend antenatal clinic as early as possible in their pregnancies.

2.2.5.2 Rationale for formulated message and help topics – Health management

Mother's place of origin: Many of the mothers interviewed were born in rural locations and many have lived in Duncan Village for a relatively short period [Table 2/Add B]. The DVDH study found that children of mothers who were not born in Duncan Village or in a city were at a higher risk of developing growth failure and special attention should be given to these mothers (HT15).

Health status of mothers: Quite a few mothers expressed the view that *breastfeeding* caused them to gain weight. One mother even felt that the *weight gain* was a reason that she could not get a job [Table 25/Add B]. Negative socio-economic and health connotations to breastfeeding could deter mothers from optimum breastfeeding practices. Therefore recommending good eating practices to pregnant women early in their pregnancy as well as giving them information in advance about nutrition while breastfeeding seems to be important (MT13 and 13a). Woman in the community must therefore be motivated to attend antenatal clinic as early as possible [Table 25/Add B] (HT16).

The DVDH study found *drinking and smoking habits* of mothers to be associated with growth failure in their children. Evidence of alcohol consumption by pregnant women and mothers as a problem in the target population came from the grandmothers' perceptions and the observations of the interviewer. Some of the mothers interviewed had obvious alcohol problems; many women were observed to be attending shebeens during the day and drinking or going to shebeens was often mentioned by grandmothers [Table 25/Add B]. Mothers must be educated about the negative effect smoking and drinking could have on their babies' health so that they can make informed choices (MT14 and 15). Alcohol abuse by the mother could affect her child's health directly but also indirectly in terms of wasted resources, impaired capacity to care and the potential that alcohol abuse creates for violence in the household.

Prevention of child illnesses: Inadequate knowledge about the advantages of *immunisation* for child health and inadequate utilisation of immunisation clinic seem to be key factors that need to be addressed. All mothers should be made aware of the importance of immunisation because of the health implications and because immunisation visits give the health workers the opportunity to monitor the progress of children and provide support and education to mothers [Table 26/Add B]. This message should be delivered at the obstetric unit where the mother gives birth (HT14) or through community outreach programmes. This is necessary because of possible non-attendance of antenatal clinics or immunisation clinic by vulnerable mothers.

Nutrition was not seen as an important element in preventing child illness. There is therefore a need for mothers to be made aware about the important role nutrition could play in preventing illness, but also in the future health and performance of their children [Table 26/Add B] (MT15b).

The diagnosis and treatment of minor illnesses (curative aspects) seemingly do not pose a problem for mothers [Table 26/Add B]. This is in contrast with the lack of knowledge shown about preventative measures in the form of immunisation and good nutrition. This provides support for MT15a and MT15b.

2.2.5.3 Rationale for formulated message and help topics – Hygiene management

General hygiene inside and outside many of the households was a problem. This, combined with the previous DVDH findings that certain hygiene indicators (washing of hands and cleanliness of clothes) has an influence on the nutritional status of children, point to the importance of addressing aspects of personal and external environment hygiene.

However, practising good hygiene is not always easy because of environmental and economic conditions existing in Duncan Village. For example, many mothers indicated that they had trouble getting hold of soap on a regular basis because of financial constraints [Table 27/Add B]. Only a few mothers had running water inside their houses and a number of women said that they know washing of hands is important but that they often do not wash hands before they prepare the baby's bottle. A lack of soap and readily available water could contribute to poor hygienic practices. However, poor hygiene inside the house will make adequate personal hygiene practices even more difficult and these issues should be addressed in a non-judgemental and practical manner. The fact that one of the mothers interviewed, a hearing impaired women, had a very clean house shows that maintaining good hygiene is possible even in the poor environmental and socio-economic conditions that exist in Duncan Village. The respondent was very emotional during her interview because she had no means and no one to help her raise her children, but her house was observed to be very clean and tidy both inside and outside [Table 27/Add B]. Guidance on practising good hygiene should therefore be given (MT16a-c).

The proper cleaning of bottles is an aspect that definitely needs attention. Feeding bottles were observed in some homes where the mother actually indicated that she did not make use of bottles. Furthermore, quite a number of mothers admitted to using poor or doubtful cleaning methods [Table 27/Add B]. Mothers should be discouraged from using feeding bottles, but if they insist on using them, they should be educated on how to clean them properly even if they only have limited resources (MT17).

Mothers are actively involved in the preparation of their children's food. At present it does not seem as if unsafe food because of incorrect preparation and storage is a problem [Table 16/Add B]. In view of the recommendation that mothers should give a larger variety of foods more frequently during the day (MT13e), practical recommendations about preparation and storage of food should be made (MT18).

2.2.5.4 Discussion

Some mothers expressed a **concern about weight gain** while breastfeeding. It is not known whether these mothers did gain all the weight while breastfeeding or if they perhaps gained too much weight during

pregnancy or even started pregnancy overweight. However these concerns could have an effect on optimum breastfeeding practices. Li, Jewell and Grummer-Strawn (2003: 931) refer to various studies that have found that initiation and duration of breastfeeding were poor among mothers who had a body mass index above the normal range. A subsequent study of their own found that both obesity before pregnancy and inappropriate weight gain during pregnancy have a negative effect on breastfeeding practices. These findings and the concerns of participants in the present study emphasise the importance of nutrition education during pregnancy to ensure future optimum breastfeeding practices. Begley (2002: 178) referred to expert reports from various countries that have highlighted that women are motivated to improve dietary intakes for pregnancy and make changes in line with recommendations when given appropriate education.

Education on alcohol and tobacco use is an important but complex issue. It was mentioned in Chapter 2 that alcohol dependence, illicit drug use and smoking affect many people in poor urban areas and that they are all closely associated with markers of social and economic disadvantage. Abuse of alcohol and tobacco could have devastating effects on the lives of children. This could be direct effects like violence caused by alcohol abuse or health effects. However it could also affect children indirectly through the worsening effect it could have on the socio-economic status of an already vulnerable household (WHO, 1998: 24, De la Barra, 1998: 47).

According to Shearley (1999: S109) motivating mothers to keep to their children's **immunisations schedule** does not only carry the obvious medical and economic benefits, but offers numerous indirect and often far-reaching societal benefits. Three of the benefits mentioned by Shearley (1999: S110) include:

- vaccination programmes provide an opportunity for other primary health care services;
- they are the only recurring activity in primary health care that bring mothers and children into contact with health services on a predictable and frequent basis, providing an opportunity for family health education;
- infrastructural developments for efficient delivery of vaccines have provided an enabling environment for other primary health care activities for example outreach activities have reached the most inaccessible and remote populations.

More light was shed on general hygiene practices of mothers in Duncan Village and general message topics were formulated for **hygiene management**. However the findings do not provide enough information to make specific deductions about the existence of the complex set of connections (including cultural factors) involved in hygiene practices in Duncan Village as was observed in Bangladesh by Zeitlin (Range *et al.*, 1997: 11). A further step in the research process, in which specific messages are developed through TIP's, may reveal whether specific cultural factors or other factors play a role.

3 General discussion and recommendations

The research in this last part of Phase 1 aimed to identify key factors that need to be addressed in the previously determined “focus areas for intervention”. Based on these key factors appropriate message and help topics were formulated for each of the focus areas. A complete list of these message and help topics are presented at the end of the chapter in Textbox 4.14 and Textbox 4.15. Many of the topics, like the effective breastfeeding and good feeding practices, contain universal messages that are the same for all mothers across all communities, but the research in Duncan Village highlighted message and sub-message topics that need special attention for the mothers living in the area. These include the following:

- What it means to be a good mother in Duncan Village
- How mothers can develop confidence in their own strength and capacity to love so as to be “good mothers’ even in the Duncan Village environment
- Breastfeeding as a special act of love in the harsh environment of Duncan Village
- Feeding time as a special time for mother and child
- Adhering to good feeding practices, but at the same time honouring traditional practices
- Adhering to good feeding practices with limited facilities

As has been mentioned, it is important to note that the specific content of most of these message topics will have to be developed further in follow up work as only the broad topics in each focus area were identified in this study. This needs to be done in consultation with mothers living in Duncan Village. However it is not only for these topics, but even for the more ordinary or standard message topics that message content that is appropriate, affordable and specific for the mothers living in Duncan Village need to be developed. Dicken *et al.* (1997: 1) state that nutrition programmes are more effective when close attention is paid “to the voices of the families” who will participate in the programme. While the message topics have now been determined through “listening to these voices”, more work is still needed to determine the specific content of the topics.

This recommendation is also important in view of the fact that the key-informants, who are important role-players in determining mother and child health in Duncan Village, do not have much knowledge on the specific nutrition-related practices of mothers in Duncan Village and could hold beliefs that are not supportive of good child feeding practices. Galloway, Dusch, Elder, Achadi and Grajeda (2002: 542) recommended after a survey of iron supplementation programmes in eight developing countries that health providers should be trained on the effective counselling of pregnant women after it was found that many health providers had beliefs and behaviours that did not support the taking of iron tablets by pregnant women.

While it has been mentioned that immunisation clinics are the only recurring activity in primary health care that brings mothers and children into contact with health services on a predictable and frequent basis and as such provide an opportunity for health education (Shearley, 1999: S110), many of the nutrition-related

messages actually need to be heard before or soon after the child is born. This is especially important for first pregnancies. Visits to antenatal clinics could provide this opportunity. In the Amatole District where East London and Duncan Village are situated, the average number of antenatal clinic visits was found to be 4.1 in 2000 with 57% of women visiting the antenatal clinics at least three times before delivery (Mahlalela, 2001: 80-81).

Although the above figures show that opportunities exist for nutrition-related education to be given to mothers at clinics, they do not address the question of the “unreached”. A 1997 UNICEF report on the right of children to sustainable development used the heading “equity: reaching the unreached” (UNICEF, 1997:6). According to the report, the poor and the marginalised populations bear the heaviest blows of environmental degradation and it is urged that those who are most vulnerable to environmental risk be located and identified. These vulnerable people most often include women, children and others who are exploited, impoverished or under domination. A similar situation exists for people with vulnerable health status. A study in Tanzania, in an area where people were all poor found that the main difference between the poorest children and those who were better off was not related to the likelihood of falling ill, but in the probability of obtaining suitable treatment once ill or the care-seeking behaviour of their caregivers (Schellenberg *et al.*, 2003: 566).

An in depth evaluation of successful community nutrition programmes in the late 1980’s already identified the targeting of high risk groups as a “crucial element” in successful programmes. High risk groups generally the poorest, are marginalised from society as a whole, including the health care system and cannot usually be reached unless a deliberate effort is made (UNICEF, 1990b). According to Grinspun (2001: 2) poverty stricken people, even in diverse situations, experience a loss of social contact, humiliation and stigma that results in isolation and exclusion, eventually cutting them off from opportunities and support. A specific mechanism is therefore needed to identify, enrol and follow up on these groups (UNICEF, 1990b). The findings of the present study in Duncan Village (also see findings in Chapter 5) also suggest that those who are the most vulnerable to nutritional risk often do not use the clinic services. To attain equity a mechanism must be found to reach these vulnerable mothers.

Further recommendations that arise from this research relate to the increasing importance that is being placed in the literature on adolescent nutrition or adolescence as an entry point for giving nutrition-related education to optimise future health of mother and child. McLeRoy, Clark, Simons-Morton, Forster, Altman and Zimmerman (1995) recommended that given the diversity of age, gender, race, geography and social environment of children and adolescents there is a need for qualitative, non-traditional, multidisciplinary research that increases understanding of the types of intervention that different groups of children and adolescents find acceptable and valuable. This is of special importance in relation to adolescence and childbearing. Caldwell and Antonucci (1997: 232) refer to Cobb who stated that given that each stage of adolescence has its own developmental tasks and transitions, research approaches and interventions that treat

adolescence as homogenous miss the opportunity to achieve a more in-depth understanding of the impact of childbearing on an adolescent's development. Developmental as well as individual and family differences must be recognised before adequate social support and effective interventions can be provided. This seems to be applicable for interventions directed at adolescents in Duncan Village.

The research findings of Phase 1 of this research have added a deeper insight into the complex factors involved in nutritional status of young children in Duncan Village. A firm basis has been laid for health workers in terms of the topics that should be covered in the nutrition-related education given to mothers attending clinics in Duncan Village. Furthermore, help topics, which will empower the health workers to render a more appropriate and individual service, were identified.

Textbox 4.14: Summary of message topics

Message topics

- MT1:** **Being a “good mother”.**
MT1a: **Being a good mother:** What will your baby’s needs be?
MT1b: **Being a good mother:** Development of confidence in own strength and capacity to love so as to be a “good mother” even in Duncan Village.
MT1c: **Being a good mother:** Birth control – not as a separate topic but as a thread in all MT1 messages
MT1d: **Being a good mother:** The good mother will use her available resources to the best advantage of her child
- MT2:** **Mother’s education**
MT2a: **Mother’s education:** Attain the highest level of education possible before having children
MT2b: **Mother’s education:** Mothers should try to improve their education through available education programmes
- MT3:** **Income generation**
MT3a: **Income generation:** Generating an own income is important for you and your child
MT3b: **Income generation:** How can you generate an income?
MT3c: **Income generation:** Where to get help for your business
- MT4** **The child support grant**
MT4a **The child support grant:** How to obtain the grant
MT4b: **The child support grant:** How to manage the grant
- MT5:** **Support available if household food security fails**
- MT6:** **Effective Breastfeeding (according to the South African breastfeeding guidelines for health workers)**
MT6a: Breastfeeding – A time to communicate and bond with your baby
- MT7:** **Breastfeeding - Start immediately after birth**
- MT8** **Exclusive breastfeeding – A special act in a harsh environment**
- MT9:** **Continued breastfeeding - Milk will be remain important in your child’s diet, breastfeed effectively so that you can breastfeed as long as possible**
- MT10:** **Breastfeeding: Supplementing breast milk is not necessary**
MT10a: **Breastfeeding:** What mothers should do if they want to adhere to the traditional practice of giving *isicakathi*.
MT10b: **Breastfeeding:** It is not necessary to give water to exclusively breastfed babies
MT10c: **Breastfeeding:** It is not necessary to give water with glucose or gripe water to breastfed babies.
MT10d: **Breastfeeding:** Giving *inembe* as a milk substitute can be dangerous to your baby’s health.
MT10e: **Breastfeeding:** It is not necessary to give any other milk to a breastfed baby

(continued on next page)

Textbox 4.14(cont.): Summary of message topics

Message topics

- MT11: Good feeding practices: Introduction of solid food**
MT11a: Good feeding practice: Do not introduce food until the child is 4-6 months old
MT11b: Good feeding practice: The good mother does not have to buy commercial baby food and formula
MT11c: Good feeding practices: Introducing solid food to your child's diet – order of introduction
MT11d: Good feeding practices: Advise mothers about an acceptable energy dense first food
- MT12: Good feeding practices: General advice**
MT12a: Good feeding practices: Balancing milk and food intake
MT12b: Good feeding practices: Providing good nutrition for your child with the child support grant
MT12c: Good feeding practices: Providing good nutrition for your child with limited facilities e.g. cooking facilities
MT12d: Good feeding practices: Make feeding time a special time for you and your baby
MT12e: Good feeding practices: Provide a variety of food more than three times per day
- MT13: Mother's nutrition**
MT13a: Mother's nutrition: Food based dietary guidelines for pregnant and breastfeeding mothers
MT13b: Mother's nutrition: Prevent excessive weight gain by eating well during pregnancy and while breastfeeding
- MT14: Mother's health**
MT14a: Mother's health: Drinking is bad for you and your baby's health
MT14b: Mother's health: Smoking is bad for you and your baby's health
- MT15: Child health**
MT15a: Child health: Immunisations are important for your child's health and provides you with an opportunity to see how well your child is progressing. It also gives an opportunity to seek help and support if any is needed.
MT15b: Child health: A healthy child with a bright future needs the best nutrition that you can provide
- MT16: Hygiene practices: Practising good hygiene in Duncan Village**
MT16a: Hygiene practices: Practical advice on good hygiene with limited resources
MT16b: Hygiene practices: A house that is clean inside and outside is important for good health
MT16c: Hygiene practices: Clean hands and clean clothes are important for baby's health
- MT17: Hygiene practices: Using feeding bottles**
MT17a: Hygiene practices: The dangers of using a feeding bottle
MT17b: Hygiene practises: If using a feeding bottle: how to clean it properly in an economical way
- MT18: Hygiene practices:** Use safe food preparation and storage methods

Textbox 4.15: Summary of help topics

Help topics

- HT1: A strong rural background of the client will often be the premise from which education must take place
- HT2: Mothers must be good caring mothers in an area where extremely poor environmental conditions exist and where unemployment is rife
- HT3: When giving nutrition-related education use messages that is meaningful to the mother's frame of reference
- HT4: Find the mothers who have been isolated from the health system because of poor household food security
- HT5: Fathers could be an important source of support for mothers and a way should be found to educate them
- HT6: Grandmothers are important sources of advice and support to young mothers. They should therefore also be reached with messages on good feeding practices.
- HT7 Breastfeeding: Young mothers need special attention and support
- HT8: Breastfeeding: Support for breastfeeding must continue for at least 2 years to ensure that age appropriate feeding practices is adhered to.
- HT9 **Obstetric unit:** Breastfeeding: Health workers must not forget that they often are the first lines of information on the subject. Give special attention to young mothers
- HT10 Breastfeeding: Special support and if necessary advice about relactation to mothers who give
: *inembe* as a milk substitute
- HT11 Breastfeeding and other feeding practices: Clinic staff has a responsibility to provide education
: and support. Mothers want to hear the messages from them.
- HT12 Good feeding practices: Introduction of food
:
- HT12 Good feeding practices: Advice on delaying the introduction of food until the child is 4-6 months
a old must be given at antenatal clinic otherwise it could be too late
- HT12 Good feeding practices: Advice on delaying the introduction of food until the child is 4-6 months
b: old – young mothers need special attention
- HT12 Good feeding practices Remember to advise mothers again at the 6-week clinic visit not to
c: start giving food too early.
- HT13 Good feeding practices: There could be other reasons than lack of knowledge for the failure of
: mothers to give a variety of food to their small children. Probing could be necessary
- HT14 **Obstetric unit:** Health workers must remember that children of mothers who do not attend
: immunisation clinics are at risk of becoming malnourished. Give special attention to vulnerable mothers.
- HT15 Health workers must give special attention to mothers who have migrated to DV from the rural
: areas
- HT16 Health workers must try to motivate women in the community to attend antenatal clinics as early as possible in their pregnancies.

Chapter 5:

Phase 2: Accessibility of PHC clinics services, including nutrition-related messages, in Duncan Village

The message and help topics formulated in Phase 1 of this research presented in Chapter 4 are intended for use at the PHC clinics in Duncan Village. Phase 2 of this research therefore aimed to determine how accessible the services delivered at these clinics and therefore any nutrition-related education given at the clinics, is to mothers and pregnant women of Duncan Village. Figure 5.1 repeats the research framework and objectives for Phase 2 of the research.

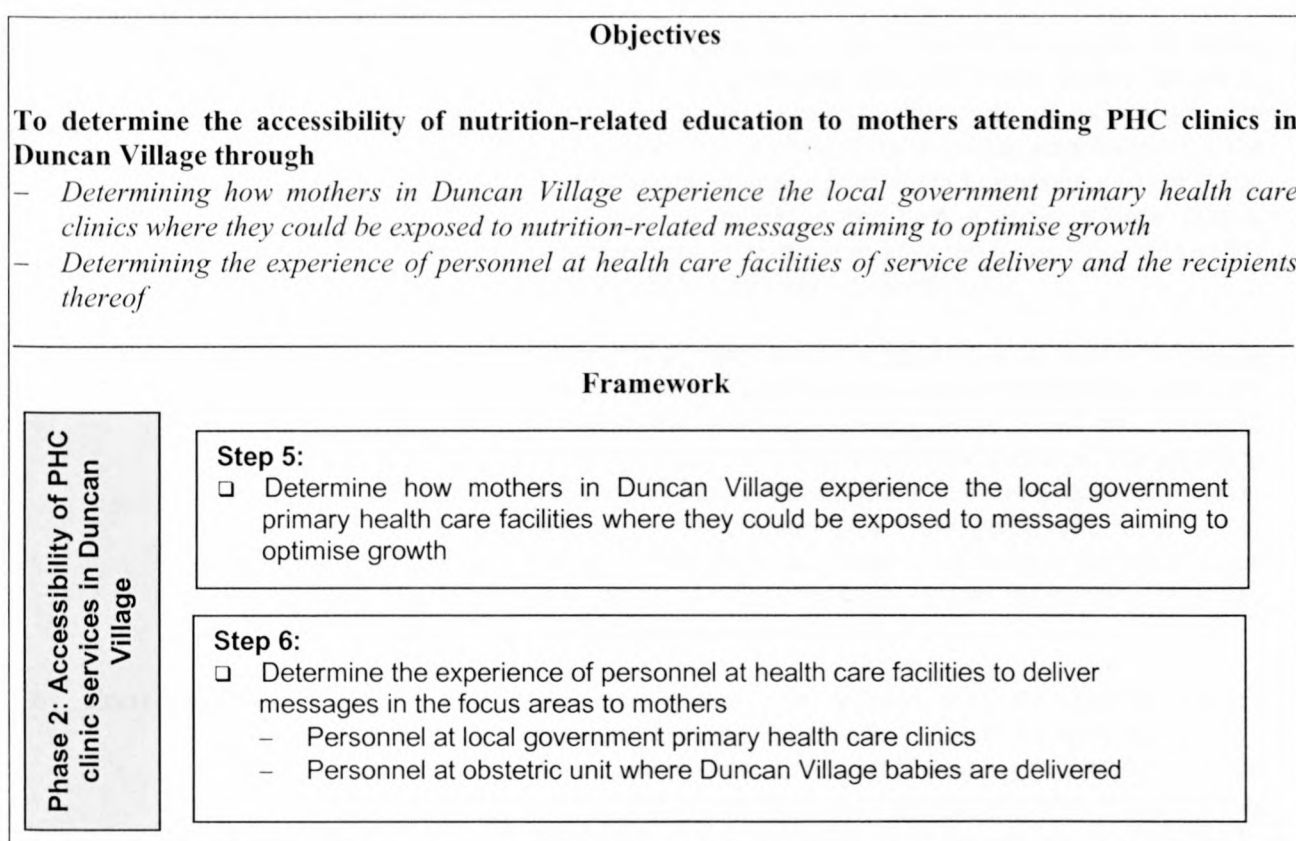


Figure 5.1: Objectives and research framework for Phase 2 of the research

1 Methodology

The nature of the objectives to be reached during Phase 2 of the research was such that group interviews where group members could freely discuss their experiences and feelings, would be ideal. The data for both the steps of Phase 2 were therefore collected through focus group discussions.

1.1 Gaining entry into the community

The following procedures were followed to gain entry to the different research sites targeted for Phase 2 of the study (Table 5.1):

Table 5.1: Procedure followed to gain entry to the research sites for Phase 2

Research site	Procedure followed
<p>1 Buffalo City Municipality</p> <p>Duncan Village PHC clinics: <i>Professional nurses</i></p> <p><i>Community Health Workers</i></p>	<p>The manager of the nursing services division was visited to confirm that the permission granted during Phase 1 to visit the clinics and conduct focus groups with the staff, was still valid. At the same time the purpose of Phase 2 was explained.</p> <p>The three clinics were then visited to arrange for focus groups to be conducted with the clinic nurses. However finding a convenient time for the clinic nurses proved to be impossible. The Buffalo City manager responsible for the clinics was then approached again to arrange a focus group with nursing staff from the three Duncan Village clinics. Arrangements were made to have the focus group in a venue at the Buffalo City Health Department.</p> <p>During the visits to the clinics it was realised that the situation of the community health workers who were still based in the community during Phase 1, had now changed. They were now working from the three clinics. The person at the municipality responsible for this category health worker was approached to arrange a focus group with them. It was arranged that the focus group could meet at the same venue that was used for the focus group discussions with the mothers and pregnant women.</p>
<p>2 Frere Hospital</p>	<p>An appointment was secured with the nursing service manager heading the obstetric unit at Frere Hospital. Two focus groups with nursing staff working in the obstetric unit were arranged at this meeting, one to pilot test the focus group guide for the health workers and the second for the actual focus group discussion.</p>
<p>3 Convenient site for mothers from all areas in Duncan Village</p>	<p>It was decided that the Gompo Centre for the Aged provided a convenient and neutral site within reach of mothers living in all areas in Duncan Village. Permission was obtained from the manager of the centre to use the facility.</p>

1.2 The study population

The steps described by Dicken et al. (1997: 4.9 - 4.17) for the selection of the sample (see Chapter 3: Section 3.1.2, p 52) was implemented as follows:

1.2.1 Population segment, units and research sites

The population segment and population units for Phase 2 were the same as those for Phase 1. However, the research sites selected for Phase 2 were not the same as the four sites targeted in Phase 1. The Buffalo City Municipality and Frere Hospital were selected because both these two institutions have staff who work directly with mothers from the three catchment areas of the clinics in Duncan Village, which were identified as the population units in Phase 1. The location of these workers place them in a unique position to provide nutrition-related information at critical stages in the lives of children born to mothers who live in Duncan Village.

A convenient site away from the clinics had to be selected to conduct the focus groups with the mothers from all three population units, as it was important to provide an environment where participants would be able to express their feelings and opinions freely. The Gompo Centre for the aged was chosen because of its convenient central location in Duncan Village. The centre also provided a spacious room with enough furniture for proper seating arrangements and a waiting area for participants arriving for the focus groups.

1.2.2 Categories of participants

The importance of group cohesion for focus groups that are used for experiential effect application (Fern, 2001: 4) (See Chapter 3, Section 3.2.3, p 56) was one of the guiding factors in choosing categories for Phase 2 of the research. Group cohesion is important because the normative behaviour in these types of focus groups is sharing everyday experiences. To ensure group cohesion participants in the focus groups with mothers and pregnant women were selected from mothers with the same age children and the same clinic attendance record to ensure homogeneity of respondents. Non-attending mothers were grouped separately. Although homogeneity of group members restricts the range of issues and positions that focus group participants discuss (Fern, 2001: 17), it was seen as necessary to provide a non-threatening environment for the mothers who do not attend or have defaulted on their children's immunisation schedule.

Four participant categories were therefore selected for Phase 2 of the research. Category A represents mothers who do not attend the clinic with their children or have not kept to their children's immunisation schedules. Category B consists of mothers whose children have completed their immunisation schedule. Both these categories include three sub-categories. These sub-categories include mothers with children

younger than 10 months; mothers with children between 10 months and 20 months and mothers with children in any of these age groups but who only had one child. The participants were selected according to these categories because the age groups of the children covered the immunisation schedule for the first two years. It was also not known whether mothers with only one child would have different experiences to mothers with more children. A further category (Cat A4) was also added during the data collection period, as it became clear that there are Duncan Village mothers who attend clinic, but not the Duncan Village clinics. Most of these mothers left the Duncan Village clinics to attend clinics nearby. As the aim of Phase 2 is to ascertain the accessibility of nutrition-related information at the clinics it seems necessary to include this group of women. In one of the sub-categories of category A the planned focus group was not conducted because of difficulties encountered with the sampling (see Section 1.3 in this chapter). Consequently an additional focus group was conducted in another similar category (cat A2). Two focus groups were conducted in category B3 because of over sampling. As the mothers had to travel some distance the researcher did not want to send them away without having had the opportunity to participate.

Pregnant women were included in Category C. Two sub-categories were selected, those attending antenatal clinic and those who do not attend antenatal clinic were selected. The category for health workers, Category D, included three sub-categories. Two categories for health workers working at the clinics in Duncan Village and a category for health workers working at the obstetric unit where Duncan Village mothers give birth. The reason for the inclusion of this last category was because these health workers could possibly be the first source of nutrition information for mothers not attending antenatal clinics. The perspective of these health workers could therefore provide valuable information about mothers that could be used in formulating recommendations about the accessibility of nutrition-related education at the PHC clinic in Duncan Village.

The different categories of participants, the selection criteria and the number of planned and actual focus groups conducted are summarised in Table 5.2. The last column in the table provides the number of focus groups that were planned to be conducted in each category. The actual number of focus groups that were conducted follows this number.

Table 5.2: Categories of participants for Phase 2

Cat A	Mothers who do not attend clinic/mothers with children with incomplete immunisations		No of focus groups
Selection criteria⁶			
A1	Mothers with children < 10 months		1 (1)
A2	Mothers with children >10 and <20 months	<ul style="list-style-type: none"> • Mother must not have attended the clinic at all or child must have missed any of the immunisations that children should get before 20 months • Mother must have more than one child • Any of the children must be between 10 months and 20 months 	1 (2)
A3	Mothers with only one child age 10 weeks up to 20 months	<ul style="list-style-type: none"> • Mother must not have attended the clinic at all or the child must have missed at least one of the immunisations that children get before 20 months • Mothers must have only one child • The child must be younger than 20 months 	1 (0)
A4	Mothers with a child age 10 weeks up to 20 months	<ul style="list-style-type: none"> • Mother left Duncan Village clinics to attend elsewhere 	0 (1)
Selection criteria⁶			
Cat B	Mothers with children with complete immunisation		
Selection criteria			
B1	Mothers with children younger than 10 months	<ul style="list-style-type: none"> • The child must have a clinic card and must be fully immunised • Mothers must have more than one child • The youngest child must be younger than 10 months 	1 (1)
B2	Mothers with children >11 and <20 months	<ul style="list-style-type: none"> • The child must have a clinic card and must be fully immunised • Mother must have more than one child • Any of the children must be between 10 months and 20 months 	1 (1)
B3	Mothers with only one child age 10 weeks up to 20 months	<ul style="list-style-type: none"> • The child must have a clinic card and must be fully immunised • Mothers must have only one child • The child must be older than 10 weeks and younger than 20 months 	1 (2)
Selection criteria			
C	Pregnant women		
Selection criteria			
C1	Pregnant women attending antenatal clinic	<ul style="list-style-type: none"> • The participant must have kept to most (90%) of her antenatal clinic dates. 	1
C2	Pregnant women not attending antenatal clinic	<ul style="list-style-type: none"> • The participant must not have attended antenatal clinic at all or have attended but stopped attending 	1
Selection criteria			
D	Health workers		
Selection criteria			
D1	Duncan Village Municipality clinics	Nursing professionals working at the clinics	1 (1)
D2	Frere Hospital Obstetric Unit	Any level of nursing staff dealing with mothers in the obstetric unit	1 (2)
D3	Community Health Workers	Community health workers employed by the municipality.	1 (1)

⁶ All potential participants for Categories A and B had to be the biological mothers of the index children.

1.3 Sampling

Participants for the mother and pregnant women focus groups were selected directly from the community and not through any of the health structures. It was believed that separating the sampling process as well as the venue from the clinics would contribute to participants expressing their views more freely without any fear of possible consequences. The “reliance on available subjects” technique combined with snowball sampling was used to select participants for the mother and child categories (see Chapter 3, Section 3.1, p 51). To ensure greater representativity care was taken to cover as large an area of each population unit as possible. The one fieldworker was born in Duncan Village and her knowledge of Duncan Village was used in the sampling process. The fieldworkers walked through the area and when they spotted a house with nappies on the line they visited the house. If the mother at the particular house or shack fell into one of the described categories she was invited to attend the focus group discussion and an appointment was made. She was then also asked about other households with small children, in particular households where she knew the mother did not attend a clinic with her child. Care was taken to search for more or less equal numbers of participants from the different areas. However, the focus groups were conducted with those that turned up for the group discussion whether they represented all the areas or not.

Although the fieldworkers attempted to visit all the areas as far as possible, the poorest and most dangerous crime-ridden areas were at first avoided because of fear for the safety of the fieldworkers. When it became clear that those were the areas where most of the mothers with incompletely immunised children would be found, the fieldworker ventured into these areas. The same sampling technique, namely the spotting of nappies was used in these areas. In order to complete the sampling process as quickly as possible because of the dangers attached to visiting these areas, the fieldworker sampled mothers with the correct age group children but ignored the selection criteria of one child only for category A3. The second focus group in category A2 therefore involved mothers with any number of children but within the 10 weeks to 20-month old age group.

For the health worker categories the researcher had to rely on available subjects. Appointments were made through the particular manager who selected the participants from staff members available at the particular time. The potential number of participants in these categories was relatively small.

1.3.1 Sample size

Group size: Although Fern (2001: 182) recommends 10 to 12 people per group (see Chapter 3: Section 3.1.3 p 53) the number of participants in the groups in Phase 2 of the study varied between four and seven. Large groups of 10 to 12 were impractical because of small children attending the groups with their mothers. The small study population in the health workers category restricted the availability of a large group of participants.

Number of groups: Fern (2001:183) recommends four to six groups per “break characteristic”(See Chapter 3: Section 3.1.3, p 53). In the planning of Phase 2, it was envisioned that participants would be selected based on a number of characteristics including clinic attendance for immunisation purposed, age of children and number of children (see Table 5.2). However, from the focus groups it became clear that the age of children or number of children did not seem to make any difference to the responses of the mothers. The characteristic that seemed to be the most important to use as a “break” was whether mothers attend clinics in Duncan Village or not. Four to five focus groups were conducted for each of these break characteristics for mothers. Four focus groups were also conducted in the health workers category.

1.4 Development of the research protocol

A research protocol was compiled that provided guidance to the co-ordinator on each step of the research process. The research protocol also served as the procedure manual (Duncan Village Nutrition Project: Fieldworker Manual – Phase 2) and was used to train the co-ordinator and the fieldworker. An overview of the contents of the protocol is provided in Textbox 5.1. A copy of the manual is available on compact disk on request.

Textbox 5.1: Content of Duncan Village Nutrition Project: Fieldworker Manual – Phase 2

Protocol

1. Type of research to be conducted during this phase
2. Research sites
3. Focus group procedures
 - 3.1 Moderator
 - 3.2 Fieldwork – recruiting the participants
 - 3.3 General
 - 3.3.1 Site
 - 3.3.2 Incentives for participants
 - 3.3.3 Focus group data
4. Categories of participants
5. Sampling (selection of participants)
 - 5.1 Source of participants
 - 5.1.1 Category A: Mothers who do not attend clinics
 - 5.1.2 Category B: Mothers who do attend clinics
 - 5.1.3 Category C: Pregnant women
 - 5.1.4 Nursing professionals

Addendum A

- Sampling sheet and participant list – Categories A1 – B3
- Sampling sheet and Participant list – Category C

Tables and figures

Table 1: Categories of participants

Figure 1: Summary of procedures for focus groups with category A participants

Figure 2: Summary of procedures for focus groups with category B participants

Figure 3: Summary of procedures for focus groups with category C participants

1.5 Development of the focus group guides

The aim of Phase 2, namely to determine the accessibility of nutrition-related education at the PHC clinics in Duncan Village, guided the development of the focus group guides. Similar guides were developed for the mothers and the pregnant women while separate guides were developed for the three sub-categories of health workers (See Addendum A). Questions about experiences they have had with the clinic; difficulties they have in attending the clinics and benefits they feel they get from attending the clinic were included in the guide for mothers and pregnant women. The health workers guide included questions about the feelings health workers have about the mothers they work with and the constraints they encounter with providing nutrition-related information to mothers. Specific reference was made in the last question to the six previously identified focus areas. All categories were also asked for recommendations on what could be done to “make it easy for mothers to attend clinic”.

An expert in qualitative research and qualitative data analysis reviewed the final drafts of the focus group guides and some changes were recommended. The revised guides were pilot tested on a group of health workers at Frere Hospital and a group of mothers in Duncan Village. No further adjustments were however necessary.

1.6 Appointment and training of fieldworkers

The researcher co-ordinated Phase 2 of the research, while the person who served as the co-ordinator, interviewer and moderator of focus groups in Phase 1, did the sampling and moderated the focus groups for Phase 1. The same fieldworker, a mature woman from Duncan Village who assisted in the Phase 1, again assisted with sampling and the practical arrangements of the focus groups in Phase 2.

The researcher conducted a training session with the fieldworkers on the sampling techniques to be used. The pilot testing sessions of the focus group guides also served as a training session for the focus group moderator and the fieldworker.

1.7 Data collection

Data was collected during a one-week period. The focus group discussions, except for the two focus groups with health workers from the obstetric unit at Frere Hospital, were conducted in Xhosa, the indigenous language of the area. The discussions were tape-recorded. Debriefing sessions were conducted at the end of each focus group session with the moderator and the fieldworker. This assisted in keeping the process as uniform as possible. As sampling continued during the data collection phase, sampling issues and strategies

to ensure representativity of the sample were also discussed during these debriefing sessions.

According to Barbour and Kitzinger (1999:10) providing focus group participants with incentives can make them more likely to co-operate. These authors recommend reimbursing travelling expenses or payment if participants need to travel to a common venue. In Phase 2 of the research incentives for participation were to be in the form of reimbursement for travelling expenses and a light meal to be provided before the start of the focus group discussion. On the first day of the data collection at Gompo Centre for the Aged, food was provided to focus group participants. However, soon many people gathered at the focus group venue, because they heard that food was being distributed. For the rest of the data collection period no food was given but participants were given a small payment.

1.8 Data analysis

The focus of the group discussions was clearly defined before the start of data collection as is reflected in the focus group guides. A systematic approach was used to analyse the data. The ATLAS/ti program was used to facilitate the analysis. The outline of this process is described in Chapter 3: Section 4.2.2. p 65).

1.8.1 Participant categories – general comments

As was mentioned in section 1.1.4, no apparent difference could be detected between the responses of mothers with children of different age group children or different numbers of children. Ferns (2001: 13) recommends four to six focus groups per break characteristic. However, it must be borne in mind that the aim of Phase 2 is to describe mothers' experiences and feelings as they relate to accessibility of nutrition-related messages at the clinics and not primarily to distinguish between the experiences of attending and non-attending mothers. Enough focus groups were therefore conducted if attending the Duncan Village clinic or not attending is taken as the "break characteristic". Where apparent and applicable the differences between these two groupings are referred to and the two groups are referred to as "attenders" and "non-attenders".

During the familiarisation phase of data analysis it became clear that mothers attending and not attending antenatal clinics were included in both the two groups that were conducted with pregnant women. The responses of these participants are therefore described but not used to indicate any differences between "attenders" and "non-attenders".

1.8.2 Preparing and importing the data

The tape-recorded focus groups discussions were transcribed and translated into English simultaneously by a professional transcriber who was recommended by a qualitative data analysis expert. For auditing purposes

one of the focus groups was first transcribed and then translated from Xhosa to English.

The 14 transcribed focus group transcriptions were loaded into ATLAS/ti as 14 primary documents.

1.8.3 Getting to know the data

The analysis began with a thorough reading of the transcriptions of the focus group discussions.

1.8.4 Coding the data

The next step was to code the data descriptively. Coding refers to the classification of a selected segment of textual data by means of a label or summary term that expresses some essential quality of the phenomenon as reflected in the data. An inductive process where the codes were derived from the data and not from a pre-determined list of codes, was followed. The inductive process allowed for the discovery of categories and patterns within the data and was done under the guidance of an expert in qualitative data analysis. The coding procedure involved the following:

First coding attempt: A preliminary code list was developed through the selection of quotations that seemed to be important in the context of the study. This was initially done for only a few of the primary documents. For these purposes the open coding technique was used according to which each sentence or sometimes paragraphs were considered and interpreted with a question recommended by Babbie and Mouton (2001: 499), namely “what is the main idea of this sentence or paragraph”. This rudimentary list was discussed with the expert in qualitative data analysis and guidance was received on how to proceed with the coding.

Second coding attempt: In the second attempt the data was reviewed again. All quotations that had been selected in the first attempt, but were clearly not important to the objectives of this phase of the research, were removed. Codes that seemed to be related were added together in a category. The fact that each category has dimensions, properties and consequences (Babbie and Mouton, 2001: 499) was now also taken into account; for example experiences of mothers at the clinics could have negative or positive dimensions and could vary in intensity. The modified code list was again discussed with the expert who indicated that the codes still contained too many words and had to be narrowed down further.

Third coding: After a third reviewing of the data and reworking of the code list a preliminary code list was finalised. The data was then revisited with this code list. A continuous revisiting of the data was necessary as additional codes emerged during the coding process. This process of refinement was continued until a final code list was achieved. The final code list was therefore only completed when the data analysis process was

completed. A copy of the code list containing all the codes assigned to the specific code families is presented in Addendum C together with a clarification of the codes.

1.8.5 Retrieval and examination of codes and quotations

Codes and their related quotations were retrieved in order to examine patterns or trends.

1.8.6 Creating families

Families are “containers” for primary documents and codes that are of the same type (Muhr, 1997: 56). One of the objectives of families is to cope with possibly large number of objects by classifying them into subsets.

Two primary document families were created namely one for mothers and one for health care workers and the codes were grouped into the 12 code families presented in Table 5.3. The presentation of the results is based on these code families.

Table 5.3: Primary document families and code families

Primary document (PD) families	No of PD	Code families	No of codes
Health care workers (HCW)	4	Difficulties experienced by HCW	8
		HCW- Experiences with the community	9
		HCW- Experiences with the mothers	13
		HCW- Coverage of the messages	9
		HCW – Recommendations	13
Mothers and pregnant women	10	Difficulties experienced by mothers	7
		Mothers’ perceptions	2
		Benefits	3
		Mothers’ feelings	9
		Mothers’ experiences with the clinic staff	9
		Mothers’ experiences with services received	10
		Mothers’ recommendations	12
Total	14		104

1.8.7 Creating networks

According to Muhr (1997:61) networks are the main ingredients for constructing theoretical models with ATLAS/ti. The networks allow the creation of visual images of the data in relation to each other so that the data may be presented in the context of its inter-relationships (Babbie and Mouton, 2001: 514). Six networks were created to visually present the inter-relationships present in the data of Phase 2 of the Duncan Village Nutrition Project.

1.9 Validity of the research

The measures that were taken to ensure design validity and objectivity in Phase 2 of the research, based on the guidelines discussed in Chapter 3 (Section 5, p 67) are presented in Table 5.4.

Table 5.4: Quantitative and qualitative notions of objectivity and design validity criteria – Phase 2

Design validity criteria	Application in Duncan Village Nutrition Project
Credibility	
Prolonged engagement	The researcher had worked in the health system in the community for longer than 10 years. The research project followed on the DVDH study. Involvement with the research question therefore stretched over a period of 15 years.
Persistent observation	Preparation for the research, sampling and the focus groups all took place in the community over a 10-day period. This 10-day period was the culmination of eight years of investigating nutritional well-being of young children in Duncan Village and the 10 days therefore allowed for sufficient time on site to get an adequate picture of the consistency of “experiences”. Debriefing interviews were conducted with the fieldworkers after each session of focus group discussions. This allowed for different viewpoints as to whether experiences of participants had been discussed thoroughly enough to allow conclusions to be made about consistency.
Triangulation	An expert in nutrition studied the interpretations thoroughly and provided a different perspective on the data set where necessary.
Referential adequacy	Relevant literature was identified and integrated with the data for conclusions about “accessibility” of nutrition-related education.
Peer debriefing	An expert in qualitative data methodology and analysis gave professional and expert interpretation and feedback on methodological and data analysis issues. An expert in nutrition gave feedback on data interpretation in the nutrition context.
Transferability:	
Thick description	Data collected was analysed and reported as far as possible with detail and precision. The use of the CAQDAS, ATLAS/ti assisted in this process. Reporting was done within the context of the Duncan Village situation.
Purposive sampling	Comprehensive guidelines for doing a consultative study to improve young children’s nutrition (Dicken <i>et al.</i> , 1997) were followed in Phase 1. This was to ensure that different categories of participants that could influence the nutrition of young children in Duncan Village were interviewed. These findings led to the participant categories selected for Phase 2 of the research. The methods followed during the sampling process (see section 1.3) ensured the greatest representativity possible in the different categories.
Structural relationships	Findings of the different participant categories were interpreted and interwoven to present a proposed framework for accessibility of nutrition-related education at the PHC clinics in Duncan Village.

(continued on next page)

Design validity criteria	Application in Duncan Village Nutrition Project
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Dependability

Inquiry audit The promoter and the co-promoter did a thorough inquiry audit.

Confirmability

Audit trail The following are available for auditing:

- Raw data in the form of recorded focus group data
- Data reduction and analysis products (data preparation, data analysis, data reconstruction and syntheses products)
- Process notes
- Materials relating to intentions and dispositions
- Instrument development information

(The last four are all contained in this document)

1.10 Presentation of the results

In the presentation of the results the description of the code family is given first. This is followed by a **codes-primary-document table** that indicates how these codes were spread across the primary documents in the relevant primary document family e.g. mothers or health care workers. According to Pope and Mays (1999) these frequency tables may “on occasion be illuminating to the researcher”, but it is important to treat them with caution. Care must be taken with quantitative interpretations of these tables, as this was not the aim. It must also be remembered that the same number of focus groups were not conducted for “attending and non-attending” mothers. The number of participants also varied for the different groups. The main purpose for including these tables is to show the trend in the responses between the different participant categories.

The **codes** in the codes-primary-document table are presented as a label consisting of the abbreviation for the participant category in capital letters, directly followed by an abbreviated version of the issue the code deals with. Lastly there is an extended label that gives a clearer description of the “issue”. For example: “**Mdif: No means**” refers to the difficulties the participant category mothers have to get to the clinic and the specific difficulty being refer to are that they do not have financial means. The code could also have a “dimension” for example **MF-: Afraid** indicates a negative dimension to the mother’s feelings. A positive dimension is indicated with a plus sign. However some codes do not have any dimension attached to them.

The codes that have been used to classify the largest number of quotations in a code family (this is referred to as the groundedness of the code) is usually presented first in the presentation of the results. In other instances, for example in the code family “benefits”, the codes will be presented in an order that best portrays the findings.

Each quotation that is supplied in the presentation of the results is followed by a reference indicating the specific primary document the quotation was taken from as well as the specific place in the document. The latter is in the form of a line reference. The same quotations are often coded with different codes and could therefore be used to highlight results in the presentation of the results of more than one code family.

The presentation of the results for each code family is concluded with a discussion of salient issues. This refers to issues that seem to be prominent. Where possible the codes in a particular code family and the relationships between them are conceptualised with a matrix as part of the discussion of salient issues. Although linking codes to other code families is done primarily in the networks, obvious links with other codes are brought up in the discussion of salient issues.

2 Results

2.1 Difficulties experienced by mothers

All codes referring to difficulties mothers experience to get or go to the clinic and therefore to have access to the messages, have been grouped together in this code family and are presented in the codes-primary document in Table 5.5.

Table 5.5: Codes-Primary-Documents-1

Code-Filter: Code Family Difficulties experienced by mothers											
PD-Filter: Primary Doc Family Mothers											

PRIMARY DOCS*											
CODES	1	2	3	4	5	6	7	8	9	10	Tot

Mdif: Being in school	0	0	0	0	0	0	0	0	1	0	1
Mdif: Booking in time	2	0	0	1	0	1	1	1	0	2	8
Mdif: Duties and prep	2	1	1	0	0	1	1	0	0	0	6
Mdif: Missing appointments	1	2	0	0	0	0	0	0	0	0	3
Mdif: No means	0	2	0	2	0	0	0	0	0	0	4
Mdif: Prerequisites	2	0	1	0	0	0	0	3	0	1	7
Mdif: Waiting	0	1	0	0	0	0	0	0	1	0	2

Totals	7	5	2	3	0	2	2	4	2	3	30

*PDI - 3:	Mothers with incompletely immunised children - "non attenders"										
PD4 - 7:	Mothers with fully immunised children - "attenders"										
PD 8:	Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders - "non attenders"										
PD 9 -10:	Pregnant women (attending and non-attending antenatal clinic)										

From Table 5.5 it is clear that the non-attending mothers brought up more than half of the difficulties. The difficulties that mothers encounter in attending clinics are discussed in the order from the highest frequency

to the lowest.

Booking in time: The time that mothers have to be at the clinic was mentioned as a factor that makes attending clinic difficult. This matter was mentioned in the discussions of six of the 10 participant categories. It seems to be a problem to mothers that even when they arrive at a time that seems early to them, they are already too late to be helped on that particular day.

“It hurts because sometimes you would think you are early only to find out you are going to be turned away. This causes a problem. That is why some of us decided not to go again PD10: Cat C2.txt - 10:6 (29:32).”

As can be seen from the above quotation this mother, like all the others who had difficulties because of the early booking in time, did not indicate whether she actually arrived at the clinic before or at 08h00. One participant did state that it is difficult to go to the clinic because *“you have to be early and you are lazy to wake up. You are turned back even if you arrive before 9 am and I don't like that, it hurts PD10: Cat C2.txt - 10:5 (24:27)”*.

According to the mothers they find it difficult to keep to the early “booking in time” for various reasons. Mothers indicated that they sometimes have “problems” that must be attended to that keep them from being at the clinic at the correct time. They also complained about the conditions under which they have to wait to make sure that they are early enough to be seen. One mother who has left the Duncan Village clinics to attend a nearby clinic said, *“At Ndende you have to wake up at six to be admitted. I have to wait in the cold PD8: Cat other.txt - 8:11 (112:113).”*

Prerequisites : Various prerequisites for attending the clinic were mentioned by mothers. Lost clinic cards were mentioned as a reason for not attending the clinic. One of these mothers managed to get a new one but did not return to complete her child’s immunisation while another one just stayed away from the clinic: *“My child's card left with a person who was staying with me, I did not have the contact numbers so that she can bring the card. I was afraid to go to the clinic without a card because I knew the nurses were going to swear and shout at me PD1: Cat A1.txt - 1:26 (120:125)”*.

The lack of an identity book was also mentioned by mothers as a difficulty. It seems as if an identity book is necessary to attend antenatal clinic. This deterred some from attending while another indicated that she then went to attend another nearby municipality clinic outside the Duncan Village borders: *“At Ndende they turned me away because I did not have an identity document, but at Phefī I was accepted PD8: Cat other.txt - 8:13 (117:119).”*

Another prerequisite mentioned by a mother was a rent card, *“I did not have the rent card so I was rejected PD8: Cat.other.txt - 8:10 (109:110)”*.

The need for these perceived prerequisites made it difficult for participants to attend clinic either because they could not attend the clinic without it or because they were afraid of the consequences if they attend without it.

Duties and preparation: Mothers also indicated that they have responsibilities at home that sometimes make it difficult to attend or be on time. Domestic responsibilities, caring for sick parents or having to look for a job were some of the issues that were mentioned. Preparing the baby for clinic also takes time, one mother indicated that this is necessary because *“the nurses are going to shout at you if you come to the clinic dirty. If they can give us grace for at least 30 minutes extra PD7: Cat b3.txt - 7:11 (57:60)”*.

No means: Both attending and non-attending mothers indicated that a lack of means to buy proper clothes or sufficient food to keep the baby from crying at the clinic makes it difficult for them to attend the clinic. The following two quotations illustrate the feelings of the mothers that raised this issue:

“Because of circumstances sometimes I don't have means to wash the baby or to buy food. The nurses always shout at us saying we have to feed the babies because they are working on their nerves when they cry. That time you do not have anything to feed the baby. So I decide to stay home PD2: Cat A2.txt - 2:8 (41:47).”

“I lost my job and I did not have clothes to dress my child when I have to go to the clinic because the other mothers laugh at your child if she is not well dressed. You feel like you are going to a competition. So I decided not to go PD2: Cat A2.txt - 2:12 (55:60).”

Missing appointments: Three non-attending mothers with children, raised missing their appointments as a difficulty. Once they have missed an appointment they are afraid to go back to the clinic for reasons illustrated by the following quotation: *“If you have missed your appointment you are insulted and (if) a baby is not immunised they send you back so you decide not to go back to the clinic PD1: Cat A1.txt - 1:11 (35:38)”*.

Waiting: A pregnant mother indicated that she finds the long waiting period at the clinic very tiring and that she decided for this pregnancy not to attend ante-natal clinic early but “this time I decided to start when my pregnancy is advanced PD9: Cat C1.txt - 9:2 (12:16)”. While this participant did attend in the end another one did not complete her child’s immunisation schedule because of the long waiting period.

The long waiting period could also make it difficult for employed women to attend as there are employers who *“would only release the employee on the last months of her pregnancy because the employer feels they stay long at the clinics PD11: Cat D1.txt - 11:39 (309:312)”*.

Being in school: Pregnant adolescent girls still in school could have difficulty attending antenatal clinic. One of the two schoolgirls that attended the focus group discussions with pregnant women stated: *“I have not been to the antenatal clinic yet because I am still at school. PD9: Cat C1.txt - 9:6 (30:31)”*.

2.1.1 Salient issues

It seems as if the difficulties experienced by mothers in attending the clinics in Duncan Village are largely due to **fear of what can happen to them at the clinic** because of the issues covered by the codes or because of **the inconvenience and unpleasantness involved** in going to the clinic. Some incidents or factors that cause the mothers to fear the consequences are beyond their control while others could possibly have been prevented. It could be speculated that mothers react differently to the difficulties experienced in attending clinic and that already vulnerable mothers react by staying away from the clinics. In the description of the sample it was mentioned that most of the mothers with incompletely immunised children were found in the poorer, more crime-ridden shack areas. It is therefore possible that these mothers differ in their coping skills, resources and support structures from the mothers who left the Duncan Village clinics to attend other nearby clinics or attended at least all the immunisation clinics that were needed. In Chapter 4 it was mentioned that mothers who find themselves living in extreme poverty often “hide” their babies and would not attend clinic.

While the difficulty of being in school was only brought up by one participant in Phase 2 it is important in view of the finding in the DVDH research as well as findings of Phase 1 that some young mothers, especially those of school going age, have special problems that need to be addressed if their babies are to receive optimum nutrition and care.

2.2 Mothers' perceptions of the clinics

Mothers' perceptions of the clinics refer to perceptions that mothers have of the staff and the treatment they receive at the clinics and not necessarily to actual experiences that they had at the clinic. Only negative perceptions were identified from the transcripts. The code output is presented in the codes-primary document in Table 5.6.

Table 5.6: Codes-Primary-Documents-2

 Code-Filter: Code Family Mothers' perceptions
 PD-Filter: Primary Doc Family Mothers

CODES	PRIMARY DOCS										Totals
	1	2	3	4	5	6	7	8	9	10	
MP-: no help	1	0	1	0	0	0	0	0	0	0	2
MP-: Verbal abuse	3	2	0	0	0	1	1	0	2	0	9
Totals	4	2	1	0	0	1	1	0	2	0	11

 *PD1 - 3: Mothers with incompletely immunised children - "non attenders"
 PD4 - 7: Mothers with fully immunised children - "attenders"
 PD 8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders - "non attenders"
 PD 9 - 10: Pregnant women (Attending and non attending antenatal clinic)

It is evident from the table that the negative perceptions mostly came from non-attending mothers.

Verbal abuse: It became clear from the transcripts that many mothers anticipate that they will be verbally abused at the clinic. This perception could be based on previous experience but if it was not clear from the transcripts whether this was the case, the remark was coded as a perception and not an experience. The following quotation serves as an example: *"I do not feel good I become scared when I have to go to the clinic, because I know that I am going to be insulted PD1: Cat A1.txt - 1:15 (62:64)"*. In other instances it was clear that the participant just reacted on perception and not actual knowledge: *"I was afraid because of hearsay that pregnant women do exercises and the nurses will shout at me for being underage PD9: Cat C1.txt - 9:20 (26:28)"*.

Some mothers indicated that they would rather not attend clinic at all for fear of being verbally abused: "I know I am going to be shouted at and insulted. That is why I do not go to the clinic anymore PD1: Cat A1.txt - 1:17 (68:70)." There are also those who indicated that they would rather attend to make sure that they are not verbally abused: *"I do not miss my dates because I do not want to be yelled at and insulted PD 6: Cat B3.txt - 6:27 (43:44)"*.

No help: Some of the statements made by mothers imply that it could be that some mothers do not attend the clinic because they think they will not be helped. The following two quotations show the different perspectives of the mothers, the one anticipated no help because she feels she is in the wrong while the other mother just believed that she will not receive help and therefore does not attend the clinic.

"My child's card left with a person who was staying with me, I did not have the contact numbers so that he/she can bring the card. I was afraid to go to the clinic without a card because I knew the nurses were going to swear and shout at me. They are going to send me back home without help PD1: Cat A1.txt - 1:53 (120:126)."

“I keep myself busy at home because I know I am not going to get any help at the clinic. I ask medicines from a nurse who stays in the same vicinity/area with me PD3: Cat a2.txt - 3:19 (51:53).”

2.2.1 Salient issues

The perception that they will be verbally abused at the clinic is the strongest perception mothers have of the clinics. This perception seems to be not unfounded if the experiences of mothers with clinic nurses are considered (Section 2.5 in this Chapter). Although mothers who have attended the clinic for all their children’s immunisations were less likely to mention negative perceptions, no one came up with any positive perceptions.

It seems as if some of the mothers who have the perception that they will either be verbally abused or receive no help would rather not attend the clinic. Others take steps to try to overcome the perceived problem. The following matrix summarises these actions or lack of action.

	Therefore do not attend	Therefore take steps
Anticipate verbal abuse	Avoid going	Do not miss dates Make sure baby is clean
Anticipate no help	Do not go	Get medicine from elsewhere

Matrix 5.1: Perceptions of mothers about the clinics and consequent actions

2.3 Benefits

Benefits refer to the benefits that mothers feel they gain from attending clinic and the code output for this code family is presented in Table 5.7.

Table 5.7: Codes-Primary-Document-3

```

-----
Code-Filter: Code Family Benefits
PD-Filter: Primary Doc Family Mothers
-----
                PRIMARY DOCS
CODES           1   2   3   4   5   6   7   8   9  10 Totals
-----
M: Benefit      0   0   0   5   0   2   2   0   6   3  18
M: Limited benefit1 0   0   0   1   2   1   0   0   2   7
M: No benefit   7   2   3   0   0   0   2   2   0   1  17
-----
Totals          8   2   3   5   1   4   5   2   6   6  42
-----

```

*PD1 – 3: Mothers with incompletely immunised children - “non attenders”
 PD4 - 7: Mothers with fully immunised children – “attenders”
 PD 8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders – “non attenders”
 PD 9 –10: Pregnant women (Attending and non attending antenatal clinic)

It can be seen from Table 5.7 that approximately the same number of mothers thought that was beneficial to attend as the number who thought that there was no benefit in attending the clinic. As was the case with the previous code families those who did not see any benefit in attending the clinics in Duncan Village came from the non-attending participant categories.

Benefit: Mothers feel that they benefit from using the clinic services in various ways. One theme that recurs was the concept of “*protection of health*”. Mothers feel that the clinics help to protect their children’s’ health, this is however mentioned mostly in relation to immunisation. The following quotation is a good example of discussions that developed around this concept: *I feel good because immunisation is the only way to protect my child from diseases PD 4: Cat B1.txt - 4:1 (12:13)*”. One mother even went further and stated that she always take the child for immunisation “*even if I am lazy*” PD4: CatB1.txt – 4:2(15:16).”

Half of the mothers who felt that they benefit from going to the clinic came from the pregnant women categories. Protection of health was mentioned in general terms as a benefit by pregnant women: “*They protect my health and the baby's health PD 9: Cat C1.txt - 9:12 (65:65)*”. A few mothers refer to the benefit of having problems with their pregnancies diagnosed early and receiving help with these problems: “*I had a problem with my pregnancy and they referred me to the hospital. If I did not go I would not have known what was wrong PD10: Cat C2.txt - 10:24 (19:22)*”. In this regard one mother mentioned the advantage of having HIV/AIDS diagnosed.

The benefit of receiving *education and information* was another concept that was referred to: “*Nurses educate us on feeding practices, hygiene and nutrition PD 4: Cat B1.txt - 4:8 (40:41)*”. One mother saw the benefit of attending clinic as far as education and information is concerned, as the advice she receives from other mothers attending the clinic: “*From the clinic I get advice from other mothers about feeding the baby, how to care for the nappies etc PD 4: Cat B1.txt - 4:7 (36:38)*”.

A few mothers indicated specifically that they attend clinic because they know they *will get help*. One mother indicated that she attends clinic, not because she feels like going but “*because I know I am going to get help I feel obliged to go PD 7: Cat b3.txt - 7:4 (24:25)*.”

Limited benefit: Protection of health, getting help and education and information also emerged as concepts related to limited benefits. However in these instances the mothers qualified their statements about the benefits they receive from attending clinic, making it clear that they felt the benefits gained were limited.

Concerning the *protection of health* mothers indicated that they only go for immunisations while some added that they “force” themselves to go: *“We know immunisation is important for our children's health so we force ourselves to go to the clinic. Otherwise there is nothing that we gain PD5: Cat B2.txt - 5:11 (61:64)”*.

The *help* they get at the clinic is also seen as limited with one mother making the point that: *“Help is limited though there are human resources people who can help they also do not care PD1: Cat A1.txt - 1:30 (133:135).”*

The *antenatal attendance card* that allowed access to giving birth in a health facility is the only benefit some participants saw in attending clinic: *“It is helpful in a way, because you are able to deliver at a hospital PD10: Cat C2.txt - 10:16 (64:65).*

No benefit: If the same concepts that were identified as benefits are applied it can be seen that some mothers see *no protection of health* benefit. In fact some felt that the immunisations make their children ill: *“I decided not to take my baby for immunisation again. My babies get sick when they are immunised PD 1: Cat A1.txt - 1:13 (55:57)”*.

One of the two main reasons why mothers feel that they receive no benefit from the clinic is because of the *lack of medicine*. The words of one of the mothers summarises the general feeling of participants who complained about this issue: *“I become frustrated because I do not understand why they say it is a clinic when there is always no medicines PD7: Cat b3.txt - 7:21 (27:29)”*. Participants said that they go to the clinic specifically because they do not have the money to buy medicine or make use of a private doctor but, as one mother said *“If you bring a child to the clinic with a high fever and ask for medication, you are told to go and buy it from the chemist. PD1: Cat A1.txt - 1:14 (51:55)”*.

The strongest response from mothers who felt that there was no benefit in attending the clinic was about the lack of help from the clinics. In some instances this is closely linked to the lack of medicine: *“I decided not to go to the clinic because a person does not get help. A person is always turned away because there are no medicines, not even for immunisation. I saw that there is no reason for me to attend the immunisation clinics PD3: Cat a2.txt - 3:9 (22:25)”*.

Other participants reported that they received no help even if you go with a sick child: *“When you come back they tell you that the number is enough for the day come another day .A person has to go back home. Sometimes the child is sick. You go home without help. I decided that I will never go to the clinic again PD3: Cat a2.txt - 3:13 (34:37)”*.

2.3.1 Salient issues

The following matrix summarises the important concepts concerning the benefits that mothers gain by attending the clinic.

Concepts	Benefit	Limited benefit	No benefit
Protection of health	Immunisation	Only immunisation	Immunisation makes children ill
	Diagnose problems	Only to enable delivery in hospital	Told to go to private doctor
			No medicines
Education and information	Receive education and information from nurses		
	Advice from other mothers		
Getting help	Receive help	Receive help, but limited	No help Even when child is ill receive no help

Matrix 5.2: Benefit or lack of benefit that mothers perceive to receive from going to the clinic

Most mothers with children who took part in the discussion about the benefits that are gained from attending clinic saw little or no benefit in attending clinic, immunisations excluded. The women attending antenatal clinics who commented were more positive and thought that the clinics helped to protect their own health and that of their unborn babies. Apart from the benefits of immunisation a few mothers also referred to the benefit of receiving education and information at the clinic (albeit from other mothers in one instance). This ties in with the findings in Phase 1 that mothers want to hear nutrition-related information from the professional nurses at the clinic. It sheds light on the remark of the participant who stated *“Help is limited though there are human resources people who can help... PDI: Cat A1.txt - 1:30 (133:135).”*

2.4 Mothers' feelings about the clinic

The codes in this code family refer to how mothers feel about attending the clinic whether they attend or not and the code output for this code family is presented in Table 5.8.

Table 5.8: Codes-Primary-Documents-4

Code-Filter: Code Family Mothers' feelings
 PD-Filter: Primary Doc Family Mothers

CODES	PRIMARY DOCS										Totals
	1	2	3	4	5	6	7	8	9	10	
MF-: Afraid	3	3	0	1	0	1	0	1	2	0	11
MF-: but attend	0	0	0	0	1	2	2	0	0	0	5
MF-: Distressed	0	1	1	0	0	1	0	0	0	1	4
MF-: Fear of embarrassment	0	1	0	1	0	0	0	0	0	0	2
MF-: Frustrated	1	1	1	2	1	3	2	0	0	2	13
MF-: Intense dissatisfaction	1	1	2	0	0	0	0	0	1	0	5
MF-: Not interested	0	0	3	0	0	0	0	0	0	0	3
MF-: Uncertainty	0	0	0	0	3	0	1	0	0	0	4
MF+: Getting help	0	0	0	1	1	1	0	0	0	3	6
Totals	5	7	7	5	6	8	6	1	3	6	53

*PD1 – 3: Mothers with incompletely immunised children - “non attenders”
 PD4 - 7: Mothers with fully immunised children – ‘attenders’
 PD8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders- “non attenders”
 PD9 –10: Pregnant women (Attending and non-attending antenatal clinic)

Table 5.8 shows that mothers have strong feelings, most of them negative, about the clinics in Duncan Village. Although the three groups with children with incomplete immunisations again generated a large number of quotations with a negative code attached to it, there were also other groups with negative responses that were equally high.

Frustrated: In the majority of the selected quotations participants used the word “frustrated” to express their feelings, for example: *“I wake up in a good mood immediately I think of going to the baby clinic I get frustrated PD 1: Cat A1.txt - 1:16 (66:68)”*. In other instances where the word does not appear the level of frustration is interpreted from the level of frustration that is evident from the comment, for example: *“It is not right to turn us back on our appointment date PD 7: Cat b3.txt - 7:10 (54:55).”*

The feelings of frustration about attending the clinic focus mostly on the long period of waiting and being turned away. The following quotation illustrates the extreme frustration felt by some participants because they feel that the waiting period is prolonged unnecessarily: *“The nurses tell you to be on time for immunisation. You come at 8 am the gates are not opened yet. When you are inside they spend another half-hour preparing, others having tea. You leave home early because you do not want to be insulted for being late. They don't keep time. At the end you spend a lot of time at the clinic when you could have done something else that is why I sometimes become lazy. PD 5: Cat B2.txt - 5:12 (28:36)”*.

Being turned away leads to even more feelings of frustration than the waiting. One participant complained that you could even get turned away twice in one day: *“I get frustrated. Sometimes the nurses say you have to come back in the afternoon. When you come back they tell you that the number is enough for the day come another day. A person has to go back home P3: Cat a2.txt - 3:11 (33:35).”*

Afraid: Mothers feel afraid to go to the clinic because they fear the verbal reactions of the staff. This was also mentioned in relation to the difficulties that mothers experience to attend the clinic (section 2.1). Due to reasons within or beyond the mothers’ control, they report that nurses “shout at and insult” them, causing them to feel afraid when they have to attend clinic. Mothers indicated that they are afraid they would be shouted at. This could be for the following reasons: they are late, they do not have the right documentation, they have missed appointment or if they are pregnant again. The following words of one of the mothers summarise these feelings of fear: *“I do not feel good I become scared when I have to go to the clinic, because I know that I am going to be insulted PD1: Cat A1.txt - 1:15 (62:64)”*.

Negative feelings but attend: Some mothers expressed negative feelings about going to the clinic but indicated that they still attend or it was clear from their clinic card that they still make use of the clinic services. One mother stated that *“there is nothing interesting and good except that I’m forced to go for immunisation PD 6: Cat B3.txt - 6:12 (52:53).*

Distressed: A few of the mothers reported feelings of distress when thinking about attending the clinic using the words “bad”, “worried”, “it hurts” and “it is painful” to describe their feelings. *“It is painful because I went to the clinic with my baby who burned. I was hysterical, I took the child to the clinic. The nurses shouted, swore and insulted me. They send me away saying that, the clinic is not a place for burnt children. I have hoped that the nurses would help me. From that day I lost interest and I decided that I would never go to the clinic again PD 3: Cat a2.txt - 3:2 (15:20)”*.

Intense dissatisfaction: Some mothers expressed their negative feelings about the clinic in even stronger terms than mere words of frustration. They used words like “hate” “sick and tired” or repeating their dissatisfaction. The following quotations illustrate these intense feelings:

“I went early to the clinic. I was told to wait .As the day goes by the nurse told me that they cannot help me because I am late .I did not want to argue. I decided never to go to the clinic to be insulted by the nurses. I am not interested to go there any more PD 1: Cat A1.txt - 1:51 (90:95).”

“I’m sick and tired of the nurses that insult me PD 2: Cat A2.txt - 2:5 (29:30)” and “I hate going to the clinic because one has to wait a long time before being attended to PD 9: Cat C1.txt - 9:1 (12:13)”.

Uncertainty: Mothers do not always know how they will be received at the clinic. This makes them feel

uncertain, *“I become lazy because sometimes it depends on the type of nurses; some are welcoming some are sulky PD5: Cat B2.txt - 5:1 (12:14)”*.

Not interested: Some mothers, all non-attenders, feel that they have lost all interest in going to the clinic, *“I am always not interested to go to the clinic even if the child is sick or she/he has to go for immunisation I always feel the same PD3: Cat a2.txt - 3:1 (12:13)”*.

Fear of embarrassment: Some mothers express feelings of fear that they will be embarrassed at the clinic because of their children clothes or their inability to buy food for the child. *“I lost my job and I did not have clothes to dress my child when I have to go to the clinic because the other mothers laugh at your child if she/he is not well dressed. You feel like you are going to a competition. So I decided not to go. PD 2: Cat A2.txt - 2:12 (55:60)”*.

Getting help: Some participants expressed positive feelings about going to the clinic because of the help that they get when attending. The positive feelings were either expressed by pregnant women or by mothers specifically in relation to immunisation. *“I always look forward to go to the clinic because I get help PD10: Cat C2.txt - 10:1 (12:13)”* and *“I feel good because immunisation is the only way to protect my child PD4: Cat B1.txt - 4:1 (12:13)”* are good examples of the few positive feelings that were expressed.

2.4.1 Salient issues

The following matrix summarises the important concepts concerning the feelings mothers have about attending the clinics.

		Attend ←	
Positive feelings	Fear	Unhappy feelings	Lost all interest
		Uncertain	
Get help	of Nurses	Distressed	
	Embarrasment (other mothers)	Frustrated	
		Extreme dissatisfaction	Not interested
		→ Do not attend	

Matrix 5.3: Mothers feelings about attending clinic

From the matrix it is clear that the “unhappy feelings” mothers have, vary in intensity. While some feel uncertain about what treatment they could expect, others expressed their extreme dissatisfaction with the situation at the clinics. It is also evident that there are mothers with the same feeling of fear or unhappiness that either attend or do not attend the clinic. It can be speculated that mothers who “are strong in themselves” (see Chapter 4: Section 2.2.2.3, p 102) find it easier to overcome these negative feelings and attend the clinics for the benefit of their children even if it is only for immunisations.

2.5 Mothers' experiences: Experiences with the clinic nurses

Mothers' positive and negative experiences are divided into the following categories: experience with the health system, experiences with the nurses, experiences with services received. The particular code family presented in this section only deal with experiences that mothers have with the nurses at the clinics. These experiences could be interpersonal relationship experiences or experiences with the nurses in the organisational context e.g. time-keeping of nurses. The mothers' experiences are presented in Table 5.9.

Table 5.9: Codes-Primary-Documents-5

Code-Filter: Code Family Mothers' experiences with the clinic staff
 PD-Filter: Primary Doc Family Mothers

CODES	PRIMARY DOCS*										Totals
	1	2	3	4	5	6	7	8	9	10	
MExNurses-: Behaviour	1	0	1	0	1	1	0	0	0	1	5
MExNurses-: Caring attitude	5	2	3	0	1	2	0	2	0	2	17
MExNurses-: Corruption	1	0	1	0	0	0	0	0	0	0	2
MExNurses-: Favouritism	2	0	1	0	0	2	1	0	0	0	6
MExNurses-: Time-keeping	1	0	0	0	1	1	0	1	0	0	4
MExNurses-: Verbal abuse	4	3	3	2	1	3	1	0	1	0	20**
MExNurses-: Work ethic	1	0	0	0	0	0	0	2	1	0	4
MExNurses: Mothers to blame	0	0	0	0	0	1	0	0	0	0	2***
MExNurses: Some good	0	0	0	0	3	2	0	0	0	0	5
Totals	15	5	9	2	7	12	2	5	2	3	63

*PD1 - 3: Mothers with incompletely immunised children - "non attenders"
 PD4 - 7: Mothers with fully immunised children - "attenders"
 PD 8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders- "non attenders"
 PD 9 -10: Pregnant women (Attending and non attending antenatal clinic)

** 2 quotations from PD11 - Municipal health care workers
 **1 quotation from PD14 - Community health care workers

Table 5.9 shows that negative experiences with the clinic staff were reported by all participant categories, but more than half of these reported experiences again came from the non-attenders. Negative experiences related to caring attitude and verbal abuse were by far the two most common experiences reported by mothers. No unconditional positive experiences were reported.

Verbal abuse: The experience of verbal abuse was the subject that participants felt most strongly about. These quotations were selected on the assumption that participants refer to actual cases where they have been insulted, shouted or sworn at. The words, shouted, insulted or swore were used in all the quotations attached to this code. (The fear that they could be verbally abused and the perception that verbal abuse takes place were coded separately and discussed earlier in Section 2.2)

The following four quotations illustrate the mothers' experiences with verbal abuse. The quotations were taken from different participant categories as well as from attenders and non-attenders:

"I'm sick and tired of the nurses that insult me PD 2: Cat A2.txt - 2:5 (29:30)."

"We go to B clinic because the nurses at C clinic shout and insult us. They swear at us PD3: Cat a2.txt - 3:21 (65:66)."

"Sometimes I become afraid because the nurses shout at us PD4: Cat B1.txt - 4:6 (30:31)."

"The nurses shout at us. This makes us not to go to the clinic. The child ends up not immunised PD5: Cat B2.txt - 5:9 (46:47)."

Without prompting the issue of "harsh words spoken" also came up in the group discussion with the professional nurses from the clinic when one sister said: "There are times that I would feel that I was harsh and I could see that the mother is hurt PD11: Cat HWmun.txt - 11:8 (40:41)."

Caring attitude: It is clear from the many quotations referring directly or indirectly to the lack of care that many participants experience the nurses at the clinics as being uncaring. Some participants just stated that there *"is no care PD1: Cat A1.txt - 1:29 (131:131)"* while others explained why they experience the clinic staff as being uncaring:

Not listening to them or consider their personal circumstances was experienced as uncaring by mothers. The following quotations illustrate this: *"They did not listen at how I lost my card. I decided never to go back to the clinic PD1: Cat A1.txt - 1:24 (108:110)".*

"They offend us about our dirty babies. They do not even know your background. Most of the time we do not even have money to buy soap to wash the baby clothes and nappies. They will offend us about the greyish clothes and nappies PD2: Cat A2.txt - 2:24 (84:88)"

Participants also felt strongly that they often are *being sent away without help* even if they have a sick child or that the help they receive is inadequate. If the statement of the participant that said *"(although) help is limited ...there are human resources people who can help, they also do not care PD 1: Cat A1.txt - 1:30 (133:135)"*, is used, it seems as if the following statements by the participants can be interpreted as referring to uncaring attitudes of clinic staff: *"...I went to the clinic with my baby who burned. ...They send me away saying that, the clinic is not a place for burnt children PD3: Cat a2.txt - 3:3 (15:18)".*

Not receiving any help and *being treated disdainfully* were also brought up as an issue related to non-caring attitude: *“They ask you what is wrong with the child. You say asthma. They ask how you know, you tell them the symptoms. They say there is nothing like that you exposed the child to cold. They tell you to go and buy the medicine. You do not know how you would know when a child is asthmatic PD 6: Cat B3.txt - 6:18 (73:78)”*.

The remark by one participant that *“the nurses stopped caring ever since the new act of free treatment for all the under 7 years. Since we stopped paying they also stopped caring PD2: Cat A2.txt - 2:18 (99:102)”* could also possibly be interpreted as a mother feeling that she is being treated in a disdainful, uncaring manner.

Participants also pointed out that *the way staff behaves towards them* shows them that the staff do not care about them. Mothers therefore linked the negative experiences with behaviour of nurses to the staff's uncaring attitude: *“The nurses do not have a way of talking, they do not respect us and they do not care. I am tired of them PD3: Cat a2.txt - 3:22 (69:70).”*

Favouritism: Experiences of favouritism were related in several of the focus group discussions. In the words of one mother: *“You must have someone that you know at the clinic to be able to get help PD3: Cat a2.txt - 3:20 (55:56).”* Favouritism is experienced in a number of ways:

People being helped even if they come later than others: “They do favours, they will attend to someone they know even if you came earlier than she did PD 1: Cat A1.txt - 1:41 (169:170)”.

Some patients get medicine other not: “Medicines are given to certain individuals but the nurses always say there are no medicines PD 1: Cat A1.txt - 1:44 (194:195).”

Behaviour: Mothers experience the way nurses behave towards them very negatively. They describe them as *“ill-mannered PD1: Cat A1.txt - 1:38 (161:161)”*, *“offensive PD6: Cat B3.txt - 6:16 (64:64)”* and one mother indicated that the *“welcoming is not good at all. The attitude and the approach of the nurses is bad especially if it is your first visit PD10: Cat C2.txt - 10:17 (69:71)”*.

Time-keeping: some participants complained about nurses' time-keeping. According to them *“nurses are always on the phone. They attend you after spending a lot of time on the phone PD1: Cat A1.txt - 1:39 (163:164).* Keeping patients waiting outside or spending too much time preparing and having tea were also some of the issues brought up by mothers. One mother complained as follows: *“Today I was at the clinic at 7h45 but we only got inside at 8h45. All that time we were outside PD6: Cat B3.txt - 6:11 (31:33).”*

Work ethic: Mothers describe incidents where they have experienced poor work ethic from the staff at the clinic: Nurses who *“chat a lot PD8: Cat other.txt - 8:3 (72:72)”*, *“are very lazy PD8: Cat other.txt - 8:4 (74:74)”* and *“drunk at work PD9: Cat C1.txt - 9:10 (58:58)”* were mentioned.

Corruption: The lack of medicines is one of the most negative things that are experienced by mothers in the health services. A participant in one of the groups said that *“Medicines are given to certain individuals but the nurses always say there are no medicines. Nurses take medicines to their home. PD1: Cat A1.txt - 1:45 (194:196)”*, while a participant from another group indicated that she rather gets medicine from a nurse who stay close to her. It is unknown if this nurse works at the clinic.

The following two codes did not have specific dimensions attached to them:

Mothers to blame: A comment by one mother is worth mentioning because it illustrates a completely different perspective. Mothers who experience nurses in such a negative way must also remember that they sometimes are the cause of the negative way nurses react to them. According to her: *“Nurses are human. Sometimes we (the clients) cause the tension. We must be able to see what we do wrong PD 6: Cat B3.txt - 6:17 (59:60)”*. In line with this perspective is the comment of one of the community workers that mothers *“protect themselves by saying the nursing staffs at the clinics are daft P14: Cat CHW.txt - 14:30 (192:194).”*

Some good: A few participants indicated that there are good nurses who care. All but one of the quotations supporting this code however also contains direct or indirect references to the “bad nurses”. An example of an indirect reference to these nurses is as follows: *“At times you ask for a particular nurse, if she is not on duty you go back home and come when she is in PD5: Cat B2.txt - 5:10.”* From some of the quotations it also seems as if the negative experiences clients have with nurses overshadows the “good experiences” for some of the participants: *“I feel bad because some nurses are good some are bad PD5: Cat B2.txt - 5:6 (22:23).”*

2.5.1 Salient issues

Mothers participating in the focus groups related a high number of negative experiences they had with nurses at the clinics. The following matrix summarises the important concepts concerning the experiences mothers have with the nurses at the clinics.

Nurses actions	Provider-client relationship	Service delivery(organisational aspects)
Directed at client	Verbal abuse Non-Caring attitude	
Observed by client and affecting client	Favouritism	Time keeping Work ethics Corruption

Matrix 5.4: Mothers experiences with nurses at the clinics

It is evident from the matrix that the experiences of mothers were related to actions directed at them

personally and also to actions of nursing staff. These have a negative effect on service delivery at the clinic and the way the participants experience the nursing staff .

Although there was a participant in one group discussion who said mothers could be to blame for the way they are being treated, the overwhelming number of negative experiences of mothers makes it likely that a problem does exist. Nurses participating in the focus groups actually admitted that verbal abuse does take place. The high number of quotations generated by the codes in this family suggests that negative experiences of mothers with staff at the clinics, could have an influence on the accessibility of the clinic service to mothers and expectant mothers.

2.6 Mothers' experiences with service received

The quotations attached to the codes depicting mothers' experiences with services received at the clinic, both negative and positive, are very close to those attached to the benefits and no benefits codes. There is however a difference between these codes for example while the advice that a mother gets from other mothers while attending the clinic is clearly of benefit to her, it cannot be coded as a positive experience concerning services received at the clinic. The code output for mothers' experiences of services received at the clinics, is presented in Table 5.10.

Table 5.10: Codes-Primary-Documents-6

 Code-Filter: Code Family Mothers' experiences with service received
 PD-Filter: Primary Doc Family Mothers

CODES	PRIMARY DOCS*										Totals
	1	2	3	4	5	6	7	8	9	10	
MExSR-: Disorganised	4	0	1	1	0	0	0	0	0	0	6
MExSR-: limited serv	1	0	2	3	1	0	3	1	0	2	13
MExSR-: Medical proc	2	0	0	0	0	0	0	0	1	0	3
MExSR-: No help	7	1	3	0	1	2	1	1	0	1	17
MExSR-: No medicine	3	2	2	1	0	1	2	1	0	0	12
MExSR-: turned away	5	1	1	2	0	1	2	1	0	2	15
MExSR-: Waiting	0	2	0	1	0	1	0	2	1	0	7
MExSR+: Education	0	0	0	1	0	0	1	0	0	0	2
MExSR+: Help with pr	0	0	0	0	0	0	0	0	2	3	5
MExSR+: Immunisation	0	0	0	1	0	1	0	0	0	0	2
Totals	22	6	9	10	2	6	9	6	4	8	82

 *PD1 – 3: Mothers with incompletely immunised children - “non attenders”
 PD4 - 7: Mothers with fully immunised children – ‘ attenders”
 PD 8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders- “non attenders”
 PD 9 –10: Pregnant women (Attending and non attending antenatal clinic)

Table 5.10 shows that negative experiences with the services received were reported by all participant categories, but as with the previous section (experiences with clinic staff) more than half of these reported experiences came from the “non-attending” categories.

No help: Many participants felt strongly that they receive no help from the clinics. The responses of participants concerning “receiving no help” can be summarised as follows:

No help even if they find themselves in desperate circumstances: “Even if you are desperate, they turn you back home without help PD 1: Cat A1.txt - 1:25 (117:118)”.

No help even though your child is ill: “When you come back they tell you that the number is enough for the day come another day .A person has to go back home. Sometimes the child is sick. You go home without help PD 3: Cat a2.txt - 3:12 (34:36)”.

No help but sent somewhere else, being sent back to the clinic and still not receiving any help: “You are sent to Frere Hospital because they say they do not have medicines. Frere Hospital will send you back to your local clinic. You end up not getting any help PD 1: Cat A1.txt - 1:33 (138:142)”.

No help but there are people that should be able to help: “Help is limited though there are human resources people who can help they also do not care. You are sent back home PD 1: Cat A1.txt - 1:31 (133:135)”.

No help because there are no medicines available: “I decided not to go to the clinic because a person does not get help. A person is always turned away because there are no medicines, not even for immunisation PD 3: Cat a2.txt - 3:5 (22:24)”.

No help because of insufficient education and information given: “They ask you what is wrong with the child. You say asthma. They ask how you know, you tell them the symptoms. They say there is nothing like that you exposed the child to cold. They tell you to go and buy the medicine. You do not know how you would know when a child is asthmatic PD 6: Cat B3.txt - 6:18 (73:78)”.

The following was also coded as no help although it was actually expressed by a mother who was positive about the services received but felt that help with growth monitoring was inadequate. “My problem is children are weighed only when they have immunisation appointments. Some injections are six months apart meanwhile you are unable to judge his /her growth/development PD5: Cat B2.txt - 5:3 (16:20).”

Turned away: Being turned away when they want to access the services of the clinics seems to be a major problem for some mothers. Being turned away and therefore not getting help are closely linked, but there are instances where mothers’ complaints specifically point to the fact that they were turned away and not that no help was received. Participants indicated that they are being turned away for various reasons:

Seemingly arriving too late: "I went early to the clinic. I was told to wait. As the day goes by the nurse told me that they cannot help me because I am late PD 1: Cat A1.txt - 1:21 (90:92)".

Attending clinic with a sick child that is incompletely immunised: "If you have missed your appointment you are insulted and a baby is not immunised they send you back so you decide not to go back to the clinic PD1: Cat A1.txt - 1:10 (35:38)".

Fridays: "Friday's are not helpful at all. They send you back home without the help. I decided to me am wasting time and never went back to the clinic again PD1: Cat A1.txt - 1:35 (149:152)".

No medicines: "I get frustrated because I had to wait for a long time before my turn. When it was my turn they turned me away saying they do not have the medicines so I have to go to a doctor. So I decided not to go PD2: Cat A2.txt - 2:4 (20:24)".

Only a limited number of people seen per day: "I have been turned away several times. They told me it is full for the day PD4: Cat B1.txt - 4:16 (74:75)".

No medicine: Based on the number of times a lack of medicines was mentioned by mothers, it can be said that this is one of the things that participants felt most strongly about concerning the services provided by the clinics. One of the reasons mothers make use of the clinic service is because "...you go the clinic for some medicines because you do not have money to buy them. PD 1: Cat A1.txt - 1:32 (137:140)". If no medicines are available at the clinic several mothers indicated that they couldn't see the need to attend clinic. "I went several times with my sick child they told me there are no medicines. That is why I decided not to go again PD2: Cat A2.txt - 2:13 (74:76)."

Limited service: Participants did not think that the clinics offered them a comprehensive service. According to them *services are not available on a Friday: "Fridays they send you back because they do admin. They will not help you even if your child is sick PD1: Cat A1.txt - 1:34 (144:146)."*

Two mothers related experiences where their children had *problems that could not be dealt with by the clinic* but then the sick children were also not referred to a hospital where they could be helped: "I lost interest because if the child is sick to death the nurses will give you Panado even if the child has to be referred to hospital. If you do not have money for a private doctor your child can die. I ended up using money to pay the doctor, that I was going to use for something else PD3: Cat a2.txt - 3:8 (27:31)."

The majority of mothers who made remarks that could be construed as referring to a limited service complained about the *limited number of people* who could be helped at the clinics each day. The following is a typical remark that was made by mothers: *“Sometimes the nurse turns us back because she has to take a certain number since she is working alone PD7: Cat b3.txt - 7:9 (50:52)”*.

Waiting: The long wait before being attended to is also experienced negatively by participants. While a few complained in a similar way as the mother who said that *“I get frustrated because I had to wait for a long time before my turn PD 2: Cat A2.txt - 2:3 (20:21)”*, there were also participants who complained about the conditions in which they have to wait: *“At Ndende you I have to wake up at six to be admitted. I have to wait in the cold PD 8: Cat other.txt - 8:11 (112:113).”*

Disorganised: A few participants observed that they got *sent backwards and forwards* between the clinic and other institutions without receiving help: *“You are sent to Frere Hospital because they say they do not have medicines. Frere Hospital will send you back to your local clinic. You end up not getting any help PD1: Cat A1.txt - 1:33 (138:142)”*.

Another mentioned that the clinics keep *no record* of periods when they do not have medication for immunisations and that the child’s incomplete immunisation status is held against the mother when she comes back to have her child immunised: *“...when you come back, the nurse shouts at you saying: why have you missed your appointment? She has forgotten that you were turned back PD4: Cat B1.txt - 4:13 (56:61)”*.

A complaint about being told to return later in the day and then sent home again also could possibly be attributed to a disorganised system: *“Sometimes the nurses say you have to come back in the afternoon. When you come back they tell you that the number is enough for the day come another day .A person has to go back home PD 3: Cat a2.txt - 3:30 (33:35).*

Medical procedures: Children getting ill from immunisations and painful procedures for pregnant women were mentioned as negative experiences that mothers had with the services they received.

Mothers reported the following positive experiences during the focus group discussions:

Education: Two mothers reported that they received education and the comments could be interpreted as a positive experience: *“I was afraid to go the first time because I thought the nurse were going to ask me difficult questions. To my surprise they educated us on how to care for the child PD 7: Cat b3.txt - 7:1 (13:16).”*

Help with pregnancy: As with the perceived benefits the pregnant participants had the most positive comments about the services they receive from the clinic. Education, help with problems during pregnancy and the diagnosis and help with HIV/AIDS were all mentioned. The following quotation illustrates these

positive experiences: *“I feel good sometimes. I had a problem with my pregnancy and they referred me to the hospital. If I did not go I would not have known what was wrong PD10: Cat C2.txt - 10:25 (19:22)”*.

Immunisations: Two mothers expressed positive experiences with taking their children for immunisation (also see the discussion under the codes, benefit and no benefit). According to one mother, immunisation is one of the good experiences she has at the clinic: *“Immunisation is one of them. I have my confidant. I know if I spoke to her I will feel good PD 6: Cat B3.txt - 6:13 (49:50)*.

2.6.1 Salient issues

Participants from all categories had negative experiences with the services that were received from the clinics. The codes that have the most quotations attached to them namely limited service, no help, no medicine and turned away, are in many instances linked to each other. It is evident that these experiences have to do with “no services” received, while only a few quotations have to do with “actual services” received. Children getting ill from immunisation, the long waiting before being helped and disorganised services refer to negative experiences of the actual services received. Many causal factors could be involved in poor service delivery at the clinics e.g. organisational or structural problems like too few staff or a lack of medicine supply to the clinics, poor work performance and attitude of nurses or unrealistic expectations of clients. However it does seem as if a good provider-client relationship could overcome many of these negative experiences that mothers have with services received.

A recurring point in all the code families discussed up to now is the fact that while the number of negative experiences from the non-attending mothers are overwhelming in comparison with the attending mothers, the latter while not reporting as many negative experiences, report very few positive experiences. The same was observed with negative feelings, perceptions and experiences of mothers with nurses at the clinic.

2.7 Mothers’ recommendations

Mothers made recommendations about what could be done to get mothers to attend the clinics. The codes that represent these recommendations are presented in Table 5.11.

Table 5.11: Codes-Primary-Documents - 7

Code-Filter: Code Family Mothers recommendations

PD-Filter: Primary Doc Family Mothers

CODES	PRIMARY DOCS										Tot
	1	2	3	4	5	6	7	8	9	10	
MrechS: Investigate conditions	1	0	0	0	0	0	0	0	0	1	2
MrechS: Mobile clinic	0	0	1	0	0	0	0	0	0	0	1
MrechS: Provide help	1	0	0	0	0	0	0	0	0	0	1
MrechS: Provide programmes	0	1	0	0	0	0	0	0	0	0	1
MrechS: Provision of medicine	1	1	0	1	0	1	1	1	0	0	6
MrechS: Records and controls	0	0	0	0	0	1	2	0	0	0	3
MrechS: Rotate staff	0	0	0	0	0	0	1	1	0	0	2
MrechS: Scan at clinics	0	0	0	0	0	0	0	0	0	2	2
MrechS: Staff shortages	0	0	0	1	0	1	1	0	0	2	5
MrechS: Trained volunteers	0	0	1	0	0	0	0	0	0	0	1
MrecNurses: Behaviour towards patients	2	3	1	0	0	4	1	2	6	0	19
MrecNurses: Time-keeping	0	0	0	0	0	0	0	0	2	0	2
Totals	6	5	3	2	0	7	7	4	8	5	45

*PD1 – 3: Mothers with incompletely immunised children - “non attenders”

PD4 - 7: Mothers with fully immunised children – “attenders”

PD 8: Mothers from Duncan Village with children who attend clinics outside the Duncan Village borders- “non attenders”

PD 9 –10: Pregnant women (Attending and non attending antenatal clinic)

In contrast to the previous codes, less than half of the quotations concerning recommendations on improving the conditions for mothers at the clinic came from the “non-attending” participants. By far the most quotations are attached to the code that recommends changes in the behaviour of nurses.

Recommendations from mothers about improvements at the clinics focus on the nurses, their behaviour at work and towards the patients, as well as recommendations about the health services.

2.7.1 Recommendations regarding the nurses

Behaviour towards patients: Most of the recommendations made by participants have to do with the behaviour of nurses towards patients. This is in line with the many negative experiences mothers reported about the clinic nurses’ uncaring attitude and verbal abuse received from nurses (see Table 5.11). These recommendations can be categorised as follows:

Mothers want *nurses to treat them with respect* by talking to them respectfully, respecting their thoughts and opinions and their privacy. The following quotations reflect these recommendations:

If the nurses can show some respect, and be able to talk to us as human beings and show that they care I will go to the clinic again PD3: Cat a2.txt - 3:24 (77:78).

“The nurse must learn to trust us when we tell them that we have a problem PD6: Cat B3.txt - 6:20 (85:86).”

“Nurses must stop insulting, shouting and accusing us in front of the other mothers PD2: Cat A2.txt - 2:14 (81:82).”

“They must have confidentiality. We even know some patients who are (HIV) positive but that is suppose to be confidential PD9: Cat C1.txt - 9:17 (85:87).”

The recommendation that nurses be *trained in dealing with the public* are reflected in several of the quotations for example: *“Nurses need to be trained on how to talk to people PD 8: Cat other.txt - 8:5 (78:79)”* and to *“take care and notice of people who attend the clinic. PD 1: Cat A1.txt - 1:55 (179:180).*

Closely linked to the recommendation that nurses need to be trained to talk to people is the need that *nurses must communicate with patients* and that the communication must take place in an agreeable manner. Communications on what to do if a card is lost or if no medicine is available will help towards making mothers feel more comfortable about visiting the clinic.

Nurses must also *learn not to project their problems onto the clients*: *“The nurses must stop taking their frustrations out on us PD6: Cat B3.txt - 6:21 (88:89)”*.

The following quotation shows that mothers would like nurses to *be sensitive to their circumstances* by dealing with hygiene matters in a sensitive manner and taking poor household security into account: *“They offend us about our dirty babies. They do not even know your background. Most of the time we do not even have money to buy soap to wash the baby clothes and nappies. They will offend us about the greyish clothes and nappies. So they have to stop this PD2: Cat A2.txt - 2:15 (84:89)”*.

Participants also recommended that *nurses must be ethical in their dealings with patients*: *“The nurses must stop doing favours. They must use the first come first serve policy PD6: Cat B3.txt - 6:24 (100:101)”*.

Time keeping: Other recommendations that concern the nurses are suggestions that they should improve their time keeping: *“They must be on time. They must stop offending us for being late PD9: Cat C1.txt - 9:15 (77:78)”*.

2.7.2 Recommendations about health services

Investigate conditions: Mothers would like to see *“...an investigator to come and investigates how the nurses treat children and mothers PD 1: Cat A1.txt - 1:37 (159:161)”*.

Provision of medicines: Participants indicated that they would like to see that there are medicines

provided at the clinic. If there are no medicines available at the clinic the nurses should communicate with them about the matter. According to one mother *“The nurses must have a strategy on how to address us about the shortage of medicines PD 6: Cat B3.txt - 6:10 (39:41)”*.

Staff shortages: Staff shortages due to too few employees at the clinics and staff absenteeism must be addressed. According to one participant, absenteeism causes some of the problems at the clinics and *“the clinics (must) have a way of dealing with this PD 6: Cat B3.txt - 6:22 (91:93)”*.

Records and control: Participants felt that *“it is not right to turn us back on our appointment date PD 7: Cat b3.txt - 7:10 (54:55)”* and that an administrative system should be implemented to record *“the number of patients that have to come on a particular day. This can eliminate the number of people being turned away even if you were early PD 6: Cat B3.txt - 6:23 (95:98)”*.

Another proposal from one of the participants was that *“the clinic must have a copy of the (clinic) cards PD 7: Cat b3.txt - 7:17 (96:96)”*.

Ultrasound scan at clinics: Pregnant mothers recommended that the clinics must have a scan: *“If the clinics can have a scan because we do not have money to commute between Frere hospital and the clinic PD10: Cat C2.txt - 10:21 (87:89)”* and *“I agree with her. It is important to have the scan because the nurse asks from you whether the baby moves or not PD10: Cat C2.txt - 10:22 (91:93)”*.

Rotation of staff: Another recommendation is that *“Nurses must rotate PD 7: Cat b3.txt - 7:19 (108:108)”*.

A few of the codes only had one quotation attached to them. The relevant quotations involved the following: It was suggested that trained volunteers could deal with immunisations. Other suggestions were the return of the mobile clinic, that people should not be turned away without help and that programmes for poor mothers should be undertaken at the clinics.

2.7.3 Salient issues

Recommendations from mothers on what can be done to get more mothers to attend the clinics focused first on the behaviour of nurses towards patients, with provision of medicines and the need to address staff shortages also being mentioned but in far less frequently than the behaviour issue. This corresponds with the results of the mothers' experiences with the nurses. Most of these recommendations came from “attending mothers” showing that although they go to the clinic and possibly did not comment negatively in other discussion points they do experience going to the clinic negatively and have strong feelings about what could be done to improve the service.

2.8 Difficulties experienced by health care workers

This code family includes the difficulties health care workers experience at the clinics and in the obstetric unit at the hospital. It also covers problems they could experience with service delivery with specific reference to nutrition-related education. The code output for the difficulties experienced by health care workers is presented in Table 5.12.

Table 5.12: Codes-Primary-Documents-8

 Code-Filter: Code Family Difficulties experienced by health care workers
 PD-Filter: Primary Doc Family Health care workers

CODES	PRIMARY DOCS*				Totals
	11	12	13	14	
HCWdif: Beyond scope of clinic	2	0	0	0	2
HCWdif: Heavy workload	4	1	4	1	10
HCWdif: Implementation	0	0	0	1	1
HCWdif: Lack of means	1	0	0	0	1
HCWdif: Lack of skills	0	2	0	1	3
HCWdif: Literacy	0	1	0	0	1
HCWdif: Missing clients	7	0	0	1	8
HCWdif: Time in hospital	0	3	1	0	4
Totals	14	7	5	4	30

 * PD11: Cat HWmun - Professional nurses from Buffalo City Municipality
 PD12: Cat HHW - Obstetric unit health workers
 PD13: Cat HHW2 - Obstetric unit health workers
 PD14: Cat CHW- Community health care workers from the Buffalo City municipality

It is evident from Table 5.13 that the professional nurses working at the clinics raised the most difficulties as a group. The difficulties raised by them had more to do with missing clients than difficulties in the workplace.

Heavy workload: A heavy workload is the most commonly mentioned difficulty experienced by health workers in providing mothers with messages about the identified focus areas. The professional nurses and the community health workers from the municipality indicated that they have a heavy workload. When asked whether they could reach all the mothers with problems a community health worker replied “*No we cannot because the community is big*” PD14: Cat CHW.txt - 14:16 (124:124) and a professional nurse from the clinics said that: “*We are only two sisters in my clinic. We do tell the women how many we are going to take for the day. We will not be able to take more*” PD11: Cat HWmun.txt - 11:42 (344:347)”.

The comments of the obstetric unit health workers about their heavy workload concentrated mostly on a shortage of staff that results in staff having to work in more than one area or having patients with medical

conditions that prevent them from spending time with healthy mothers. The following quotation is a good illustration of these problems: *“Admissions are included, so we have to work in double area. Sometimes the sisters are unable to get to all the patients. For instance if more than one patient is ready to deliver and the baby dies, there is no one to be with them. Especially when the theatre is on. Patients sometimes go home without observations. We experience those difficulties PD13: Cat HHW2.txt - 13:12 (218:225)”*.

Missing clients: The second biggest difficulty foreseen and experienced by clinic health workers is that some patients do not come to the clinics although they have been told to do so or only come once and then migrate back to the rural areas without informing the clinic. The following quotations illustrate these experiences of the nurses:

“They migrate to the urban areas when they are pregnant. After they deliver they go back. When you do follow up you find that she is no longer here she gone to Transkei. When they move they do not inform the clinics PD11: Cat HWmun.txt - 11:17 (108:112)”.

“It (nutrition-related education) looks inadequate because we have to start it when the person is still pregnant, but it is difficult because sometimes they do not even come for their blood results .So you don't see that person until she give birth PD11: Cat HWmun.txt - 11:22 (149:153).”

A community health worker supported these problems and stated that there are many pregnant women in the community who do not attend clinics. Mothers also do not bring their children for immunisation: *“The problems were, they would come back late for the next immunisation appointment even after two years PD11: Cat HWmun.txt.”*

Time in obstetric unit: An important factor identified by obstetric unit health workers that could make it difficult for them to educate mothers is the short time that mothers with an uncomplicated delivery spend in the unit.

Lack of skills: Both the community health workers and the obstetric unit health workers indicated that they see their lack of skills as a possible difficulty in conveying the necessary messages to mothers. One of the health workers of the obstetric unit commented: *“I would tell them what I know. I don't feel that it is enough PD12: Cat HHW1.txt - 12:21 (339:340).”*

Although the following difficulties were raised by only one participant each they are important in the context of access to nutrition-related education:

Problems that are beyond the scope of clinic and mothers' lack of means: One nursing professional said that some problems cannot be dealt with by the clinics, but even if the clinic deals with it by referring the client to the relevant people, the mothers often do not have the means to access that help: *“Sometimes*

non-availability of resources is a problem. Sometimes you want to refer the mother because you feel the problem is beyond your scope of practise you have to send them to town .The mother will tell you that she does not have the money to go to town PD11: Cat HWmun.txt - 11:16 (85:90)”

Participants also remarked on the **problem of literacy and a failure of clients to implement** what has been taught. A community health worker stated that the problem is: *“few people do implement what they have been educated about. We do educate people on health but it takes time for them to do what they have been told PD14: Cat CHW.txt - 14:29 (173:176)”*.

2.8.1 Salient issues

Not having enough time to spend with patients because of the heavy workload and patients who do not attend the clinic are the most important difficulties health workers are faced with in the workplace. These could prevent them from presenting patients or clients with nutrition-related messages. These responses must be understood against the fact that the three clinics in Duncan Village service a community of close to a 100 000 people and many of the residents migrate back and forth from the rural areas. While migration could play a role in pregnant women not returning to antenatal clinics or mothers not bringing their children for immunisation, there is also a real possibility that poor interpersonal relationships and inadequate service delivery are the actual reasons for mothers not attending the clinics.

The heavy workload and multiple tasks expected from health workers in the obstetric unit of the hospital could have a serious effect on the possibility of presenting new mothers with nutrition education. The chances of these health workers to educate mothers are further reduced by the fact that mothers only stay in the unit for about 6 hours after delivery. This further emphasises the need for accessible nutrition-related education to be available at the antenatal clinics in Duncan Village.

2.9 Health care workers – Experiences with the mothers

The codes in this code family reflect on how the participants from the health care workers categories experience the mothers who are their clients. This provides information on their ability to focus on the unique (nutrition-related) needs, resources and contexts of their clients. The code output for this code family is presented in Table 5.13.

Table 5.13: Codes-Primary-Documents 9

 Code-Filter: Code Family HCW - Experiences with the mothers
 PD-Filter: Primary Doc Family Health care workers

CODES	PRIMARY DOCS				Totals
	11	12	13	14	
HCWExMoth-: Abuse help	4	0	0	3	7
HCWExMoth-: Breast feeding	0	3	7	1	11
HCWExMoth-: Health	0	5	1	0	6
HCWExMoth-: Household Food Security	8	1	4	1	14
HCWExMoth-: Ignorant	5	0	0	0	5
HCWExMoth-: Negligent	3	0	0	0	3
HCWExMoth-: Trusting other advice	3	0	0	1	4
HCWExMoth-: Uncaring	4	0	0	0	4
HCWExMoth: Age	0	2	2	0	4
HCWExMoth+: Attend health talks	0	0	0	1	1
HCWExMoth+: Solving conflict	3	0	0	0	2
HCWExMoth+: Understanding	2	0	0	0	2
Totals	32	11	14	7	63

 * PD11: Cat HWmun - Professional nurses from Buffalo City Municipality
 PD12: Cat HHW1 Obstetric unit Health Workers
 PD13: Cat HHW2 Obstetric unit Health Workers
 PD14: Cat CHW- Community health care workers from the Buffalo City municipality

Table 5.13 shows that most of the comments related to the experiences about mothers came from the group discussion with the professional nurses from the clinics. It is evident that the experiences health workers have with mothers are overwhelmingly negative.

Household Food Security: Poor household food security is rampant in Duncan Village and it is therefore not surprising that the code dealing with negative experiences around mothers’ household security has the most quotations attached to it. In some of the quotations the health workers shared their observations *“We do educate them on what to do but they do not have the means to buy the things they need for the babies PD11: Cat HWmun.txt - 11:27 (175:177)”* while in others they gave their perceptions of factors that contribute to the problem. These include the following:

Laziness: According to health workers mothers are lazy. *“They can start food gardening especially where the father and the mother are both not working PD11: Cat HWmun.txt - 11:34 (254:256)”*. Another one said that: *“They are lazy to do things for themselves they want to be spoon fed PD14: Cat CHW.txt - 14:23 (79:80)”*.

Inadequate education: One health worker suggested that *“some of them (mothers) are poor because they left school early. They do not even have the skills so that they can have a job. They are underage so they are unemployable. So most of them are poor because of ignorance PD11: Cat HWmun.txt - 11:64 (187:193)”*.

Children left with grandparents: It was suggested that some mothers leave their children with grandparents who then have difficulty accessing the child support grant or the mother gets a grant but does not hand it over to the grandparents.

Not having the child support grant: “After two years, they come back for a clinic card saying they want to register their babies. Every time they are discharged, we give them a lecture on what to do about clinic cards and the form for registering the baby PD13: Cat HHW2.txt - 13:21 (351:355).” Several comments such as these were made about mothers who neglect to register their children and therefore do not have access to the child support grant.

Negative perceptions of the ways in which mothers try to improve their household food security is illustrated by the following quotation: “The grandmothers take children to foster them though you can see they are doing it only because they are going to get money PD11: Cat HWmun.txt - 11:61 (129:131)”. One obstetric unit health worker also suggested that girls get pregnant on purpose just so that they can get access to the child support grant.

Breastfeeding: Negative experiences with breastfeeding is the code in this code family with the second most quotations attached to it. Both the community health workers and the health workers of the obstetric unit related negative experiences they had had concerning mothers and breastfeeding. According to these health workers, mothers do not want to breastfeed. The community health worker said that in her experience “young children do not want to breastfeed because.... They also influence each other. They want to bottle feed PD14: Cat CHW.txt - 14:7 (66:70)”. This confirms the findings of Phase 1 (see Chapter 4: Section).

The obstetric unit health workers also related several specific instances of mothers who did not want to breastfeed, but the remark of one of the nurses highlighted the problems of young mothers: “One of the mothers came back with a three week old baby. She claimed that at the clinic they said they did not have time to teach her how to breastfeed. She did not have money to buy formula so she is giving the baby water and cabana juice if there is any at all PD13: Cat HHW2.txt - 13:17 (283:288)”.

Abuse of help: The abuse-of-help experiences focused mostly on the abuse of the child support grant. However references to the abuse of the nutrition scheme were also made. Food supplements are handed out to undernourished children through the nutrition scheme. Children qualify to be admitted to the scheme through nutritional status and household income criteria. One community health care worker said: “Some of the mothers abuse the nutrition scheme. They would say they are not working though they do. Some would demand the milk though they do not qualify PD14: Cat CHW.txt - 14:26 (130:133)”.

Abuses of the child support grant take the form of the money not being used for the child or the child being

left with the grandmother and the grant not being handed over to her by the mother. According to a clinic nurse *“the abuse of grants and vouchers by people who are not suppose to receive them (corruption) cause the delay for new applicants PD11: Cat HWmun.txt - 11:72 (275:277)”*.

Health and hygiene: Only the health care workers of the obstetric unit referred to health and hygiene issues. Their experiences were related to the poor nutritional as well as hygiene status of some mothers who come in to deliver. The health workers also indicated that they sometimes get mothers where there is evidence of alcohol abuse when they are admitted: *“We do have mothers who are using alcohol. Some arrive drunk when they come to deliver PD12: Cat HHW1.txt - 12:16 (297:298)”*.

The following comment by one of the health workers is important in view of previous findings (both the DVDH study and Phase 1 of this research) that young mothers have specific nutrition-related problems: *“What is fascinating about them is that they (the patients whom they see) have children at an early age PD12: Cat HHW1.txt - 12:31 (23:24)”*.

Ignorant: Responding to a question on what they think are the reasons why mothers do not attend the clinics, one sister answered: *“Ignorance, laziness and uncaring PD11: Cat HWmun.txt - 11:37 (300:300)”* and another said: *“The community health workers do tell them to go to the clinics but they remain ignorant PD11: Cat HWmun.txt - 11:63 (166:167)”*.

Several examples were also given by the sisters that could be interpreted as the mothers being ignorant of the need to attend clinic, for example: *“Some are coming to their husbands from the rural areas of Transkei. She did not attend the clinic because it was far. When she is here she does not even bother coming to the clinic. She will only come when she is in labour or when there is something wrong with the child PD11: Cat HWmun.txt - 11:38 (302:307)”*.

Negligent: Health workers experience non-attendance of clinics by mothers as negligent behaviour: *“After giving birth they sometimes do not come back to us. Alternatively, they will come back with the malnourished six-month-old babies PD11: Cat HWmun.txt - 11:24 (153:156)”*.

Trusting other advice: Trusting the advice of the mother-in-law or traditional healers more than those of the clinic staff could have an influence on accessibility of messages from health care workers. A clinic health worker made the following remark about this: *“The other problem they believe too much in witch doctors. You find that when they come back to the clinic the child is in another state when you ask why, they will tell you that she was using traditional healer's medicine. You find that the only emphasis is on what she has been told by the traditional healer rather than what we have told them PD11: Cat HWmun.txt - 11:19 (117:124)”*. The same was said about mothers-in-law: *“You will educate her and she will tell you what her mother-in-law said so you find there is a conflict of ideas PD11: Cat HWmun.txt - 11:25 (157:160)”*.

Uncaring: It is clear from some of the remarks that the health workers thought mothers were uncaring. According to them there are some mothers who leave their small children with the grandparents, not offering any support and others who neglect to keep their clinic appointments: *“When you want to know why, they would say they did not hear what the next appointment date was PD11: Cat HWmun.txt - 11:14 (77:80)”*.

Age: Negative experiences with young mothers were related by some of the obstetric unit health workers. The importance of accessible nutrition-related information for these young mothers is reflected by the following quotations:

“Some of them are young and living with mothers who are also young so they do not have someone to guide them on how to do things they do things on their own or things they see from others PD12: Cat HHW1.txt - 12:34 (103:107).”

“The teenagers do not want to breastfeed. They do not want to come to the nursery. They will only come out to see the child when there is a relative or a boyfriend PD13: Cat HHW2.txt - 13:2 (16:19).”

There were very few positive experiences reported about mothers by health workers. One community health worker said that mothers do attend health days, while the professional nurses from the clinics feel that mothers do try to solve conflict with them. According to these professional nurses mothers do understand the situation at the clinic. *“However, you do explain to them, that to attend to one patient can take you more than 45 minutes. By 4.30pm the clinic closes so you won't be able to see them after that time. Then you advise them to come next time. I think you try to be fair to them so that they do not wait and yet they will not be attended to. Those that can see there is no space in the waiting room do understand PD11: Cat HWmun.txt - 11:74 (353:361)”*.

2.9.1 Salient issues

The experience of health workers with mothers provides insight into their ability to focus on the unique needs, resources and the contexts in which their clients live in two important ways. Firstly it gives an indication of the insight the particular health workers have into the situation of the women who attend the baby and antenatal clinics and shows how empowered they are to help their clients. Second it provides evidence of negative experiences health workers possibly had with individual mothers that led to negative perceptions of and attitude towards mothers. These negative perceptions and attitudes could possibly serve as a barrier to effective message delivery and reception of these messages by mothers. The concepts involved in health workers' experiences of mothers are summarised in Matrix 5.5.

How HCW experience mothers	Negative experiences that could lead to negative perceptions/attitudes	Negative experiences that could lead to greater insight
	Abuse of help Negligent Uncaring Ignorant Trusting other advice	Household food security Breastfeeding Age Health and hygiene

Matrix 5.5: Health workers’ experiences with mothers

The following comments can be made about the validity of some of the negative experiences that nurses reported:

Concerning mothers being lazy and therefore not having a food garden, the DVDH study found no connection between children’s nutritional status and food gardens and observation data of Phase 1 showed that all mothers who had space for a vegetable garden had a vegetable garden.

Negative experiences with mothers who abuse the child support grant could possibly be true in view of the finding of Phase 1 about what mothers would spend their money on if they had an amount equal to the child grant (see Addendum B, Table 22). In reality both the DVDH study and Phase 1 of this research found that very few mothers actually receive the child support grant. This points to the possibility that accessing the grant is a more pressing problem at present than abusing the grant.

Inadequate education of the mother has already been identified in the DVDH as a risk factor for growth failure in children. This provides support for the experience of health workers that lack of schooling contributes to poor household food security.

Experiences with young mothers who do not want to breastfeed because they “influence each other” seems to be confirmed by findings of Phase 1 (see Chapter 4: Section 2.2.4.2, p 109). The experience of health workers of the obstetric unit that there are young mothers who have no access to support networks or help from the clinic, are supported by observation data from Phase 1 (see Chapter 4: Section 2.2.4.2, p 109).

2.10 Health care workers – Experiences with the community

The codes in this code family reflect on how the participants from the health care workers categories perceive the community they work in. As with the experience they have with mothers, this could also provide information on their ability to focus on the unique (nutrition-related) “needs, resources and contexts of their clients”. Experiences health workers have with the community were only discussed in the focus

group discussion with clinic staff, namely the professional nurses and the community health workers. The code output is presented in Table 5.14.

Table 5.14: Codes-Primary-Documents-10

 Code-Filter: Code Family HCW - Experiences with the community
 PD-Filter: Primary Doc Family Health care workers

CODES	PRIMARY DOCS				Totals
	11	12	13	14	
HCWExCom: Difficult	1	0	0	0	1
HCWExCom: Household Food Security	2	0	0	0	2
HCWExCom+: Appreciation	1	0	0	0	1
HCWExCom+: Caring	1	0	0	0	1
HCWExCom+: Felt needed	2	0	0	0	2
HCWExCom+: Formed attachments	2	0	0	0	2
HCWExCom+: Motivating	3	0	0	0	3
HCWExCom+: Open for help	2	0	0	1	3
HCWExCom+: Referring others	0	0	0	1	1
Totals	14	0	0	2	16

 *PD11: Cat HWmun - Professional nurses from Buffalo City Municipality
 PD12: Cat HHW1 Obstetric unit Health Workers
 PD13: Cat HHW2 Obstetric unit Health Workers
 PD14: Cat CHW- Community health care workers from the Buffalo City municipality

In contrast to the many negative experiences that were relayed in the discussion about mothers, it is clear from Table 5.14 that health workers who participated in the discussions had mostly positive things to say about the community. Because of the few quotations attached to each code the codes will not be discussed separately.

The community was described as **difficult** by a professional nurse who when asked what is interesting about working in Duncan Village remarked: *“The type of community that I worked in. Though they use to give us problems, I always had something to do PD11: Cat HWmun.txt - 11:2 (16:18)”*. They were also described as a community that shows **appreciation**: *“We had problems: The workload was too much but they showed appreciation. I become part of them so they would share their family problems PD11: Cat HWmun.txt - 11:7 (33:36)”*.

There were also indications from some of the health workers that the community made them **“felt needed”** and that they would get **attached** to some patients: *“There are poor people to whom I became attached. They had social problems .I would collect some things for them. Therefore they would come to the clinic even if it were not their appointment dates. This made me always looked forward to go to work the following day. They made me to be interested in seeing the progress of the child PD11: Cat HWmun.txt - 11:48 (23:28)”*.

Poor **household food security** was mentioned as a problem in the community but that people were **open for help**: *“I found that it is a poor community but somehow they wanted to better themselves, if they can be offered help or guidance. They were very motivating PD11: Cat HWmun.txt - 11:49 (30:33)”*. Although poor one health worker also described them as a **caring** community that motivated them in their work as health workers: *“They are a poor, caring, and loving community. If a mother was referred to hospital, she will come back to report. They motivate you . You become interested in working with them. PD11: Cat HWmun.txt - 11:11 (66:69)”*.

2.10.1 Salient issues

The positive experiences that the professional nurse reported show that there are rewards for working in the Duncan Village community. These positive experiences could perhaps be used in motivating health workers at the clinics to make nutrition-related messages accessible to the mothers attending the clinics in Duncan Village.

2.11 Health care workers: Coverage of the messages

Participants of the focus groups were presented with the proposed six focus areas for intervention (see Chapter 1, Table 1.2, p 7) and asked about the information that was being given to mothers about these focus areas. The codes included in this code family is given in Table 5.15.

Table 5.15: Codes-Primary-Documents-11

Code-Filter: Code Family HCW: Coverage of the messages
 PD-Filter: Primary Doc Family Health care workers

CODES	PRIMARY DOCS				Totals
	11	12	13	14	
HCWcov: Breast feeding	2	2	5	1	10
HCWcov: Feeding practices	0	0	1	1	2
HCWcov: Health and hygiene	0	4	1	7	12
HCWcov: Household Food Security	1	1	3	2	7
HCWcov: Nutrition	1	0	1	1	3
HCWcov: Resource management	0	0	0	2	2
HCWcov: Self development	1	1	0	1	3
HCWcov: Inadequate	1	1	0	0	2
HCWcov: Refer	2	2	1	2	7
Totals	8	11	12	17	48

* PD11: Cat HWmun - Professional nurses from Buffalo City Municipality
 PD12: Cat HHW1 Obstetric unit Health Workers
 PD13: Cat HHW2 Obstetric unit Health Workers
 PD14: Cat CHW- Community health care workers from the Buffalo City municipality

From Table 5.15 it can be seen that all the focus areas were at least addressed in some way or other by one of the health worker categories. No attempt was made during the focus group discussions to determine the

adequacy of information provided.

Breastfeeding and feeding practices: Most of the quotations came from the health workers of the obstetric unit. This was expected, as these health workers are the first line of information available to a mother if she did not attend antenatal clinic. Both other categories however also indicated that they do breastfeeding education. One professional nurse reported that one of the things she liked about her work is *“when I have motivated a mother to breastfeed when she has stopped. I wanted to see if she continues with breastfeeding PD11: Cat HWmun.txt - 11:1 (10:12)”*. Breast-feeding is also the code in the “coverage of messages” family with the most quotations attached to it.

Health and Hygiene: All the quotations were taken from the discussions with the community and obstetric unit health workers. The community health workers seem to be very involved with motivating women to attend the ante-natal clinics so that they can make arrangements for the birth of their babies in hospital: *“So I become interested in educating them on the advantages and disadvantages of booking PD14: Cat CHW.txt - 14:1 (15:17) and “First thing when we see a pregnant woman we tell her to go and do booking and give her all the details like which days PD14: Cat CHW.txt - 14:3 (32:35)”*.

The community health workers also spoke about the health awareness days that are attended by women. One health worker said: *“We do educate people on health but it takes time for them to do what they have been told PD14: Cat CHW.txt - 14:20 (174:176)”*.

The obstetric unit health workers reported doing education on health and hygiene and referring mothers to the clinic: *“When it comes to health education I think we help them there PD12: Cat HHW1.txt - 12:19 (323:324)”* and *“We do give them health education and refer them to the clinics to get support from other groups PD13: Cat HHW2.txt - 13:9 (196:198)”*. They were also the only health worker participant category that indicated that they do any hygiene education: *“We do educate them about hygiene. Like what they have to do when they wake up and how to look after the baby .We do educate them for the one-day they stay here PD12: Cat HHW1.txt - 12:11”*.

Household Food Security: A professional nurse from the clinics reported giving physical help to patients with household food security problems: *“There are poor people to whom I became attached. They had social problems. I would collect some things for them. Therefore, they would come to the clinic even if it was not their appointment date. Therefore, I always looked forward to go to work the following day. They made me to be interested in seeing the progress of the child PD11: Cat HWmun.txt - 11:3 (21:28)”*. Other attempts to address household food security mentioned by both the obstetric unit and the community health workers relate to teaching mothers about food gardening and teaching them about requirements for the child support grant. A obstetric unit health worker said that every time a mother is discharged *“we give them a lecture on what to do about clinic cards and the form for registering the baby PD13: Cat HHW2.txt - 13:27 (353:355)”*.

Nutrition: Reference to nutrition education was made by at least one participant in all the health worker categories. A professional nurse remarked about nutrition education as follows: *“We do educate them on what to do but they do not have the means to buy the things she needs for the baby PD11: Cat HWmun.txt - 11:27 (175:177)”*.

Resource management: Two community health workers indicated that they try to educate mothers on how to manage the child support grant. According to one she *“advised one woman to take a decision of every time she gets the money she asks her neighbour to go and buy food for the child PD14: Cat CHW.txt - 14:14 (107:110)”*.

Self development: References, although fairly weak were made about aspects of self development education by each of the three health worker participant categories, the disadvantages of alcohol abuse and the importance of caring for oneself were issues that were brought up and point to an awareness of some health workers of the self development needs of mothers.

Inadequate: Two references were made to nutrition-related education being inadequate, one had to do with inadequate skills: *“I would tell them what I know. I don't feel that it is enough PD12: Cat HHW1.txt - 12:21 (339:340)”*. The other had to do with clients not being available to access the messages: *“It looks inadequate because we have to start it when the person is still pregnant, but it is difficult because sometimes they do not even come for their blood results. So you don't see that person until she give birth PD11: Cat HWmun.txt - 11:22 (149:153)”*.

Refer: There was evidence from the group discussion that health workers sometimes refer patients who have problems mentioned in the six focus areas to social welfare or other relevant agencies. Inadequate household food security, alcohol abuse and health and hygiene problems were raised. Referring patients with problems could contribute to improving accessibility to nutrition-related information but could in some instances also discourage patients. According to one professional nurse: *“Sometimes you want to refer the mother because you feel the problem is beyond your scope of practice you have to send them to town.... They loose confidence immediately and not understand why you cannot help them especially when they come back rejected from the place of referral. Usually you would see the need for grant or assistance and you do not understand yourself why it was declined PD11: Cat HWmun.txt - 11:45 (86:96).”*

2.11.1 Salient issues

The fact that health workers recognised most of the focus areas and responded with examples shows that there is an awareness of the need for these messages. In most instances the information seems to be inadequate but no conclusion can be drawn as the discussions were very superficial. Inadequate coverage of

messages could be a barrier to the accessibility of messages and therefore seems to be an issue that needs addressing.

The following comments can be made about breastfeeding education: There is no information about the quality of the instruction that is given in hospital but considering the short time mothers spend in the obstetric unit after their babies are delivered as well as the workload reported by health workers, the amount of information that can be relayed is doubtful. Breastfeeding education does take place at the clinics as well but evidence was found in the interview and observation data of Phase 1 that not enough breastfeeding education was given especially to young mothers or else they did not assimilate the messages properly (see Addendum B).

2.12 Health care workers: Recommendations to improve accessibility

The recommendations of health workers on what can be done to improve the accessibility of nutrition-related education to mothers are contained in this code family. The code output is presented in Table 5.16.

Table 5.16: Codes-Primary-Documents-12

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Code-Filter: Code Family HCW: Recommendations
PD-Filter: Primary Doc Family Health care workers
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CODES	PRIMARY DOCS				
	11	12	13	14	Totals
HCWrec: Encourage patients	0	0	0	1	1
HCWrec: Inservice training	0	2	0	1	3
HCWrecClin: Home visits	0	1	2	1	4
HCWrecClin: See 10days olds	0	0	3	0	3
HCWrecEd: Appropriate information	1	0	0	0	1
HCWrecEd: Start at school	1	0	0	0	1
HCWrecEd: Clinics primary role	0	2	2	0	4
HCWrecEd: Co-operation with other role players	2	0	0	0	2
HCWrecEd: Educate men	0	2	0	0	2
HCWrecEd: Groups	0	1	0	3	4
HCWrecEd: Longer stay	0	0	1	0	1
HCWrecEd: Patience and perseverance	1	0	0	0	1
HCWrecMoth: Patience and understanding	6	0	0	0	6
Totals	11	8	8	6	33

- * PD11: Cat HWmun - Professional nurses from Buffalo City Municipality
- PD12: Cat HHW1 Obstetric unit Health Workers
- PD13: Cat HHW2 Obstetric unit Health Workers
- PD14: Cat CHW- Community health care workers from the Buffalo City municipality

The number of quotations attached to each code in Table 5.16 shows that the discussions around recommendations were brief and the codes will therefore not be discussed separately. The discussions did

provide a few interesting comments that were coded because they support some of the recommended message and help topics of Phase 1 as well as salient issues discussed in previous sections of this Chapter.

The **need for mothers to be patient and understanding** is the recommendation code with the most quotations attached to it. All of these came from one participant category namely the professional nurses from the clinic. *“We tell them to be patient. There is nothing that we can do because you are working alone PD11: Cat HWmun.txt - 11:40 (322:323)”*.

Recommendations made by health workers of the obstetric unit about the PHC clinics focused on the **primary role clinics** should play in the education of pregnant women and **mothers with new born babies**. One health worker stated: *“Some of these mothers you can see they are not well nourished. They are having problems. Some of them are not very clean. You wonder whether they will be able to look after their babies hygienically... All those things are supposed to be addressed by the clinic because they look at their basic guidelines. They will also be able to see if a mother is unhygienic and educate her if she have sores and let her get treatment PD12: Cat HHW1.txt - 12:10 (170:184)”*.

The importance of receiving nutrition-related education at antenatal clinics was highlighted by one nurse who said: *“I think if it can (they should) before they deliver be educated on nutrition and other guidelines PD12: Cat HHW1.txt - 12:4 (118:120)”*.

In support of why the clinics should play a primary role another health worker used the following example: *“One of the mothers came back with a three weeks old baby. She claims that at the clinic they said they do not have time to teach her breastfeeding. She did not have money to buy formula so she is giving the baby water and cabana juice if there is any at all PDD13: Cat HHW2.txt - 13:17 (283:288)”*.

Concerning the importance of helping mothers with newborn babies by seeing them when they are **10 days old** or **doing home visits** a obstetric unit health worker said: *“After ten days mothers were educated at the clinics on how to feed their babies. They were given health talks. The baby was checked. Currently there are no district nurses to visit mothers. They do not give the health talks to mothers. Mothers are turned back and told not to visit the clinic after ten days but only when the baby has to go for the first immunisation which is after six weeks. I feel this is wrong PD13: Cat HHW2.txt - 13:14 (241:250)”*.

Both the community and obstetric unit health worker focus groups thought that they needed **in service training**: *“In-service training is needed because every year there is new information and changes on health issues especially with AIDS, TB, clinic cards, immunisation. We equip ourselves by reading. It has been a long time since we last have training. So we need proper training PD14: Cat CHW.txt - 14:21 (181:186)”*.

Another recommendation made by both the community and obstetric unit health workers is that more education of the mothers should be done in a group context. The following quotations illustrate this recommendation:

We are interested to go to the clinic because you get more pregnant women and more mothers at the same time which is easy to educate than when you are in the community PD14: Cat CHW.txt - 14:5 (57:61)

We would like the mothers to be attend workshop on these issues PD12: Cat HHW1.txt - 12:24 (357:358).

Recommendations that are important in the context of this study, but were made by only one or two participants are: education must start in school, men must also be educated and information given must be appropriate. Mothers must also be encouraged to attend clinic even if they had an unhappy experience at the clinic before and health workers must be patient and persevere with education.

2.12.1 Salient issues

The recommendation from health workers that mothers must be patient and understanding provides another perspective on the mothers' negative experiences with services received from the clinic as well as the uncaring attitude and negative verbal treatment they received from nurses (see Section 2.5). It is clear that the recommendation by health workers that mothers should be patient and understanding will have to be closely linked to the implementation of the recommendations made by the mothers about the quality of service they receive from the clinic. Some of these recommendations are that they must be treated with respect, that medicines should be available and that staff shortages at the clinics should be addressed.

The issues raised by obstetric unit health workers about the need for home visits and seeing 10-day-old babies have important implications for accessibility of nutrition-related messages. The first immunisation visit is only when the baby is six weeks old and many messages that should still be theoretically accessible to the mother could be rendered "inaccessible" at this age. Incorrect feeding practices that have been implemented before this visit e.g. introduction of solids or supplementation or cessation of breastfeeding are examples of practices that could have an influence on the effectiveness of nutrition-related education given at this age.

2.13 Networks

Six networks were compiled against the background of the main objective for Phase 2, namely the assessment of accessibility of nutrition-related messages at the three Duncan Village PHC clinics. These networks include:

- Interpersonal aspects of not accessing health services
- Organisational aspects of not accessing health services
- Problems experienced by HCW concerning accessibility of nutrition-related education
- Interpersonal factors involved in accessibility of nutrition-related education
- Favourable aspects for message accessibility
- Other aspects involved in messages not being accessible
- Recommendations to improve message accessibility

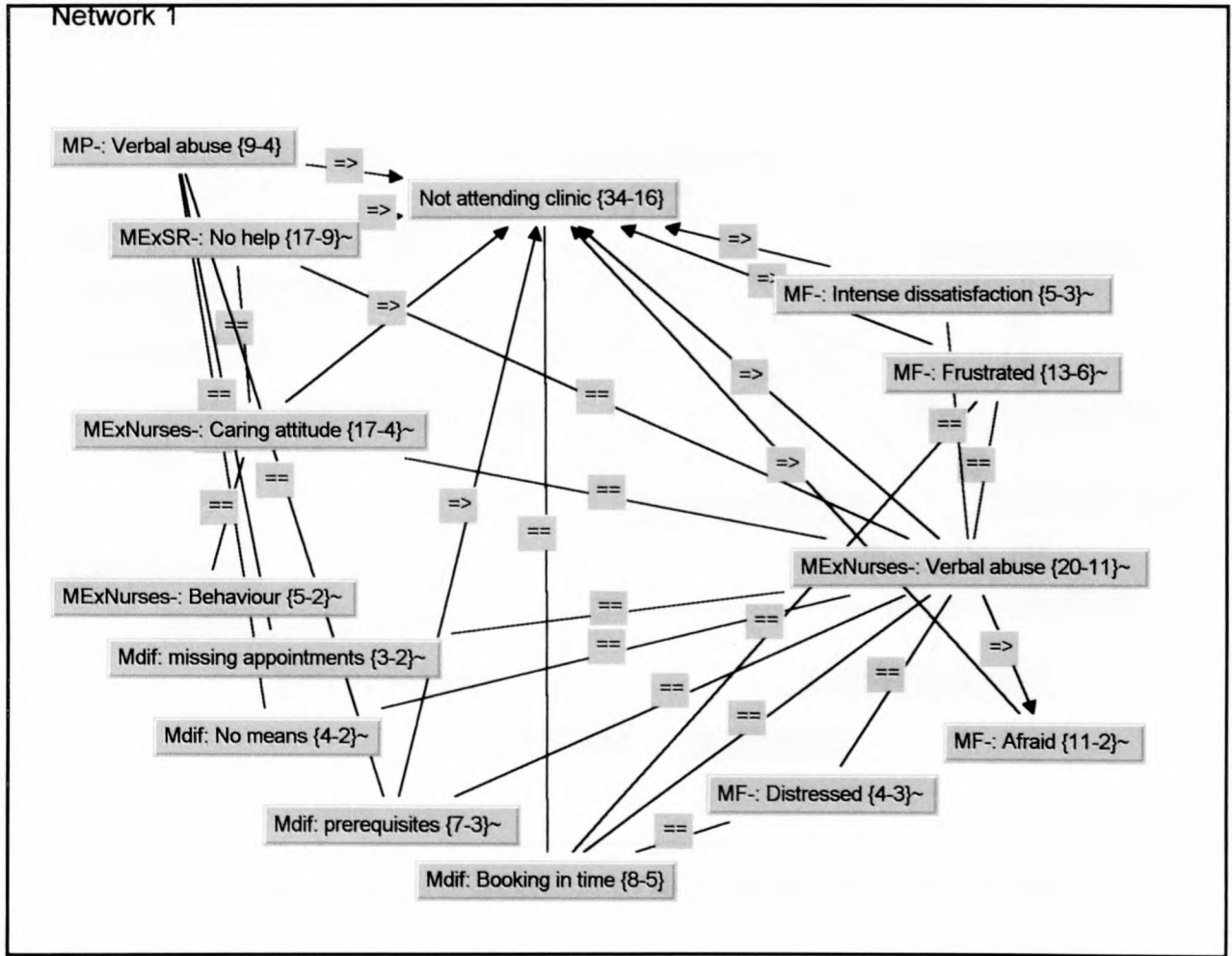
2.13.1 Guide for the interpretation of the networks

Code label: The code label **MP: Verbal abuse {9-4}** is used as an example:

- The family abbreviation **MP** refers to the code family: Perceptions of mothers.
- This is followed by the **code** developed to describe a salient quotation in this case “verbal abuse”.
- The **figures in brackets** that follow the code indicate the number of times a particular code has occurred followed by existing linkages to other codes e.g. MP: verbal abuse is linked in the networks to “Not attending clinic”; Mdif: No means; Mdif: prerequisites and Mdif: missing appointments”. If the first figure in the brackets is 0 it indicates that the code has been created specifically for the network and does not have any quotations attached to it.

Links: The lines between codes are links that indicate a relationship between the codes. The type of relationship could be defined by a symbol being placed on the link e.g. = = indicates that C1 is associated with C2, [] indicates that C1 is part of C2 and \Rightarrow that C1 is the cause of C2.

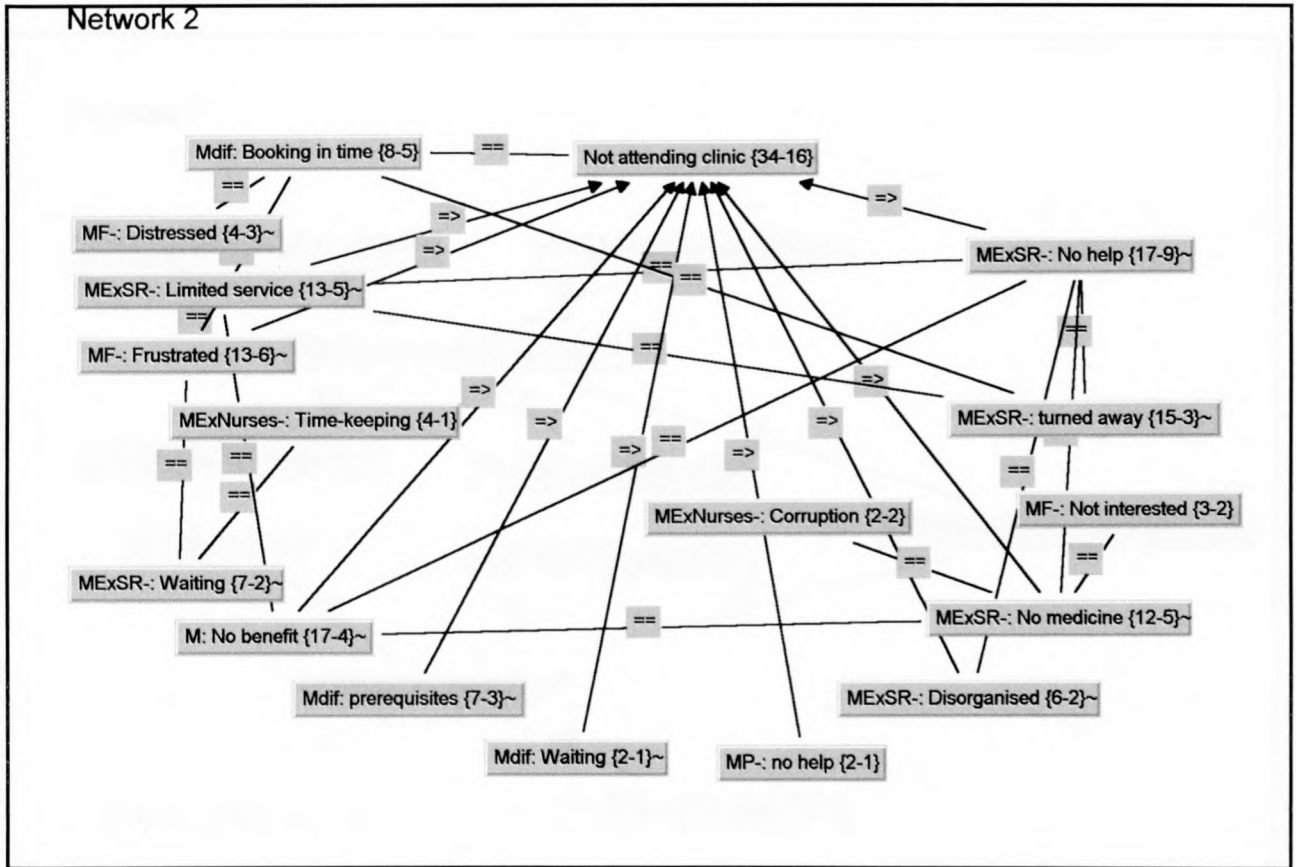
2.13.2 Interpersonal aspects of not accessing health services



Network 1: Interpersonal aspects of not accessing PHC clinic services in Duncan Village

Network 1 presents the interpersonal aspects identified by the participants that either make it difficult for them to attend clinic or cause them not to attend clinic at all. Participants expressed various levels of negative feelings and experiences that prevent them from accessing the clinic service. Verbal abuse by nurses at the clinics (MExNurses-: Verbal abuse) has the strongest direct and indirect link with non-attendance. Other aspects that seem to have a direct link with non-attendance include no help received, uncaring attitude of the nurses, the prerequisites needed (e.g. clinic card, ID), and mothers feelings of fear, frustration and intense dissatisfaction. The negative experiences mothers and pregnant women have of no help received; the nurses' uncaring attitude towards them; the difficulties they have in attending clinic and all the negative feelings they have about the clinic are all indirectly associated with non-attendance through verbal abuse. Mothers furthermore perceive that they will be verbally abused if they miss appointments, if the baby cry because they have no means to buy food for the child or if they do not have the correct prerequisites. These perceptions are associated with non-attendance of the clinics.

2.13.3 Organisational aspects of not accessing health services

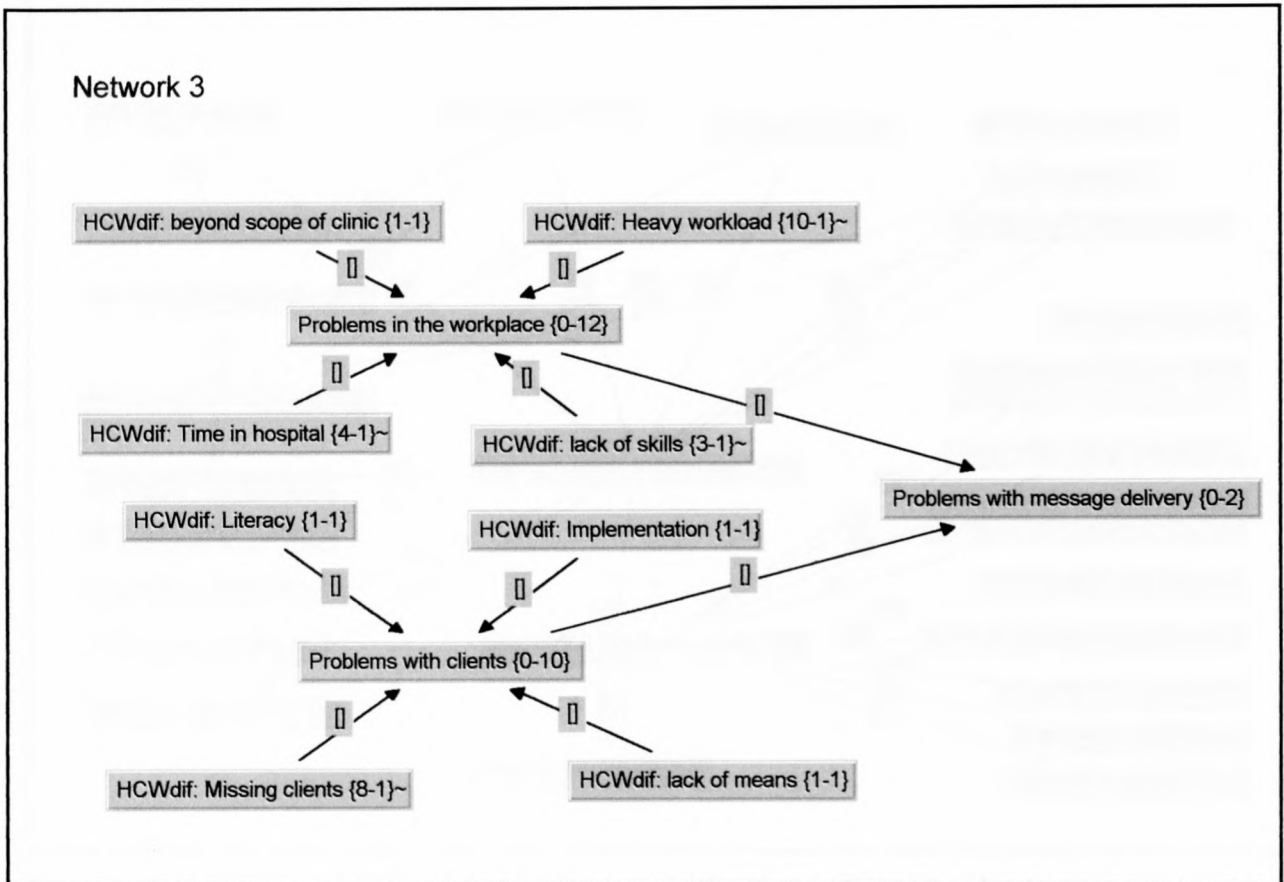


Network 2: Organisational aspects of not accessing PHC clinic services in Duncan Village

It is evident from Network 2 that the limited services offered, feelings of frustration, the perception of no benefit, the prerequisites needed, the perception of not getting any help, the disorganised services, no medicine available, the experience of not getting any help are all direct causes of mothers not attending the clinics. Many of these are also indirectly linked to non-attendance for example: Many mothers see no benefit in attending the clinic because of a lack of medicine, no help received or the limited services that are offered. Not receiving any help in its turn is associated with the service being disorganised, being turned away, limited service (e.g.) no clinic service available on a Friday and no medicine. No medicine is associated with corruption, the experience of no help available and feeling of not being interested in attending the clinic.

Many of these experiences lead to clients feeling frustrated or distressed or just not interested in accessing the service.

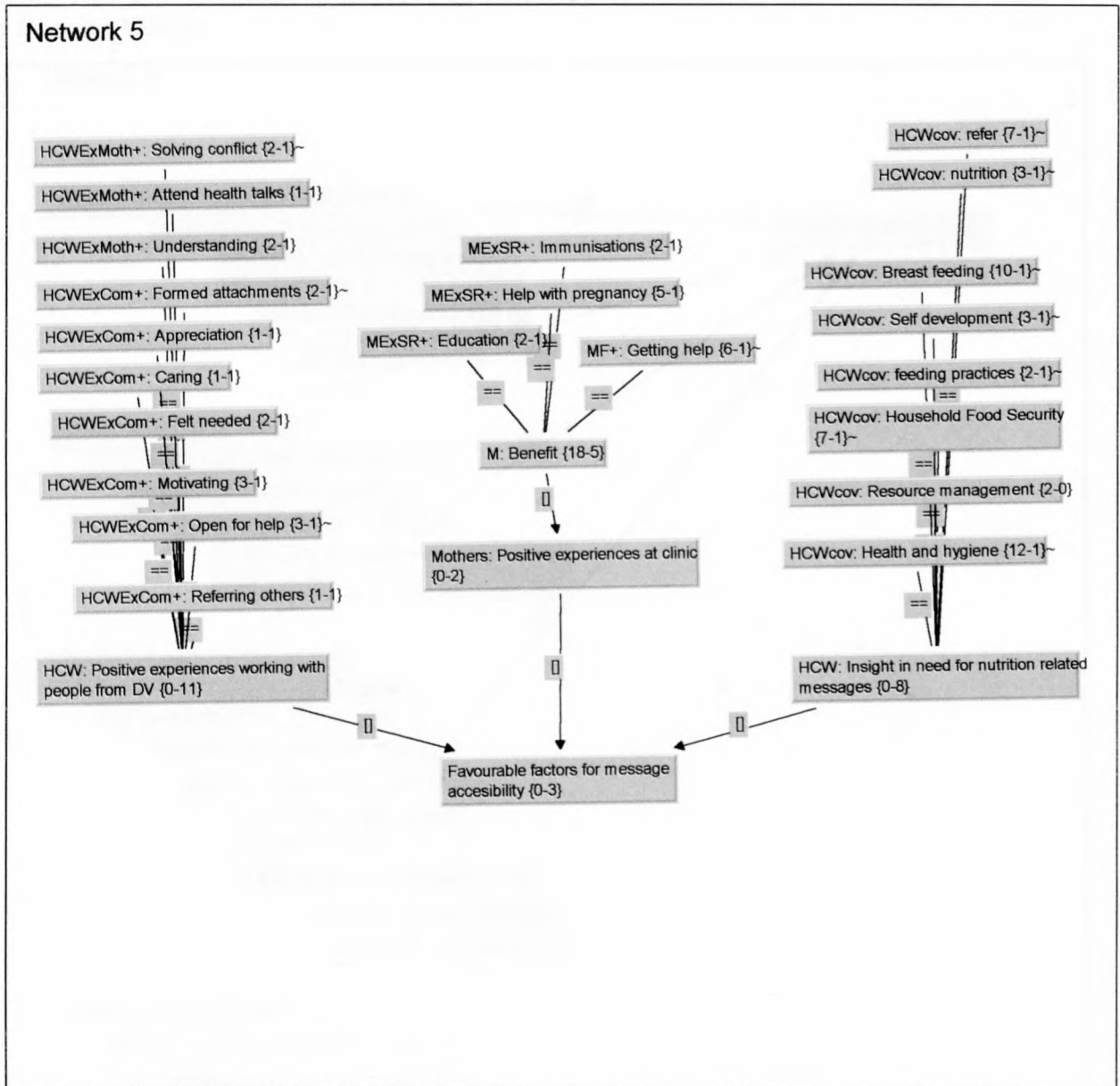
2.13.4 Other aspects involved in nutrition-related messages not being accessible



Network 3: Problems experienced by health workers concerning accessibility of nutrition-related message

Network 3 shows that factors influencing service delivery by health workers involve problems in the workplace on the one hand as well as problems with clients (mothers) on the other hand. The most prominent problems are a heavy workload and the short time period available in the obstetric unit for education. As far as problems with the clients are concerned, the most prominent problem seems to be the fact that they do not return to the clinic (missing clients).

2.13.6 Favourable aspects for the accessibility of nutrition-related messages

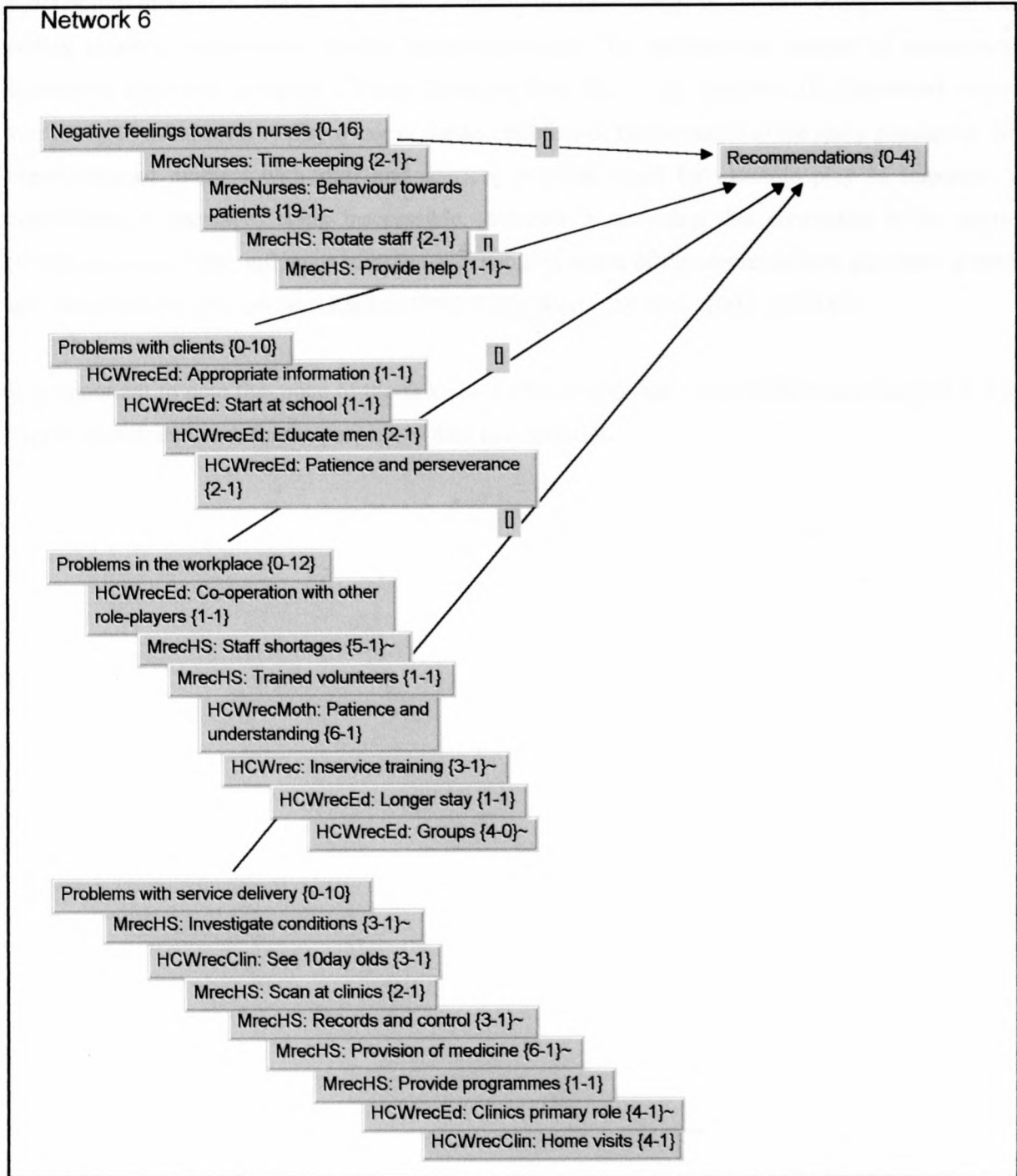


Network 5: Factors that could contribute to the accessibility of nutrition-related messages

Network 5 presents the aspects that would contribute to a favourable environment for mothers to receive nutrition-related messages. It is evident from the network that the following is important in this regard:

- Positive feelings from health workers about the people they work with.
- Insight into the nutrition-related needs of their clients and presenting them with messages about these needs.
- Positive experiences of mothers with services received so that mothers feel there is benefit in attending the clinic.

2.13.7 Recommendations to improve accessibility of nutrition-related messages at the clinics in Duncan Village



Network 6: Recommendations to improve accessibility of nutrition-related messages at the clinic

Network 6 displays the recommendations made by both health care workers and mothers on what can be done to make it easy for mothers to attend the clinic. Most recommendations concerned improvements that should be made in addressing the negative feelings of clients towards the health workers

3 Interpretation and general discussion

Phase 2 of the research aimed to gain more information about the various factors that play a role in the accessibility of services aimed at mothers attending the three clinics in Duncan Village. After an extensive coding process, certain code families were constructed. To facilitate the process of interpretation the framework presented in Figure 5.2 was developed from these code families. The framework includes the various factors that seem to play a role in the accessibility of the messages to the study population. Negative experiences of mothers with staff and services received could for example play an important role in contributing to messages being inaccessible. However it is evident that constraints in the organisation (workplace) could also influence message accessibility. Some of the elements have also been mentioned in the literature on quality of care (Kanani, 1998: 1227; Westaway *et al.*, 2003: 337-343).

It is important to note that none of the links in the framework have been tested statistically so it remains a hypothetical framework for the purpose of data interpretation.

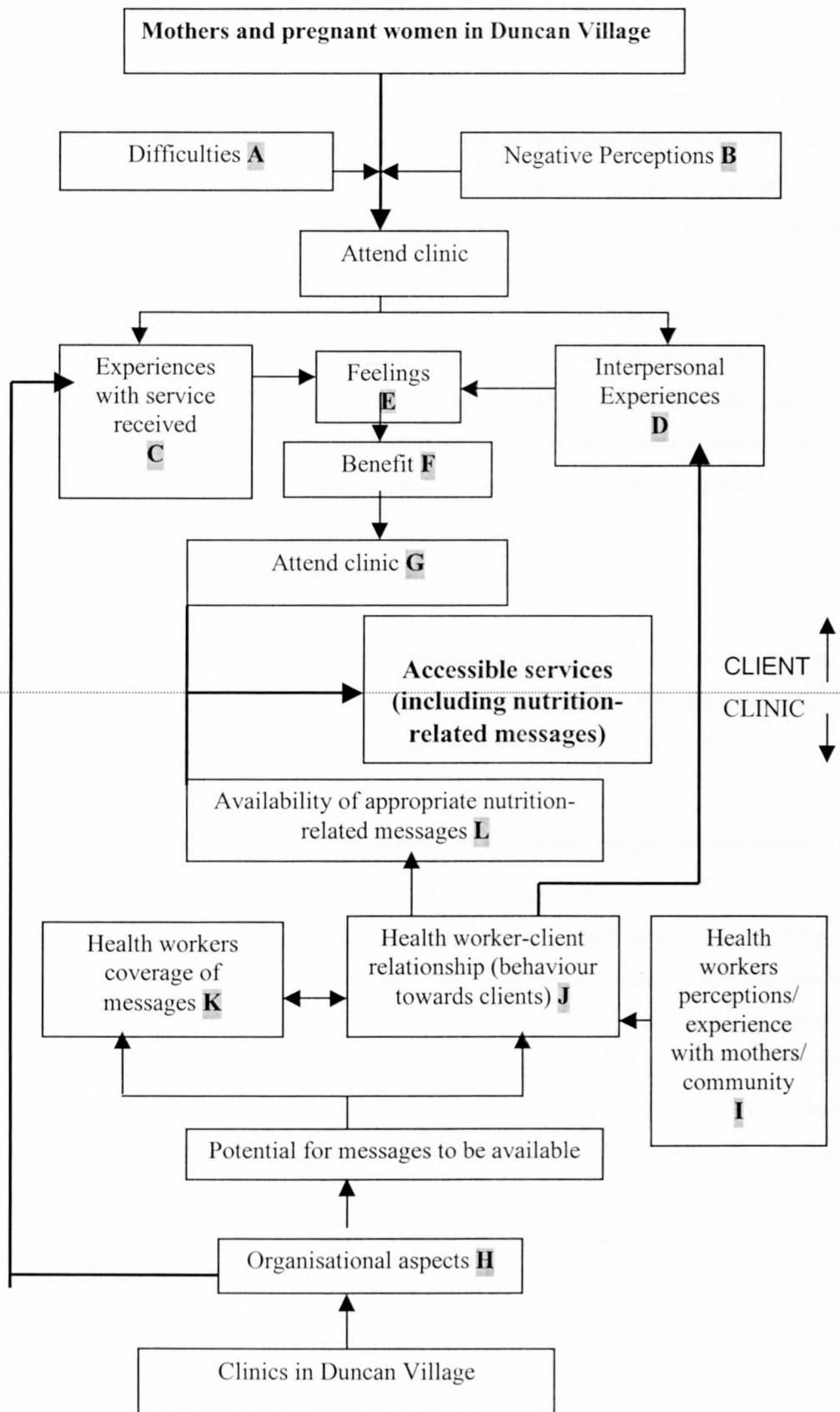


Figure 5.2: Proposed framework for the accessibility of nutrition-related messages at Duncan Village clinics

3.1 The influence of difficulties and negative perceptions on clinic attendance

Mothers participating in the focus groups named various **difficulties (A)** that make it difficult for them to attend clinic. These difficulties include the prerequisites that are required and not having any means to buy proper food or clothes. Participants also mentioned various **negative perceptions (B)** they have about the clinic that cause them not to attend clinic (e.g. that they will not get any help or be verbally abused). Both of these (A and B) are presented in Networks 1 and 2. It is speculated that these factors that could lead to decisions not to attend clinic are especially applicable to the most poverty-stricken mothers. In Chapter 4 it was stated that poverty erodes the capacity of poor people to be part of social support networks, leaving them unable to engage in and maintain social exchange (De La Rocha & Grinspun, 2001: 85). The result is that these high-risk groups are marginalised from society as a whole, including the health care system (UNICEF, 1990b). In his concluding remarks about the results of a focus group study in Central America, Leon (2003: 70-71) stated that the poorest sector of the population has the most difficult access to services, receives the lowest quality of care and has the fewest or no expectations. They feel themselves excluded from the system, discriminated against and treated in an undignified manner.

Women who do not experience difficulties or problems with negative perceptions or those who overcome these problems and attend the clinic, are faced with various factors at the clinic that could (1) affect their decision to attend again or (2) influence their susceptibility for educational efforts.

3.2 The influence of women's experiences at the clinic on clinic attendance (C & D)

Westaway *et al.*, (2003: 337-344) found that patient satisfaction at clinics is a bi-dimensional construct with an emphasis on interpersonal relationships and organisational characteristics. In a study in Guinea eight criteria were identified that appeared to be greatly valued in relation to health services (Haddad *et al.*, 1998: 381-394). Most of these criteria relate to structural issues of the service or the process of care and are therefore in line with Westaway's construct. The criterion that Haddad *et al.* (1998: 381-394) encountered most frequently was improvement in health. This suggests that quality of health services was primarily judged in their study population in terms of health outcomes. This criterion seems to be closely related to the mothers' general experience of "not receiving any help" at the clinics in the present study. It is evident from Network 1 and Network 2 that the experience of not receiving help is associated with both organisational and interpersonal aspects of the clinic service.

3.2.1 Experiences with services received (C) and organisational aspects of the clinic service (H)

Negative experiences with service delivery elicited the most comments from participants in the focus groups. These experiences are presented in Network 2 as part of the “organisational factors” associated with mothers and pregnant women not accessing the clinic service. Some of these negative experiences include the experience of not getting any help; no medicine available, being turned away, the limited service that is offered and the long waiting at the clinics. Several of these experiences have also been reported in the literature. During the 1998 South African Health and Demographic Survey (SAHDS) over 3000 adults were interviewed in the Eastern Cape Province and nine percent of them complained about the long waiting time in public health care services. A 1999 survey in the Eastern Cape Province furthermore found one in four people to have been dissatisfied with the services they had received at primary health care clinics (Mahlalela *et al.*, 2001: 22).

The experiences of clients with services received are linked in the framework to “organisational aspects” of the clinics in Duncan Village. Kanani (1998: 1227) describes the appropriateness of the physical infrastructure to deliver good quality care as one component of the quality of care at the point of service delivery in child health programmes. One indicator of this level of care is the availability of adequate facilities and supplies (essential drugs, vaccines, and nutrient supplements).

Leon (2003:71) found in a focus group study in Central America that the most basic and widespread preoccupation with health services among rural poor was how to obtain effective, cheap medication in sufficient quantity. The important role of availability of medicine at the clinics also became clear in the present study with a lack of medicine one of the most often reported problems with service delivery. It can be seen from Network 2 that the negative experience mothers have with the lack of medicines at the clinics is an important reason why they feel that there is no help from the clinic and no benefit in going to the clinic.

The organisational aspects identified in the study that concern human resource issues are presented in Network 3. Health workers at the clinics and the obstetric unit indicated that a heavy workload could keep them from giving nutrition education to women. Staff shortages were mentioned as serious problems that need to be addressed urgently in the 2002 annual reports of all three PHC clinics in Duncan Village (Buffalo City Municipality, 2003). The shortage of staff is experienced by clients as “limited service” offered by the clinics and leave them with feelings of frustration and ultimately seeing no benefit in attending clinic (see Network 2).

The “Primary Health Care in the Eastern Cape Report (1997-2000)” indicated that clinics in the Amatole District had a workload of 24 patients per nurse per day at that point in time (Mahlalela *et al.*, 2001: 26). According to Lehman and Sanders (2002: 123) workloads particularly at PHC facilities continue to be

a controversial issue. The workload of 25 patients per eight hours shift that is usually recommended is according to Lehman and Sanders (2002: 123) “a reasonable if not too generous” ratio. There are however large variations in the workload that PHC nurses actually handle at different PHC facilities and also variations in what is expected from the health workers in terms of having to clean the clinic themselves, doing all clerical work or assist HIV+ patients with their applications for social assistance grants (Lehman & Sanders, 2002: 124). Another aspect commented on by Mahlalela (2001: 25) is that the number of personnel assigned to a facility do not always assure adequate levels of staff. A 1999 survey in the Eastern Cape found 33% of staff absent on the day of the survey. “Absent” staff may be attending training courses or meetings, be on maternity leave or have other legitimate reasons for not being at work (Mahlalela, 20001: 25). According to Lehman and Sanders (2002: 131) the human resources sector of the health services “hold the key” to tackling the challenges facing the health sector and it is important that their problems be addressed. The relevancy of this comment to the Duncan Village clinic situation is supported by the number of recommendations made by mothers and pregnant women about attending to the staff shortages at the clinics (see Network 6).

A few positive experiences with the services received at the clinics were expressed mostly from pregnant women attending the antenatal clinics (see Network 5). However, there were still more negative than positive experiences reported by pregnant women (see Table 5.10 in this Chapter).

3.2.2 Experiences with interpersonal aspects (D) of the clinic service and the connection with health workers behaviour (J) towards clients

The various interpersonal aspects identified in the study that could play a role in nutrition-related messages being inaccessible to clients is displayed in Network 1. Although interpersonal experiences elicited fewer negative responses than experiences with services received, most of the recommendations by clients on what can be done to improve the service centred on the behaviour of health workers towards them (see Network 6). It seems therefore as if being “treated badly” overshadows “not receiving any service” as the experiences with services were mostly about “no services” received. Fonn, Xaba, Tint & Varkey (1998: 697) described similar findings in two research projects in three South African provincial health services. By far the most common aspect of maternal health services that respondents commented on was the negative way in which health service staff treat patients.

During the 1998 SAHDS it was found that 15% of the respondents who were dissatisfied with the service received at a public health facility cited “rude staff” as the reason (Mahlalela *et al.*, 2001. 21). Evidence exists that similar problems could be found at primary care clinics elsewhere in the South Africa and in the world. In the research by Fonn *et al.* (1998: 700) health workers described themselves as rude, uncaring and insensitive. Elsewhere in a small qualitative study in Bangladesh, three themes surfaced repeatedly in

interviews done with women attending family planning clinics, namely communication problems, conflict over medication and the fact that counselling skills and courtesy are not given equally to all (Schuler & Hossain, 1998: 174). The role of interpersonal relations in the perception of the quality of health services was also found to be very important in Guinea (Haddad *et al.*, 1998: 381-394). These researchers noted that in their study, as in many other studies, the conduct of the health care professionals stood out as a central element of the judgement that users made about health services.

Another study in Central America found that users expressed general dissatisfaction with specific aspects of health care services but that the quality of personal attention was foremost among the complaints. Users complained about a lack of attention and disrespectful attitudes, the latter being directed especially towards those of modest socio-economic status (Leon, 2003:69). In Phase 2 of this study complaints about “favouritism” were frequently voiced. Schuler and Husain (1998:174) reported similar findings and they suggested that rudeness to clients is sometimes more than a reflection of ignorance, and that interpersonal skills and courtesy are sometimes used “quite selectively”. Health workers admitted this in the study by Fonn *et al.* (1998: 700) when they said that they treat clients selectively, providing better treatment to educated and well-off women and men and worse treatment to illiterate or poor women.

The interpersonal experience of clients and the behaviour of health workers towards the clients are therefore inextricably linked as is clear in the proposed framework (Figure 5.2). From the above discussion it is also clear that the negative behaviour of health workers towards patients is not always due to a lack of training. According to Haddad *et al.*, (1998: 381-394) health workers have to carry the burden of a dual legacy: (1) that of their bio-medical background which tends to focus more on the disease than on the person, contrary to traditional treatments that are anchored in the specific culture and (2) that of many professionals who often abuse the authority conferred upon them in the patient-caregiver relationship.

It is therefore proposed that the **perceptions of and how health workers experience their clients’ (I)** can shape health care providers’ behaviour towards their clients (See Networks 4 and 5). Vlassoff & Moreno (2002: 1718) refer to work done by Fonn and colleagues about domination and subordination in the nursing field in South Africa and other countries. Class, racial defined distinction and gender inequalities have the result that being a female health provider does not necessarily make the provider more sensitive to the clients needs, particularly when these female clients are of a lower social class. In this research health workers acknowledged that a lack of gender sensitivity, in spite of being women themselves made them judgmental (Fonn *et al.*, 1998: 700). These authors quote one of the health workers they interviewed in this regard: “ We grow up in the same society as everyone else, we are socialised to see women in a certain way and we do.” Health workers also indicated to these authors that they often take less time and care with illiterate women, as they know that these women are unlikely to complain (Fonn *et al.* 1998: 700). Fonn *et al.* (1998: 700) suggest that it is in understanding the reasons why health workers behave inappropriately towards clients

that solutions can be found for improving health services and health service utilisation.

According to Fahlberg, Poulin, Girdano and Dusek (1991: 191) health educators can “empower” their clients if they recognise and respect the context and reality in which their clients live. However the pervasiveness of individualism in health education, that is the belief that culpability and liability is primarily at the personal level makes this very difficult. Only when health workers “recognise that people are not islands” and see contextualised people and events, can they find themselves providing services to their clients through facilitating the flow of personal, collective or public resources. Haddad *et al.* (1998: 381-394) added to this when they stated that health service providers must be aware that their users want a proper reception and treatment. However their main desire is to be considered holistically as a person with a health problem rather than as a case. An example of the need for health workers to see their clients in context is the negative experiences obstetric unit health workers reported with very young mothers. Health workers need to understand that young or adolescent mothers can have numerous mental health problems (e.g. depression, self-efficacy). These risks are associated with early childbearing and it is important to identify factors that may contribute to more positive long-term outcomes for adolescent parents and their families (Caldwell & Antonucci, 1997: 240).

3.2.3 Linking experiences with services received and interpersonal experiences

Westaway *et al.* (2003: 337-343) found that in South African clinics diabetic clients perceived empathy by health workers as going hand in hand with competence. Proper and respectful behaviour should lead to patients **feeling (E)** trust in the healthcare provider and feeling “good” about attending the clinic instead of the fear and frustration expressed by many respondents.

It is therefore proposed in the framework (Figure 5.2) that the experience of services received and/or the behaviour of the staff towards them, will lead to clients having certain **feelings (E)** about the clinics. These will determine whether they feel there is any **benefit (F)** in attending the clinic again. Network 1 displays the association that was found in the study between interpersonal problems and negative feelings from mothers, with the negative feeling ultimately leading to mothers’ decisions not to attend the clinic again. An example is the feeling of fear that verbal abuse by nurses creates resulting in mothers not attending the clinic. Network 2 indicates that negative experiences clients have with services received at the clinics leave them with feelings of frustration and distress and finally lead to the decision not to attend clinic again because there is no benefit in it. Myer and Harrison (2003:270) also found in rural KwaZulu-Natal that women who appeared to see relatively little direct benefit from attending antenatal clinics only attend these clinics late in their pregnancies. If mothers and pregnant women decide not to attend clinic again the nutrition-related information that could be offered at clinics would be rendered inaccessible to these people. Conversely Network 5 shows that mothers’ positive feelings about the services received make them feel that there

is benefit in attending the clinic. However in this research very few positive experiences were reported. According to the framework (Figure 5.2) this could have serious implications for the accessibility of nutrition-related education at the clinics in Duncan Village.

3.3 Availability of appropriate of nutrition-related messages at the Duncan Village clinics (K & L)

If women **attend clinic (G)** because they are happy with the services received and they are treated properly and respectfully there are still two essential aspects that need to be present before accessibility of services, including nutrition-related messages, at the clinics is ensured. **Coverage (K)** of nutrition-related messages by the health workers must take place at the clinics and in order to be accessible to mothers, these messages must appropriate (L). To be appropriate the message must be targeted and relevant as discussed in Chapter 4.

Although health workers were asked about the coverage of nutrition-related messages, not enough information was obtained to comment on the quality of nutrition education and the influence it had on the accessibility of messages. However, the following evidence, other than what has already been discussed in Chapter 4, point to the possibility that there could be problems with the **provision (or coverage) of nutrition-related messages (K)**. It was seen in Phase 2 that community health care workers seem to think that the most important message to be given to pregnant women is to “book for hospital”. Myer and Harrison (2003: 268) found the same in a study with women in Kwa-Zulu Natal. These authors found that mothers do not perceive any threats to their health when they are pregnant and therefore do not think it is necessary to attend antenatal clinic more than once. Labour and delivery was however perceived as a time of significant health risk that required biomedical attention and most women therefore prefer to give birth in a health facility. According to Myer and Harrison (2003: 268) it is evident that a paradox exists: women see health care as important for childbirth but not during pregnancy. This underlies the primary reason for seeking antenatal care: to receive an antenatal attendance card that is required to deliver at a health facility. The reason for this behaviour could be the emphasis that is being placed on delivering in a health facility to the detriment of other relevant health messages (Myer & Harrison, 2003:271).

A further example pointing to inadequate coverage of nutrition-related messages is the report about primary health care in the Eastern Cape (Mahlalela, 2001: 67). This report indicated that 70% of the nurses observed in a primary health care setting examined the child’s immunisation chart while 67% looked at the child’s growth chart. In only 66% of the observations did the nurse weigh the child and in only 20% of the observations was nutrition-related information given in relation to the growth chart. As far as malnutrition is concerned, the report referred to the number of children fed through the government’s Protein-Energy-Malnutrition Scheme as an indication of severe malnutrition in the province. No information is given on any nutrition-related education as part of primary health care in the Eastern Cape Province. Similar

findings were also reported by Kanani (1998: 1227) who refer to a study done in an urban area in India where health workers were more concerned about the number of children weighed monthly than with educating mothers about their children's growth and feeding. It was also found that short-term programmes such as immunisation and food supplementation received more emphasis than nutrition education to mothers, because these were the ones which featured in the supervision, monitoring and evaluation system.

It is further proposed that **health workers' interpersonal relationships with mothers' (J)** could influence the provision of appropriate nutrition-related messages in two ways:

Firstly an interpersonal relationship characterised by negative attitudes and behaviour could render nutrition-related education inaccessible to the client (see Network 4). Although nurses report positive experiences with mothers who manage to solve conflict with them if they had been harsh or understand being turned away, the overwhelmingly negative feelings and experiences reported by mothers show that problems do exist in the way mothers and pregnant women are treated by nurses (see Network 1). From Networks 5 and 6 it is evident that for nutrition-related messages to be accessible to these clients, health care workers will have to treat them properly and with respect. Respect is described by Knowles (cited in Vella, 1994) as the prime factor in adult learning. If the learner does not feel respected by the teacher, "she will not learn what she might learn".

Secondly, poor interpersonal relationships could prevent the health care worker from providing any kind of nutrition-related education. Earlier in the section it was mentioned that health workers could only be of service to their clients when they see their clients and events surrounding them, in context (Fahlberg *et al.*: 1991: 191)

From the above discussions it is clear that the final elements in the process of providing accessible services, including nutrition-related messages, to mothers at clinics are that (1) **the clients (mothers) must attend the clinic (G)** and (2) **that appropriate messages must be available (L)**.

4 Summary and conclusions

Phase 2 of the research investigated the accessibility of nutrition-related education to mothers attending health care facilities in Duncan Village. Mothers and health workers participated in focus group discussions to ascertain problems and experiences related to accessibility. Mothers reported overwhelmingly negative experiences with service delivery and interpersonal relationships with health care providers at the clinics while health workers reported their negative experiences both in the workplace and with mothers as clients.

The concepts that were created through the qualitative data analysis process were used to develop

a framework for the accessibility of nutrition-related education at the PHC clinics in Duncan Village. The framework provides a tool for the interpretation of the findings of this phase of the research but also for formulating recommendations to improve accessibility of nutrition-related education at the clinics. The need for appropriate and relevant nutrition messages as was described in Chapter 4 is evident from the framework.

The Duncan Village research project was conducted in a rural community where the majority of the population is employed in agriculture. The research was conducted in a rural community where the majority of the population is employed in agriculture. The research was conducted in a rural community where the majority of the population is employed in agriculture. The research was conducted in a rural community where the majority of the population is employed in agriculture.



The framework for nutrition education at the PHC clinics is a conceptual model that provides a tool for the interpretation of the findings of this phase of the research but also for formulating recommendations to improve accessibility of nutrition-related education at the clinics. The need for appropriate and relevant nutrition messages as was described in Chapter 4 is evident from the framework.

Chapter 6: Recommendations to authorities

The Duncan Village Nutrition Project had a two-fold aim: In the first phase key factors in the previously identified six focus areas for intervention were identified. These key factors were used as a basis for the formulation of nutrition-related message topics to contribute to the well-being of young children in Duncan Village. In the second phase the potential for nutrition-related messages to be accessible at the PHC clinic services in Duncan Village to mothers and pregnant women were assessed. Phase 3 of the Duncan Village Nutrition Project aims at formulating recommendations to the Buffalo City Municipality concerning these issues. The research framework and objectives for Phase 3 is presented in Figure 6.1.

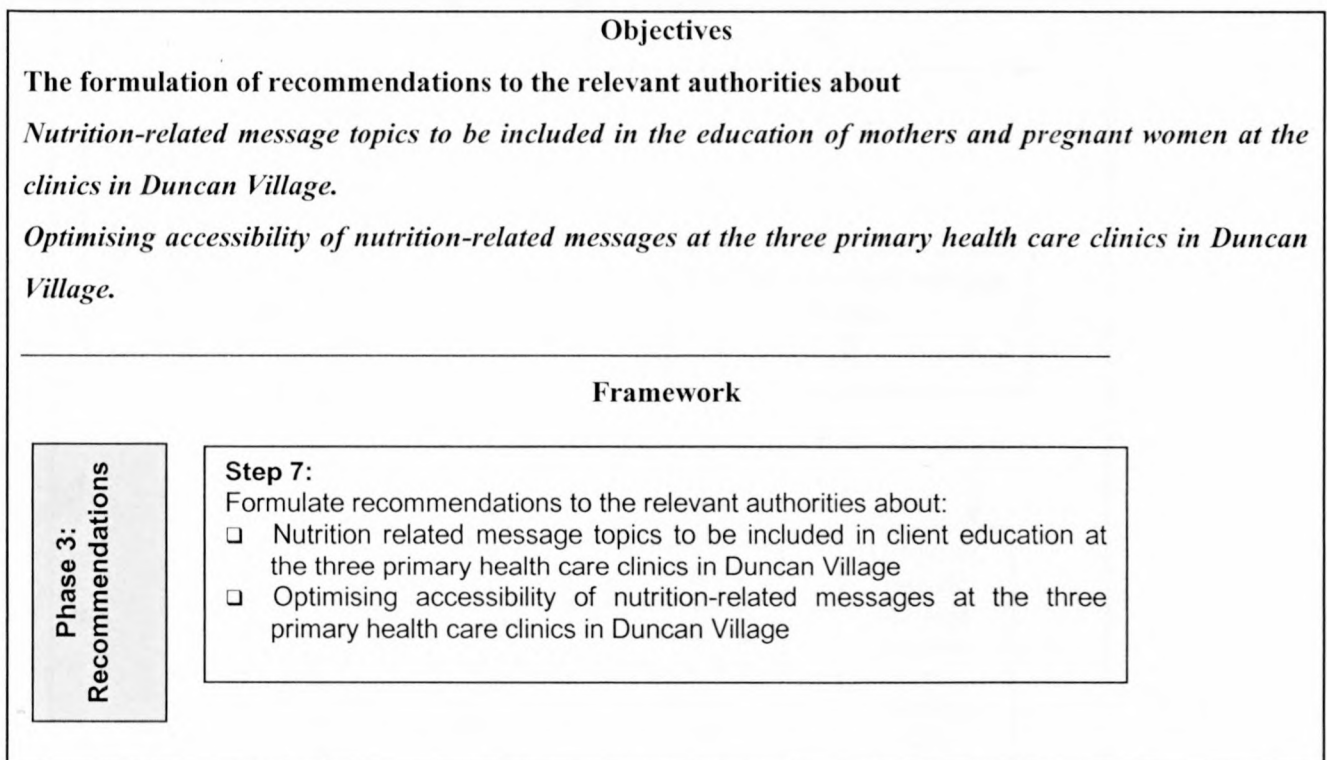


Figure 6.1: Objectives and research framework for Phase 3 of the research

1 Recommendations to Buffalo City Municipality

The following framework was developed to structure the recommendations directed at the Buffalo City Municipality and the obstetric unit where Duncan Village women give birth.

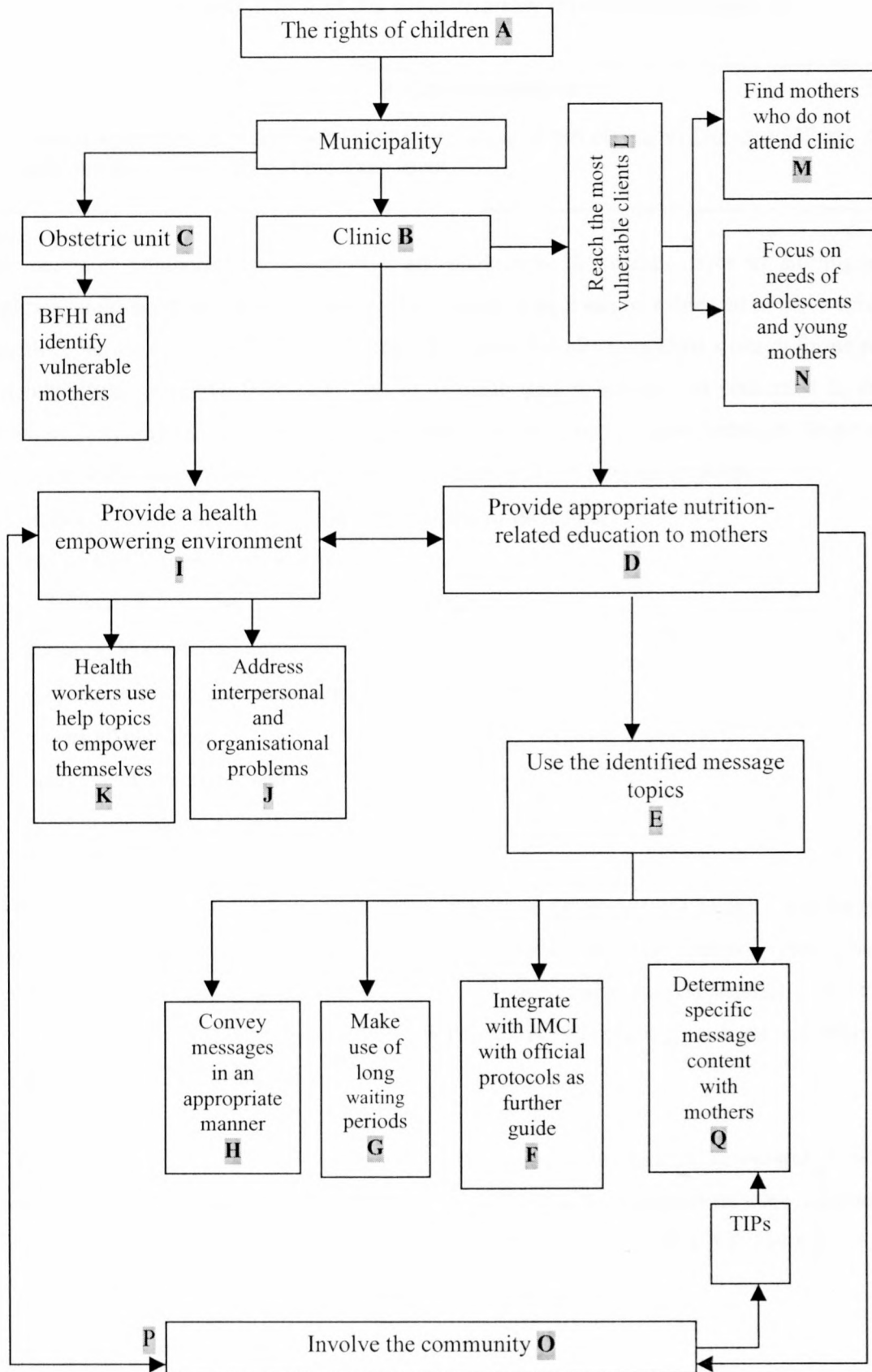


Figure 6.2: Framework for recommendations to the relevant authorities

1.1 The right to nutrition and the child-friendly municipal strategy (A)

Recommendation 1

Provide appropriate nutrition-related messages at the clinics in Duncan Village as part of implementing child rights at the local level.

An increasing number of local authorities and planners of the world's cities are striving to implement the rights of children at the local level where the greatest impact can be made and to make urban environments healthier for children (UNICEF, 2002c: 48). The child-friendly municipal strategy forms part of the Child-Friendly Cities initiative (UNICEF, 2002c: 48) and aims to involve all concerned in the well-being of children, including the children themselves, NGOs and civil-society representatives. Some of the features of the strategy that could also be of importance in relation to nutrition are as follows:

- is rooted in the whole convention on the Rights of the Child;
- enjoys high government priority;
- is integrated into other local and national plans;
- adopts a decentralised implementation process;
- includes priorities and time-bound measurable goals;
- covers all children;
- is widely disseminated and
- is regularly assessed and monitored.

Even before the Child-Friendly initiative, the “Mayors as Defenders of Children” was launched as a way of involving municipal leaders in the pursuit of child rights. The initiative recognised the fact that decentralisation is occurring all over the world and more and more responsibilities for basic services are being transferred to local governments (UNICEF, 2002c: 48). This gives local authorities more power to make a difference in children's lives.

Firm and consistent political commitment is a critical element in successful community nutrition programmes. It was found that in successful programmes the decision makers were informed, motivated and convinced that the basic need for food was a key development issue (UNICEF, 1990b).

1.2 Providing appropriate and accessible nutrition-related education at the Duncan Village clinics and the relevant obstetric unit

1.2.1 The role of the municipal clinics in providing nutrition-related information to the mothers of 0 – 24 month old children in Duncan Village (B)

Recommendations 2 – 3

- All health workers attached to the three municipal clinics in Duncan Village must at all times remember the important role the clinics play in the nutritional health of young children. For many mothers there is no other source of help. Even if no physical help in the form of food can be given, help in the form of advice and guidance is equally important.
- Mothers with new babies will only be seen at the clinic at six weeks. This is too late for education about breastfeeding and complementary feeding practices. Mothers must be given guidance at antenatal clinics and must be seen at the clinic as early as possible after the birth of the baby.

The PHC clinics in Duncan Village are in a unique position to provide nutrition-related information to mothers in Duncan Village because both immunisation clinics and child curative services are offered, which provide opportunities for educating mothers. Nutrition-related education could be provided at the clinic as part of an integrated service to mothers in association with any of the nine services that are considered basic services at the PHC clinics. These nine services are antenatal services, family planning, nutrition, sexually transmitted infections, child curative, immunisation, adult curative, chronic care and tuberculosis treatment (Mahlalela, 2001:53). The data of the study furthermore clearly shows that mothers would like to hear nutrition-related information from staff at the clinics.

A special effort should also be made to provide nutrition-related education to pregnant women at antenatal clinics and/or provide a service to mothers with new-born babies. According to UNICEF (2002c: 110) 94% of South African women attend an antenatal clinic at least once (1995 – 2001) and between 57% and 68% (1997 and 1999 surveys) of women in the Amatole district attend clinics at least three times before delivery.

1.2.2 The role of the obstetric unit in providing nutrition-related information to new mothers of Duncan Village (C)

Recommendation 4

Health workers in the obstetric unit must

- Educate mothers on breastfeeding
- Give special attention to young mothers or mothers that seem vulnerable and refer them to the relevant agencies for support

Although most women of Duncan Village choose to give birth in Frere Hospital in East London, the situation could change when a planned obstetric unit at one of the Health Centres in Duncan Village is opened. It is important that this facility adheres to the principles of the Baby Friendly Hospital initiative to ensure that all new mothers receive the necessary education on breastfeeding as is indicated by the findings of this study. It is essential for health workers at these facilities to identify vulnerable mothers whose new-born babies are at risk of developing growth failure and to refer these women to government or non-governmental agencies for support at an early stage.

1.3 Providing appropriate nutrition-related education to mothers (D)

1.3.1 Implementing the identified message topics at the clinics in Duncan Village (E)

Recommendation 5

Use the identified message topics as a focus to guide nutrition-related education for mothers and pregnant women

During Phase 1 of the study 19 message topics with sub-topics were identified. The message topics were determined through a consultative process with women from the community who had small children. These message topics could contribute to the improvement of the nutritional well-being of 0–24-month-old children attending the clinics in Duncan Village. Message topics were formulated to address problems mothers might have with self-development, household food security and resource management, feeding practices and hygiene and health management. Further work is still needed to determine the specific content of these topics (see Recommendation 15) but the identified message topics provide a firm basis for the provision of nutrition-related education at the clinics and in-service training of health workers.

No message topics were formulated for factors that did not seem to be problematic e.g. home health management of children. It could mean that education in this regard is effective. This work does

not imply that these topics should not be included in the education of mothers but that there should be a strong focus on addressing all the newly identified topics.

1.3.2 Integrating the identified message topics and help topics with IMCI (F)

Recommendation 6

Although the identified message and help topics have a wider range than the feeding practice topics in IMCI, both of these can easily be used in conjunction with the IMCI strategy.

Providing nutrition-related information is an important aspect of IMCI, a strategy that the Buffalo City municipality is in the process of implementing at the clinics under their jurisdiction (Qabaka, personal communication, 2003).

As can be seen from Table 6.1 the identified message topics can easily be incorporated into the 16 “Key Family Practices” of the IMCI strategy (Gibson & Kerry, 2002:4). The training module for community based health workers in IMCI makes provision for different districts to identify their own barriers and suggest their own messages (Gibson & Kerry, 2002:5). The identified message topics were compiled specifically for the Duncan Village community. Therefore health workers in Duncan Village can use these message and help topics with confidence knowing that they have been compiled through a consultative process with members from the community, as is suggested by the IMCI strategy.

Table 6.1: Key family practice messages of IMCI versus the message and help topics identified for Duncan Village

IMCI		Duncan Village Nutrition project - Message and help topics	
A. Growth promotion and Development			
Key Family Practice 1	Breastfeed infants exclusively for 6 months	MT6:	Effective Breastfeeding (according to the South African breastfeeding guidelines for health workers)
		MT6a:	Breastfeeding – A time to communicate and bond with your baby
		MT7:	Breastfeeding – Start immediately after birth
		MT8:	Exclusive breastfeeding – A special act in a harsh environment

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- MT9: **Continued breastfeeding** - Milk will be remain important in your child's diet, breastfeed effectively so that you can breastfeed as long as possible
- MT10: **Breastfeeding: Supplementing breast milk is not necessary**
- MT10a: **Breastfeeding:** What mothers should do if they want to adhere to the traditional practice of giving *isicakathi*.
- MT10b: **Breastfeeding:** It is not necessary to give water to exclusively breastfed babies
- MT10c: **Breastfeeding:** It is not necessary to give water with glucose or gripe water to breastfed babies.
- MT10d: **Breastfeeding:** Giving *inembe* as a milk substitute can be dangerous to your baby's health.
- MT10e: **Breastfeeding:** It is not necessary to give any other milk to a breastfed baby
-
- HT7: Breastfeeding: Young mothers need special attention and support
- HT8: Breastfeeding: Support for breastfeeding must continue for at least 2 years to ensure that age appropriate feeding practices are adhered to.
- HT9: Obstetric unit: Breastfeeding: Health workers must not forget that they often are the first line of information on the subject. Give special attention to young mothers
- HT10: Breastfeeding: Special support and if necessary advice about relactation to mothers who give *inembe* as a milk substitute
- HT12: Good feeding practices: Introduction of food
- HT12a: Good feeding practices: Advice on delaying the introduction of food until the child is 4-6 months old must be given at the antenatal clinics otherwise it could be too late
- HT12b: Good feeding practices: Advice on delaying the introduction of food until the child is 4-6 months old – young mothers need special attention
- HT12c: Good feeding practices Remember to advise mothers again at the 6-week clinic visit not to start giving food too early.

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IMCI		Duncan Village Nutrition project - Message and help topics	
Key Family Practice 2	Starting at 6 months of age, feed children freshly prepared energy and nutrient rich complementary foods, while continuing to breastfeed up to 2 years or longer	MT11:	Good feeding practices: Introduction of solid food
		MT11a:	Good feeding practice: Do not introduce food until the child is 4-6 months old
		MT11b:	Good feeding practice: The good mother does not have to buy commercial baby food and formula
		MT11c:	Good feeding practices: Introducing solid food to your child's diet – order of introduction
		MT11d:	Good feeding practices: Advise mothers about an acceptable energy dense first food
Key Family Practice 3	Provide children with adequate amounts of micro-nutrients (vitamin A, iron and iodine in particular) either in their diet or through supplementation	MT12:	Good feeding practices: General advice
		MT12a:	Good feeding practices: Balancing milk and food intake
		MT12b:	Good feeding practices: Providing good nutrition for your child with the child support grant
		MT12c:	Good feeding practices: Providing good nutrition for your child with limited facilities e.g. cooking facilities
		MT12d:	Good feeding practices: Make feeding time a special time for you and your baby
MT12e:	Good feeding practices: Provide a variety of food more than three times per day		
Key Family Practice 4	Promote the child's mental, social and physical development by a. Being responsive to the child's needs for care, and stimulating the child through talking playing and other appropriate physical and affective interactions	MT1:	Being a "good mother"
		MT1a:	Being a good mother: What will your baby's needs be?
		MT1b:	Being a good mother: Development of confidence in own strength and capacity to love so as to be a "good mother" even in Duncan Village
		MT1c:	Being a good mother: Birth control – not as a separate topic but as a thread in all MT1 messages
		MT1d:	Being a good mother: The good mother will use her available resources to the best advantage of her child
		MT8	Exclusive breastfeeding – A special act in a harsh environment
	b. Ensuring growth monitoring to detect growth faltering and taking corrective action	MT12d:	Good feeding practices: Make feeding time a special time for you and your baby
		HT2:	Mothers must be good caring mothers in an area where extremely poor environmental conditions exist and where unemployment is rife

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B. Disease Prevention

Key family Practice 5	Dispose of faeces (including children's faeces) safely and wash hands with soap after defecation, and before preparing meals and feeding children	MT16: MT16a: MT16b: MT16c: MT17: MT17a: MT17b: MT18:	Hygiene practices: Practising good hygiene in Duncan Village Hygiene practices: Practical advice on good hygiene with limited resources Hygiene practices: A house that is clean inside and outside is important for good health Hygiene practices: Clean hands and clean clothes are important for baby's health Hygiene practices: Using feeding bottles Hygiene practices: The dangers of using a feeding bottle Hygiene practises: If using a feeding bottle: how to clean it properly in an economical way Hygiene practices: Use safe food preparation and storage methods
Key Family Practice 6	In malaria-endemic areas, ensure that child sleep under recommended insecticide treated mosquito net.		Not applicable
Key family practice 7	Prevent child abuse/neglect and take corrective action when it has occurred.	MT1: MT1a: MT1b:	Being a "good mother" Being a good mother: What will your baby's needs be? Being a good mother: Development of confidence in own strength and capacity to love so as to be a "good mother" even in Duncan Village
Key Family Practice 8	Adopt and sustain appropriate behaviours regarding HIV/AIDS prevention and care for the sick and orphans		

C. Home Management

Key Family Practice 9	Continue to feed and offer more fluids to children when they are sick		
Key Family Practice 10	Give sick children appropriate treatment for illness at home		Not found to be problematic IMCI messages sufficient
Key Family Practice 11	Take appropriate actions to prevent and manage child injuries and accidents		

D. Care Seeking and compliance to treatment and advice

Key Family Practice 12	Take children as scheduled to complete a full course of immunisation (BCG, DTP, Polio, HiB, HepB and Measles)	MT15: MT15a:	Child health Child health: Immunisations are important for your child's health and provides you with an opportunity to see how well your child is progressing. It also gives an opportunity to seek help and support if any is needed
Key Family Practice 13	Recognise when sick children need treatment outside the home and take them for health care to the appropriate providers	MT15b:	Child health: A healthy child with a bright future needs the best nutrition that you can provide
Key Family Practice 14	Follow recommendations when sick children need treatment outside the home and take them for health care to the appropriate providers	HT14:	Obstetric unit: Health workers must remember that children of mothers that do not attend immunisation clinics are at risk of becoming malnourished. Give special attention to vulnerable mothers
Key Family Practice 15	Ensure that every pregnant woman receives the 5 antenatal visits, recommended doses of tetanus toxoid vaccination and is supported by the family and community in seeking appropriate care, especially at the time of delivery and during the postpartum/lactation period.	MT13: MT13a: MT13b:	Mother's nutrition Mother's nutrition: Food based dietary guidelines for pregnant and breastfeeding mothers Mother's nutrition: Prevent excessive weight gain by eating well during pregnancy and while breastfeeding
		MT14: MT14a: MT14b:	Mother's health Mother's health: Drinking is bad for your baby's health Mother's health Smoking is bad for you and your baby's health
		HT16	Health workers must try to motivate women in the community to attend antenatal clinics as early as possible in their pregnancies
Key Family Practice 16	Ensure that men actively participate in provision of childcare, and are involved in reproductive health initiatives	HT5:	Fathers could be an important source of support for mothers and a way should be found to educate them

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All Key Families

- HT1: A strong rural background of the client will often be the premise from which education must take place
- HT3: When giving nutrition-related education use messages that are meaningful to the mother's frame of reference
- HT11: Breastfeeding and other feeding practices: Clinic staff have a responsibility to provide education and support. Mothers want to hear the messages from them.
- HT15: Health workers must give special attention to mothers who have migrated to DV from the rural areas

No Specific Key Family

- MT2: **Mother's education**
- MT2a: **Mother's education:** Attain the highest level of education possible before having children
- MT2b: **Mother's education:** Mothers should try to improve their education through available education programmes

The question has been asked whether health services can support the costs, both in time and money of IMCI (Tulloch, 1999:SII 19). The suggested message and help topics only tie in with one of the three components of IMCI, namely improving the health care capacity and practices in the home and community. The same question could therefore be asked about the viability of the implementation of even this one component strengthened by the newly identified message and help topics in the Duncan Village clinics. The education will require time from health workers, who already often only see patients for a few minutes because of their workload (Tulloch, 1999: SII19, Chapter 5: Section 2.8). To ensure that enough time is available to implement the IMCI strategy with patients, Tulloch (1999:SII 19) suggests that there should be better organisation of the flow of patients and that facilities should be kept open and staffed for the scheduled hours (see Recommendation 10).

1.3.3 Using protocols or written guidelines (F)

Recommendation 7

Protocols, already existing in the national or provincial health service should be used for all nutrition-related education e.g. breastfeeding education and introduction of complementary foods. Where necessary protocols should be compiled.

According to a document of the WHO/UNICEF/UNFPA (1999: 12) written protocols of care facilitate the training of staff at all levels of the health care system and improve their performance. Additionally such protocols can provide the basis for the evaluation of staff performance. These guidelines should be based on international state-of-the art information and should be adapted to the local context.

According to Steyn and Labadarios (2002: 343) The National Nutrition Directorate of the South African Department of Health has been very active in the area of health promotion and a series of policy documents are available, amongst them guidelines on breastfeeding and vitamin A supplementation. These documents have been developed through extensive consultation with a wide spectrum of role-players (Steyn & Labadarios, 2002: 343) and could be implemented in the PHC clinics in Duncan Village. The identified message and help topics could provide guidance on the need for specific nutrition education protocols or written guidelines that are needed at the PHC clinics in Duncan Village.

1.3.4 Using long waiting periods (G)

Recommendation 8

Turn a weak point into a strong point - Make use of long waiting periods at clinics to provide nutrition-related education

The long waiting period at the clinics has been one of the complaints of mothers and pregnant women. It is suggested that this waiting period that leads to much frustration among clients and in some instances even leads to mothers and pregnant women not attending the clinics, could be used to present nutrition-related messages to clients. Although the heavy workload at clinics could be a barrier to the use of this time for nutrition-related education, many options could be investigated such as involving the community (see Recommendation 14) or other role-players e.g. other sectors in the Department of Health or NGOs.

1.3.5 Communicating the identified message topics to clients (H)

Recommendation 9

Train health workers to use sound counselling practices and adult education principles when conveying nutrition-related messages to clients

This recommendation is closely associated both with providing nutrition-related messages to mothers and the importance of creating a health empowering environment. The latter will be discussed in the next section.

Gillespie and Allan (ACC/SCN, 2001: 77) recommend that service personnel (health workers) should receive special attention when nutrition interventions are planned. They should be trained in sound counselling practices so that they could be “real motivators of behavioural change”. Health workers should furthermore be trained to “treat people as if they are what they ought to be and thus help them to become what they are capable of being” (Von Goethe cited in Robinson, 1994: 104). To achieve this the basic principles of adult education should be incorporated into training and practised in the clinics. Health workers need to know that the most important role of the educator of adults is to create an environment of mutual respect. A friendly atmosphere and a supportive psychological environment where mothers are recognised as responsible and self-directing (Robinson, 1994: 56) should be created for effective nutrition education to take place at the clinics.

Haaland and Vlassoff (2001: 1) refer to Freire, one of the main founders of modern adult education methodology, who stated that dialogue is among the most important principles in the process of “transforming” adult learners. This dialogue must be undertaken as an equal relationship between people with communication and empathy the main methods in the dialogue. From this it is clear that if health workers at the Duncan Village clinics want mothers to be empowered and motivated to take action to improve the quality of their and that of their children’s lives, the identified problems of verbal abuse, negative behaviour, favouritism and the uncaring attitudes of health workers towards mothers will have to be addressed.

1.4 Recommendations about creating a health-empowering environment for clients (I)

1.4.1 Addressing interpersonal and organisational problems (J)

Recommendation 10

Address interpersonal and organisational problems that might exist at the clinics that could make it difficult for women to attend clinic.

Mothers and pregnant women recounted many negative experiences with the clinic services in Duncan Village. These experiences lead to various levels of negative feelings such as fear, frustration and intense dissatisfaction and could eventually lead to the decision not to use the PHC services offered by the clinics. Many of the problems experienced by clients and health workers in Duncan Village also exist in other areas of South Africa and elsewhere in the world (Schuler & Husain, 1998:174; Fonn *et al.* 1998: 697; MacKeith, Murray, Standing, Phiri & Ahmed, 2001: 8).

In order to create an accessible clinic service, these problems, perceived or actual, need to be addressed. Most of the recommendations made by participants in the focus groups concentrated on the way health workers behave towards clients. According to Haddad *et al.* (1998: 381-394) many studies have shown that the conduct of health care professionals stands out “as a central element of judgement that users make about health services”. Improving the interaction between health service providers and their clients therefore seems to be the most important aspect of creating a clinic service that clients would like to access.

On the other hand the problems experienced by health workers that make it difficult for them to give nutrition-related education to their clients also needs to be addressed. According to Kanani (1998: 1227) empowerment of mothers and other child caregivers can only be achieved when health service providers are also empowered. “Empowerment” in this context is seen as a continuous process in which the knowledge and skills of providers are enhanced, attitudes are changed and administrative support is provided for delivering good quality care. To facilitate this process, quality of care should be the focus in all aspects of management such as training, logistics of providing supplies, monitoring and supervision. Adequate financial resources should furthermore be available (Kanani, 1998: 1227). The results of a large qualitative study on practical solutions to the problems of poor health services for women (Fonn *et al.*, 1998: 700-701) showed that the same recommendations for empowerment of health workers made by Kanani (1998: 1227) is also applicable to health services in South Africa.

Implementing Recommendations 2 – 3, 4, 7 – 9 and 11 will already contribute to addressing the interpersonal and organisational problems identified by mothers and health workers. Other problems like the lack of

medicine and vaccinations as well as organisational problems such as staff shortages should however also to be addressed.

More information could be collected about these problem areas but there are already a number of guides available in the literature that can be used to address interpersonal and organisational problems at the clinics. These include the Health Workers for Change initiative (Fonn & Xaba, 2001: 13) as well as the manual titled “How to make maternal services more women-friendly (MacKeith *et al.*, 2001).

1.4.2 Using the help topics as a tool for empowering health workers (K)

Recommendation 11

Health workers should use the help topics to empower themselves to see their clients in the context in which they live.

For health workers to be able to educate mothers effectively they need to realise that their clients are part of a larger reality that includes “physical, biological, psychological, spiritual, historical, cultural, social, economic and political dimensions” (Fahlberg, *et al.* 1991: 186). The help topics that have been formulated in this study could be used by health workers to empower themselves to identify and understand the unique needs that arise from the conditions of life in an impoverished urban slum. This could assist in providing a service that is more woman-friendly (MacKeith *et al.*, 2001: 9).

The findings of the “Health Workers for Change initiative” concerning the importance of understanding gender issues when providing health care to women provide evidence for the important role of “seeing clients in context”. The initiative is based on the premise that an increased understanding of the social determinants of health, illness and health-seeking behaviour would increase providers’ understanding of how gender roles may affect client’s use of services (Vlassoff & Fonn, 2001: 48). These authors found several indications that an increased understanding of how gender issues affect their clients’ lives led to positive changes in the relationship between health workers and their clients and improved the delivery of services.

1.5 Recommendations on reaching the most vulnerable clients (L)

1.5.1 “Equity: reaching the unreached” (M)

Recommendation 12

Find ways to reach those that need the messages most but do not attend the clinics

An in depth evaluation of successful community nutrition programmes in the late 1980’s identified the targeting of high risk groups as a “crucial element” in successful programmes. UNICEF, (1997:6) uses the phrase “equity: reaching the unreached” to describe this important aspect in the delivery of health care services. High-risk groups include women, children and all those who are exploited and impoverished. According to De La Rocha and Grinspun (2001: 85) poverty-stricken people, even in diverse situations experience humiliation, stigma and a loss of social contact that results in isolation and exclusion. This eventually cuts them off from opportunities and support. These high-risk groups, are not only marginalised from society but also from the health care system and can usually not be reached unless a deliberate effort is made (UNICEF, 1990b). A specific mechanism is therefore needed to identify, enrol and follow up on these groups (UNICEF, 1990b).

Evidence that impoverished people are often isolated from the health system is provided by Schellenberg *et al.* (2003: 566). These authors studied an area in Tanzania where people were all poor and found that the main difference between the poorest children and those that were better off was not that they were more likely to fall ill but rather whether their caregivers accessed all the opportunities for treatment.

Many of the “non-clinic-attending mothers” in the present study in Duncan Village also came from the poorest areas in the township. These mothers who are the most vulnerable to environmental and nutritional risk often do not use the clinic services because of the various factors described in Chapter 5. To attain equity a mechanism must be found to reach these vulnerable mothers. Addressing the recommendations for the creation of a health empowering environment (K and J in Figure 6.1) at the clinics could assist in improving the accessibility of clinic services to these high-risk mothers.

1.5.2 Focusing on the needs of adolescent and young mothers (N)

Recommendation 13

Special attention should be given at the clinics to adolescents and very young mothers through:

- Efforts to prevent early pregnancies and
- Providing support to very young mothers

In the WHO's (2002a: 8) strategic directions for improving the health and development of children and adolescents it is stated that reproductive health problems are the major cause of death in women aged 15 to 19 years. Reproductive health problems furthermore have many negative consequences on education, employability and income-potential of young women. The finding of this research showed that very young mothers experience many problems that could affect the nutritional well-being of their children. A similar finding was made in a study in Lusaka, Zambia (MacKeith *et al.*, 2001: 54) where adolescents were identified as one of the three most important groups needing more help from the clinic services. The other two groups included poor/uneducated women and widows.

Many adolescent and young mothers in Duncan Village find themselves in poverty-stricken circumstances and according to the WHO (2002a: 8) these young women could be especially vulnerable to not being able to access essential knowledge, skills and commodities for health and health care. This highlights the need for action to prevent young girls from falling pregnant but also to provide special support for those that have already had a child at a young age.

1.6 Involving the community (O)

1.6.1 Involving the community in creating an accessible clinic service (P)

Recommendation 14

Find practical and sustainable ways to involve the community in establishing the clinics as nutrition-user-friendly services.

To ensure the accessibility of nutrition-related information, one of the important aspects is to get members of the community to access the services. Getting community members involved in the health services delivered to them could assist in this process. According to Manderson (1997) the operation and development of integrated health service programmes at primary care levels must be seen from the perspective of the client communities and their needs and take the capability of the health services into account.

Although local clinic health committees have been established in Duncan Village they do not always seem to be fully functional. This is often due to mobility of community members who migrate from Duncan Village to the rural areas and back (Qabaka, personal communication, 2003; Buffalo City Municipality, 2003). This aspect needs to be considered when suggesting that the community becomes involved in health service delivery. Strategies to overcome this problem need to be found through participation of the community.

In a commentary on community development, user development and primary health care Fisher, Neve and Heritage (1999:749) discuss existing problems in getting communities involved in primary health care in Great Britain. The clinics in Duncan Village probably face similar problems. According to Fisher *et al.* (1999:749) primary care givers are expected to shape services, assess health needs, reduce health inequalities, listen to users' views, and work in partnership with local agencies. To achieve all this will need a range of skills, which few primary health professionals possess. Even the British government has provided little conceptual, managerial, or financial infrastructure for public involvement in this sphere. Public meetings are the only mechanism for consultation. Fisher *et al.* (1999: 749) therefore suggests that primary care providers should work in collaboration with community development projects so that trained community development workers can bring local people together to achieve the following:

- identify and support existing community networks, thus improving health;
- identify health needs, in particular those of marginalised groups and those suffering inequality;
- work with other relevant agencies, including community groups to tackle identified needs
- and encourage dialogue to develop more accessible and appropriate services.

It is also important to remember that although urban communities are often characterised by poverty, high rates of violence and substance abuse and disrupted social networks they do have “a wealth of human resources”, including experience in solving local problems (El-Askari, Freestone, Irizarry, Kraut, Mashiyama, Morgan & Walton, 1998) According to these authors empowering communities through raising critical consciousness, increasing community participation and control, strengthening social ties and helping to develop the capacity of communities, can mobilise existing human resources to promote better health. These possibilities could also be of importance when attempting to mobilise the Duncan Village community to participate in improving accessibility of nutrition-related messages at the Duncan Village clinics.

1.6.2 Involving the community in developing relevant nutrition-related messages (Q)

Recommendation 15

Determine the specific content of the identified message topics through TIPs or other participatory action research techniques

According to Gillespie and Allan (ACC/SCN, 2001: 77) one of the important processes to follow in facilitating behavioural change in nutrition intervention is to “enforce rigorous discipline in the message development processes”. This is important to ensure that messages always “call for” and motivate a desired action, offer benefits and are easy to remember.

In Phase 1 of this research specific nutrition-related message topics for the mothers attending the Duncan Village municipal clinics were identified. The specific content of most of these message topics must however still be developed. This can only be done through a participatory process with the community. The Trials of Improved Practices suggested by Dicken *et al.* (1997) is one way of developing relevant messages for breastfeeding, feeding practices and health and hygiene issues.

2 Summary and conclusion

In Phase 3 of the study 15 recommendations were formulated to improve the accessibility of nutrition-related messages at the PHC clinics in Duncan Village. These recommendations are based on the message and help topics that were formulated in Phase 1 and the factors identified in Phase 2 that influence the accessibility of services (including nutrition-related messages) aimed at mothers attending the PHC clinics in Duncan Village. The recommendations focus on the provision of a health empowering environment and the provision of appropriate nutrition-related messages at the clinics. Community involvement in developing the specific message content of the message topics that were identified and reaching the most vulnerable mothers are also emphasised.

Implementation of the recommendations will contribute to the nutritional well-being of all young children in Duncan Village and could play an important role in realising the rights of children living in the area.

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**Addendum A:
Instruments**

Addendum A

Instruments

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Question guide

Key-informant interviews

Name of respondent:

Job title:

Place of work:

Phone number:

Name of interviewer:

Date of interview:

SECTION A: CHILD FEEDING

Child feeding

The concept child feeding encompasses the following:

- Initiation of Breast-feeding*
- Continued breast feeding and complementary foods*
- Cessation of breast-feeding*
- Introduction of family foods*
- Feeding style*
- Quality and quantity of food*
- Practices around feeding of sick children and during convalescence*
- Encouragement of feeding*
- Influence of family members and health service providers*

- Do you think that there is a problem regarding child feeding in Duncan Village?
If yes describe the problem:

- Can you describe the practices of mothers in Duncan Village with regard to the following aspects of infants and young children feeding:

	Aspects of child feeding	Description
1.	Breast-feeding	
1.1	Initiation	
1.2	Style	
1.3	Water supplementation	
1.4	Early supplementation	
1.5	Maternal diet/care	
1.6	Breast-feeding problems	
2.	Weaning	
2.1	Continued breastfeeding	
2.2	Introduction of complementary foods	
2.3	Introduction of family foods	
2.4	Feeding style (complementary foods)	
2.5	Quality of food	

	Aspects of child feeding	Description
2.6	Quantity of food	
3.	Feeding practices	
3.1	Encouragement of feeding	
3.2	Feeding during illness	
3.2	Convalescence	

3. Can you describe how the following individuals or factors influence child feeding practices in Duncan Village?

4.	Individuals/Factors influencing feeding	
4.1	Family members	
4.2	Health service providers	
4.3	Media	
4.4	Previous and ongoing health and nutrition communication programs	

4. What do you see as constraints (environmental and attitudinal) to improving child feeding in the target population?

SECTION B: RESOURCE MANAGEMENT

Resource management

The concept resource management refers to ensuring optimal use of and management of financial resources:

e.g. adhering to wise buying principles and budgeting and identification and utilisation of other sources of financial aid.

1. Do you think that issues concerning resource management are of importance to people with limited financial resources? Explain.

2. Do you think that mothers in Duncan Village have a problem with managing available resources? Explain.

3. Do you think that there is a need for women in Duncan Village to know more about

		Yes	No	Explain
3.1	Managing existing resources e.g.			
	Simple budgeting			
	Adhering to wise buying principles			
3.2	Identification and utilisation of additional financial aid.			

4. What kind of resources are available to mothers in Duncan Village in terms of

	Names
Financial support (grants etc)	
Other aid	

SECTION C: Child health management

Child health management refers to:		
Home management of illness	Utilisation of health services	Home-based protection
Prevention of illness	Preventive and promotive health services	Control of pests
Diagnosing illness	Timely seeking of curative health services	Avoidance of accidents (burns, falls, bites)
Providing home treatment		Prevention of abuse/violence

1. In your opinion does a problem exist in the way mothers' home health practices concerning the above? Explain

2. Can you describe the practices of mothers in Duncan Village concerning the following aspects of child health management:

	Explain
Home management of illness	
Prevention of illness	
Diagnosing illness	
Providing home treatment	
Utilisation of health services	
Preventive and promotive health services	
Timely seeking of curative health services	
Home-based protection	
Control of pests	
Avoidance of accidents (burns, falls, bites)	
Prevention of abuse/violence	

SECTION D: Hygiene

Hygiene refers to the mothers' own personal hygiene and hygiene practices with regard to her child e.g. hand washing and bathing and cleaning child

1. Can you describe the practices of mothers in Duncan Village with regard to the following aspects of hygiene practices:

	Description
Hand washing	
Bathing and cleaning child	

2. Do you feel that hygiene practices of mothers in Duncan Village, personal and with regard to their small children are adequate? Explain.

3. If no to 2 what would you see as contributing factors to these inadequate practices?

4. Do you think that given the specific circumstances in Duncan Village that it is possible for mothers to change their hygienic practices? Explain.

SECTION E: Health care providers' knowledge, attitudes, and skill related to counselling on child feeding, nutrition and other care behaviours

Care behaviours refer to a range of feeding, food preparation, psycho-social, hygiene, and home health practices that could affect survival, growth and psycho-social development of children.

1. How would you subjectively rate health care provider's knowledge, attitudes, and skill related to counselling on child feeding, nutrition and other care behaviours

	Poor	Adequate	Good	Reason
Knowledge				
Child feeding				
Nutrition				
Care behaviours				
Attitudes,				
Child feeding				
Nutrition				
Care behaviours				
Skills				
Child feeding				
Nutrition				
Care behaviours				

2. If health care provider's knowledge, attitudes, and skill related to counselling on child feeding, nutrition and other care behaviours are judged inadequate suggest a practical and feasible solution to address the problem.

SECTION F: Individuals, services and media that may influence child feeding and care behaviour as well as channels through which services and educational programs could be delivered.

Individuals refer to local role models, family members or any individual likely to influence child feeding in Duncan Village
Services refer to local government services, services offered by residents and civic associations as well as those offered by churches and non-government organisations
Media refer to radio, television and the printed media

1. List the individuals, service and media that may influence child feeding and care behaviours.
2. Rank them in order of importance? (1 most important, 5 least important)

	1.	2.
Individuals		
1.		
2.		
3.		
4.		
5.		
Services		
1.		
2.		
3.		
4.		
5.		
Media		
1.		
2.		
3.		
4.		
5.		

SECTION G: General

1. Please give me your general impression on how each of the following 3 factors could influence the effectiveness of a nutrition education program (including aspects influencing child development) in Duncan Village.

1.1	Family conditions and practices	
1.2	Community conditions and practices	
1.3	Cultural values and beliefs	

2. Have you any suggestions on what other information I need in order to be able to plan an effective educational program for mothers?

3. Have you any suggestions on what educational approach (role-play, storytelling etc.) would be the most effective method of conveying the educational messages to the target group?

4. Is there a particular type of printed art (cartoon figure, real life photos, real life paintings) that you think is the most effective way of conveying a message to the target group?

5. Do you want to suggest any other key people that I need to interview?

6. Do you know about any other educational programs directed at women in Duncan Village?

Question guide

In depth interviews

Instructions to interviewer:

Introduce yourself to the respondent and inform her about the following:

The aim of the interview is to determine how mothers in Duncan Village feed their children and care for them with the few resources that are available, there are therefore no “right” or “wrong” answers. Your answers could help other mothers that find themselves in similar conditions as the information that you provide will be used to develop a program that will aim to help mothers to care for their children to the best of their abilities. Everything that we discuss will be confidential and only the researcher will know your name and the specific information that you have given. Because of the length of the discussion we would like to have your permission to tape the discussion. To ensure confidentiality we will not mention your name and address on the tape recording. If you agree to this will you be prepared to sign the following consent form? (Consent form is provided as a separate form but are to be attached to the datasheet)

Have a general introductory discussion with the mother on her personal situation so as to set her at her ease and also provide background to the discussion that will follow. The following information should be obtained:

- Place of birth
- Length of stay in Duncan Village
- Her view of conditions in Duncan Village
- Hardships presently experienced
- Her general feelings about being a mother

Record the following immediately with the relevant socio-demographic information on the data sheet.

- Date of interview
- Investigator name

Record the time the interview started and ended on the data sheet.

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1. Interview Guide

The following colour coding can be used to guide the interview with the participants from the various categories. The colour coding provide guidelines to the importance of the specific question for the different categories

Participant Category	Description	Colour code
Participant category A	Mothers with 6-week old infants	
Participant category B	Mothers with 14 to 18 week old infants	
Participant category C	Mothers with 9 month old children	
Participant category D	Mothers with children, \pm 18 months	
All of the above categories		

Three stars (***) are used in the guide to indicate where the name of the child could be used to personalise the interview as far as possible.

In sections 4.2, 6, 7, 8, 9 and 11.2 a column, marked "Obs" is added. This column alerts the interviewer with the little sign "👁" that actual observation is needed and that this information should be added to the observation sheet in section 13

2. Socio-Demographic information

	Information to be obtained	Obs	A	B	C	D
1.	Street					
2.	Mother's name					
3.	Child's name					
4.	Sex of child					
5.	Place of child's birth					
6.	Date of birth					
7.	Weight at birth					
8.	Clinic card Yes <input type="checkbox"/> No <input type="checkbox"/>	👁				
9.	How many children do you have?					
10.	How old are you?					
11.	What standard (grade) did you pass?					
12.	Are you working outside the house/ are you on maternity leave?					
13.	Are you married? (Explain relationship with father of child)					
14.	How many people live in your house and who are they?					

3. Support systems

	Information to be obtained	A	B	C	D
	Does your husband/partner assist with caring for the child?				
	Who else in the household assists you with looking after ***?				
	Who is your main source of support (emotionally and physically) in bringing up your child?				

4. Breastfeeding

4.1 Introduction

	Question	Probe or Instruction	A	B	C	D
1.	Do you currently breastfeed?	If yes continue with Section 4.2 If no continue with 1.1				
1.1	Did you breastfeed at all?	If no continue with 1.1.1 If yes continue with 1.1.2				
1.1.1	Why not?	If no to 1.1 continue with Section 5: Introduction of liquids other than milk.				
1.1.2	How long did you breastfeed?					
1.1.3	Why did you stop breastfeeding?	Continue with 4.2				

4.2 Breastfeeding practices

	Question	Probe or Instruction	Obs	A	B	C	D
1.	Where was *** born?	<i>At home or in hospital. If at home continue directly with question 2</i>					
1.1	How soon after the birth did they give you *** to breast-feed?						
1.2	What advice was given to you with regard to breastfeeding in the hospital?						
1.3	When you got home from the hospital did you experience problems with breastfeeding?						
2.	How many times per day do/did you give breast milk?	<i>Ask the mother to explain her feeding schedule.</i>					
3.	If on demand, can you tell me more or less how many times a day?						
4.	Can you tell me how many of these times do *** actually drinks and how many times the breast is just used to comfort her/him?						
5.	Does *** sleep with you at night?						
6.	Do/did you also breast-feed at night?	<i>Do *** actually drinks or is he/she just comforted by the breast?</i>					
7.	When did you start breastfeeding?	<i>Right after birth, how many hours after birth on what day, why?</i>					
7.1	If the answer is "immediately", did you give the first milk that came out?	<i>Describe the milk as yellow or thick</i>					
7.2	If no why?						
7.3	If yes why						
7.4	Do you have a name for this milk (colostrum)?						

	Question	Probe or Instruction	Obs	A	B	C	D
8.	<i>If the mother did not give milk immediately:</i>						
8.1	Why did you not give milk immediately?						
8.2	What did you give *** to eat or drink instead of milk?						
8.3	When did you give it?						
8.4	How many times did you give it and for how many days?						
9.	<i>If the mother did not give breast milk immediately because she did not have milk:</i>						
9.1	When did you start having enough milk to give to ***?						
10	How do you feel about the quantity of milk you have/had? Normal/enough for the needs of the child Not enough More than enough	<i>Also ask her to explain why she feels like that.</i>					
10.1	If not enough, what do/did you do?						
11.	Do/did you use both breasts when breastfeeding?						
11.1	If no, why?						
11.2	If yes, why?						
12.	Approximately how long do/did you breast-feed during one feeding?	<i>How many minutes?</i>					
13.	How do you know that the child has received enough breast milk during one feeding?						
14.	Who did you get the most advice from regarding breastfeeding?						
15.	Do or did you enjoy breastfeeding?						
16.	From who or where did you get the greatest support for breastfeeding?						
17.	What would you say is or was the biggest obstacles that you encountered while breastfeeding?						
18.	If you have just breast-fed *** and he/she cries what is the first thing that you think could be wrong?						
	<i>If currently breastfeeding:</i>						
19.	How will you know when to stop breastfeeding completely?						
20.	Do you ever stop breastfeeding for a few days?	<i>Explain</i>					
21.	Has the child been given milk besides breast milk?	<i>If yes, complete matrix 3 on the last page of the questionnaire.</i>	☺				

5. Introduction of liquids (Tea, water, herbal drinks etc)

	Question	Probe or Instruction	Obs	A	B	C	D
1.	Do you give the child water to drink?	<i>Do you do anything to the water before giving it to the baby?</i>					
2.	If yes. How often do you give water?						
3.	How do you give the water?		✳				
4.	How much water do you give?		✳				
5.	Why do you think is it necessary to give a small baby water?						
6.	When did you give water for the first time?						
7.	What other liquids have you given *** up to now?	<i>Complete matrix 1</i>					
8.	Do you give *** any herbal drinks?	<i>Describe</i>	✳				
9.	Has the child been given any <i>inembe</i> ?		✳				
10.	If yes in what form?	<i>If in a liquid form, complete matrix 2 on the last page of the questionnaire.</i>					

6. Introduction of complementary food

	Question	Probe or Instruction	Obs	A	B	C	D
1.	Has the child ever received any solid food (Even if in liquid form)?						
1.1	If yes, why and on the advice of whom?						
1.2	If no, why and on the advice of whom?						
2.	From whom or by what means would you want to hear this information?						
3.	If yes, from where or whom did you get the biggest support when you started to introduce food to your child?	<i>Explain</i>					
4.	If yes, what were the biggest problems that you experienced when you started to introduce the food?						
5.	If yes at what age did you begin to give these?	<i>Use weeks for category a + b, months for c.</i>					
6.	If yes describe the type of food and how the food was prepared.	<i>Start with the first food that was given and go on to all the other foods that you have given already. Complete matrix 4 at the end of the questionnaire.</i>	✳				

	Question	Probe or Instruction	Obs	A	B	C	D
7.	Is there a specific order in which you think food should be introduced to a baby?	<i>You could mention different foods to the mother</i>					
8.	Did you ever find that *** coughed after you gave him/her food?						
9.	Is the child getting the same food as the family?	<i>If yes complete this question otherwise go on to question 8</i>	☼				
9.1.	If yes, when did you first start giving family food?	<i>Are there any specific milestones or cues for introduction?</i>					
9.2.	How is the food given?	<i>From the mothers plate? Own bowl?</i>	☼				
10.	If no, who prepares the food for the family and who prepares the food for the child?						
11.	How many times a day is food prepared for the child?						
12.	If meals are prepared in advance, how is it stored?		☼				
13.	Who usually feeds ***?						
	If currently breastfeeding/bottle-feeding:	<i>If not breastfeeding/bottle-feeding go on to question 16</i>					
14.	Do you give the food before or after breastfeeding/bottle-feeding?						
15.	Do you sometimes give food and no milk?	<i>Why?</i>					
16.	Do you find that the child drinks less milk now that you are giving food?	<i>Explain</i>					
17.	Do you think that your breast milk became less when you started giving the food?	<i>Explain</i>					
18.	At this age what do you think is the most important for *** milk or food?						
19.	Can you tell me a little more about the type of food you are giving now?	<i>Complete matrix 5 at the end of the questionnaire</i>	☼				
20.	Are there any foods that you think should not be given to a child of this age?	<i>Explain why not?</i>					
21.	How many times per day do you feed the child?	<i>When do you give food for the first time? Do you give anything between breakfast and lunch? Between lunch and supper?</i>					
22.	What do you do if the child refuses to eat?						
23.	Why do you think that children sometimes do not want to eat?						
24.	Do you decide when the child had enough to eat or does he/she decide?		☼				

	Question	Probe or Instruction	Obs	A	B	C	D
25.	What do you do regarding food if your child is ill?	<i>Do you change the type of food?</i>					
26.	If you had plenty of money what would you have liked to give your child to eat?	<i>List in order of importance</i>					
27.	Can you tell me what the child ate and drank yesterday?	<i>Complete matrix 6 at the end of the questionnaire. Start with the first thing the child ate when he/she woke up and end with the last thing the child ate or drank before he/she went to sleep</i>					

7. General caring practices

	Question	Probe or Instruction	Obs	A	B	C	D
1.	Where does *** spend most of his/her day?	<i>In a crib, in the mother's arms?</i>	★				
2.	If you go somewhere (visiting, church, work) do you take *** with you?						
3.	How do you feed *** when you are not at home?						
4.	When you leave home and do not take *** with you, how do you arrange his/her feeding?						

8. Mother's nutrition

The following questions are to be asked of mothers in all categories. If the mother did not breast-feed only question 3 needs to be asked.

	Question	Probe or Instruction
1.	Have you been eating any differently while breastfeeding?	
2.	Have you been taking more fluids while breastfeeding?	
3.	What is your feeling about the influence of breastfeeding on your health/the health of a woman?	<i>Do you feel that it has an influence on your weight?</i>

9. Resource management

	Question	Probe or Instruction	A	B	C	D
1.	How many people in your household have an income?					
2.	Do you know how much they earn?	<i>If yes can you tell me more or less? Do not put pressure on the participant to give an answer.</i>				
3.	Who controls the income?	<i>How much can you influence the spending of the money?</i>				
4.	How much money do you have available to spent on yourself and on your child/children?					
5.	Do you have a grant for your child?	<i>If yes continue with question 5.1 otherwise go to 5.2</i>				
5.1	If yes to 5.1 what problems did you experience?					
5.2	If no have you tried to get one?					
5.3	If no, why not?					
6	If you have a grant on what do you spent the R100 per month?					
7.	If you are given R100 a month for your child on what will you spent it?	<i>List in order of importance</i>				
8.	Where do you buy your food?					
9.	Do you think that you can buy it cheaper somewhere else?	<i>Explain</i>				
10.	If you have money available (on a regular or irregular basis) how do you decide on what to spend it?					
11.	Keeping in mind that this interview is confidential would you like to tell me how you manage to survive on a very small or no income?	<i>For example how do you manage to get food on a daily basis?</i>				

10. Health management

10.1 Mothers own health

	Question	Probe or Instruction	A	B	C	D
1.	Did you experience any health problems with your pregnancy?	<i>If yes tell me a little more</i>				
2.	Do you smoke or did you smoke while you were pregnant?	<i>If yes, how much</i>				
3.	Do you drink or did you drink while you were pregnant?	<i>If yes, how much</i>				

10.2 Prevention of illness

	Question	Probe or Instruction	Obs	A	B	C	D
1.	What do you think a mother can do to prevent her small baby from getting ill?	<i>List a few things in order of importance. If mother cannot think of something immediately go on to next question.</i>	☒				
2.	What do you think can a mother do to prevent accidents around the house?	<i>List a few things in order of importance. If mother cannot think of something immediately go on to next question.</i>	☒				

10.3 Diagnosing illness and seeking help or providing home treatment

	Diagnosing illness	Prompt or instructions	What will you do about it? (Repeat this for each of the illnesses mentioned in column 1)
1	How will you know when your baby is ill?	<i>What will the baby look like?</i>	If the answer is: "Take the baby to the clinic" continue with the following: If the clinic is closed what will you do? If the answer is to give a particular medicine continue with the following: If you have no medicine what will you do?
2	How can you tell whether you baby has a high temperature (fever)?	<i>Leave this question if already answered in 1</i>	
3	Can you tell anything about your child's health by looking at his/her stool?		
3.1	What can cause a runny tummy?		
4	Are you aware of different rashes that babies can get?	<i>Ask about treatment for all the different rashes.</i>	
4.1	What do you think can cause a rash on your baby's skin?		
4.2	Do you know what causes nappy rash?		
5.	Small babies often have a problem with "sticky eyes". Did your baby have this problem?	<i>Ask what you can do about it even if her baby did not have the problem.</i>	

	Diagnosing illness	Prompt or instructions	What will you do about it? <i>(Repeat this for each of the illnesses mentioned in column 1)</i>
Other questions regarding diagnosing of illness			
6.	All babies vomit sometimes, if your baby vomits when will you get worried and take the baby to the clinic?		
Other questions regarding home treatment of illness			
7.	Do you ever make use of medicine that you buy in the shop? <i>(Ask if you can you see the medicines)</i>		
8.	What are you using the medicines for?		

11. Hygiene management

	Question	Probe or Instruction	A	B	C	D
1.	Where do you get water to use in the house?	<i>If outside house how far is it?</i>				
2.	How many times a day do you have to go and fetch water?					
3.	How do you heat the water for bathing?	<i>What do you do if you have no paraffin?</i>				
4.	What do you use to bath *** in?					
5.	How often do you bath ***?	<i>If answer "twice a day", probe gently about the actual behaviour!</i>				
6.	What kind of soap do you use to wash *** and ***'s clothes?					
7.	Do you have trouble getting hold of soap on a regular basis?	<i>What do you do if you have no soap?</i>				
8.	What kind of nappy do you use?					
9.	How do you dispose of the child's wastes?	<i>Explain to her what you mean by this</i>				
10.	If you use a bottle how do you clean the bottle?	<i>Probe gently about actual behaviour if there is no money for paraffin or if the child is crying and she is a hurry to prepare the bottle.</i>				
11.	Can you tell me how important you think washing of hands (your own and your child's) are?					
12.	How often do you wash your and your child's hands?	<i>How do you wash hands regularly if you do not have running water in the house?</i>				

12. Observation guide

	Observation	Instruction for observation
1.	House and environment	
1.1	Type of house	<i>Describe type and general impression of suitability</i>
1.2	Vegetable garden	<i>Record yes or no</i>
1.2.1	Space for a vegetable garden	<i>Record yes or no</i>
1.3	Hygiene inside the house	<i>Evaluate on a scale of 1 to 3 where 1 is poor, 2 average and 3 good. Describe your general impressions</i>
1.4	Hygiene immediately around the house	
2.	Feeding practices	
2.1	Breastfeeding	
2.1.1	How many times was the child fed during the interview?	<i>Record number and whether the feeding was just to pacify the child or to satisfy hunger.</i>
2.1.2	Was both breasts used for feeding?	
2.1.3	Does the child sleep while feeding?	
2.2	Are feeding bottles observed in the house?	
2.2.1	Are they used for the targeted child?	
2.3	Did the child receive other food besides breast milk?	
2.3.1	If yes what did the child receive?	<i>Record type of food</i>
2.4	Does the child feed him/herself?	<i>Record yes or no, with additional notes</i>
2.4.1	If yes what did the child eat?	<i>Record type of food</i>
2.5	If the child is feeding, is the child held by the mother during their interaction?	<i>Record yes or no, with additional notes if necessary</i>
3.	Resource management	
3.1	Ask for permission to see the food that is bought for the child and make a list.	<i>List the foods</i>
3.2	If she has had problems with getting a grant, ask if she has any documentation that you could look at.	<i>Briefly describe the documentation.</i>
4.	Growth	
4.1	Check the growth chart at the back of the clinic card and transfer the points on the growth line to the chart attached to the data sheet.	
5.	Health management	
5.1	Check clinic card for immunisations	<i>Tick of immunisations on data sheet.</i>
5.2	Are immunisations up to date?	<i>Record yes or no, with additional notes if necessary</i>
5.3	How many visits to clinic have been recorded?	<i>Record number of visits</i>
5.4	Make a list of all the medicine available in the house and indicate	

	Observation	Instruction for observation
	whether it has been received from the clinic, shop, traditional healer or private doctor.	
6.	Hygiene management	
	General hygiene measurements taken with the child. List observed behaviours regarding:	<i>Describe hygiene practices if any, observed.</i>
6.1	Washing of hands	
6.2	Wiping of face	
6.3	Cleanliness of cloth that is used to clean the child	
6.4	Changing of nappy	

12.1 General notes on what has been observed:

13. Matrices

13.1 Matrix 1: Introduction of liquids

Liquid	Specific kind	How is it given	Anything added?	At what age
Tea				
Cold drinks				

13.2 Matrix 2: Giving inembe

At what age	For what*	Why	What does she think about it	Frequency

*Coding:

1. Before breastfeeding – mother did not want to begin
2. Before breastfeeding – mother said she had no milk
3. Breastfeeding but wanted additional liquid
4. Breastfeeding but wanted a replacement
5. Breastfeeding but uses it as the main milk
6. Breastfeeding but uses it as additional liquid for the solid food also given

13.3 Matrix 3: Giving other milk while breastfeeding,

Kind of milk	At what age	For what*	Why	What does she think about it	Frequency

*Coding:

1. Before breastfeeding – mother did not want to begin
2. Before breastfeeding – mother said she had no milk
3. Breastfeeding but wanted additional liquid
4. Breastfeeding but wanted a replacement
5. Breastfeeding but uses it as the main milk
- Breastfeeding but uses it as additional liquid for the solid food also given

13.4 Matrix 4: Food given

	Food	Age given (months)	Reasons for the particular type of food	Readiness*	Preparation
1					
2					
3					
4					
5					

*Ask: How did you know that the baby was ready for this food? Probe for behavioural and development cues, perceived need, other reasons.

13.5 Matrix 5: Food given now

	Food	Reasons for the particular type of food	Preparation
1			
2			
3			
4			
5			
6			
7			

13.6 Matrix 6: Food given yesterday

Breakfast	Quantity	In-between	Quantity
Lunch	Quantity	In-between	Quantity
Supper	Quantity		

Duncan Village Nutrition Project
Phase 1

Focus group discussion guides

Explanation of procedure for all focus group discussions

TOPIC	DISCUSSIONS
Introduction	Facilitator's and Observer's names
Topic of Interview	We would like to talk to you today about the caring practices of mothers in Duncan Village with regard to feeding, resource hygiene and health management.
No right or wrong answers	There are no right or wrong answers to any of the questions – this is not a test. We would just like to know about your experiences with your children and how you manage your life from day to day.
Child Health Project	We are working on a project aiming to empower mothers to care for their children in such a way to ensure that they never suffer from malnutrition. We would like to know your experiences and thoughts in this regard.
Length of time of discussion	The discussion will take about one hour.
Talking to one another	As we will be discussing many things, it will be important that we not all talk at once because we will want to hear each other so we can talk together.
Explain note-taking and tape recording	_____ (observer's name) will be writing down some of the things we talk about so we can remember them later. Also we would like to use a tape recorder. Does anyone object?
Confidentiality	This discussion is confidential and we will not use any names in any report.
Check understanding	Do you understand what I said?
Clarification if needed	Do you have any questions?

Duncan Village Nutrition Project
Phase 1

Focus group guide 1

Category A
Mothers with 6 week old babies

TOPIC	DISCUSSIONS	PROBES
Women's introduction (warm up)	Please introduce yourselves and tell and as you do, tell how many children you have, the name and age of your youngest child	Observer should record this information for use during analysis
Motherhood	As you all have young children, can you say something about how your child makes you feel?	Happy, why Proud, why Tired, why? Link to future Aspirations
Good mother	How would you describe a good mother	How would she care for her child?
Necessities for children of different ages (To place feeding among other needs)	What was important for your baby right after birth? What was important for your baby during the first month? What will be important in the next months up to six months?	Care/ceremonies Foods Drinks/water Breast milk Why?
Support with child feeding	From whom did you get the most support regarding the feeding of your child?	What obstacles did you encounter up to now?
Child feeding decisions		
Breastfeeding	Some of you mentioned breast milk as important for a baby (may have to rephrase, depends on response) Who has breastfed their youngest child? Why did you breastfeed/why did you prefer breastfeeding? Who has influenced your decision to breastfeed? Who has given you the most advice on breastfeeding?	Advantage of breastfeeding Problems with giving bottles or cow's milk People and reasons for influence – doctor, husband, relatives, friends

(continued on next page)

TOPIC	DISCUSSIONS	PROBES
	Where were your babies born and what advice was given to you if the baby was born in the hospital?	If born in hospital how soon after birth did they give you the baby to feed?
	How many times per day do you give breast milk?	Feeding schedules During the night? For how long at a time (minutes)
	Did you give the first yellow thick milk that came out of your breasts?	What do you know about this milk? If you did not give it, what did you give?
	How do you feel about the quantity of milk that you have?	If not enough what do you do?
	Do you use both breasts when breastfeeding?	Practices in this regard Using the breast as a pacifier.
Exclusive breastfeeding	Did you during the early weeks of breastfeeding give your child any other liquids?	Water Other milk Herbal drinks Why? On whose advice? What do you use to give it with? Teaspoon, cup? Do you know anybody who uses a teaspoon or a cup?
Use of other milk	Do some of you use milk other than breast milk for your youngest child? Why did you decide to do this?	Benefits of milk to child? Which type of milk? Why? Insufficient milk, what can be done, whom do you ask? People and reasons influenced?
Continued breastfeeding	Let's say a woman from your neighbourhood has a child of one month. She had been breastfeeding her baby, but now comes to you for advice on what to do next. What would you recommend?	Why?
Weaning		
Introduction of complementary food	Have some of you started to give solid food (even in liquid form) to your baby?	At what age What kind of food Why On the advice of whom Preparation If breastfeeding do you think that your breast milk became less when you started giving the food? (continued on next page)

TOPIC	DISCUSSIONS	PROBES
	Are there any foods that you think are particularly good for a young baby?	Specific order of introduction of food to a baby?
Food vs. milk	<p>Some of you are either breastfeeding or giving bottle feeds? I would like you to discuss how you give the milk and the food to the child.</p> <p>Do you decide when the child had enough to eat or does he/she decide?</p>	<p>Do you give the food before or after breastfeeding/bottle feeding?</p> <p>Do you sometimes give food and no milk?</p> <p>Do you find that the child drinks less milk now that you are giving food?</p> <p>At this age what do you think is the most important for a child, milk or food?</p>
Resource management	<p>The following discussion is very personal so you only have to take part if you feel comfortable with it.</p> <p>How many mothers receive the R100/month grant</p> <p>If you are given R100 a month for your child what will you spent it on? (<i>List in order of importance</i>)</p> <p>Food is very expensive, how do you go about buying food?</p> <p>How do people in DV survive with meagre resources</p>	<p>If no have you tried to get one? What problems did you experience?</p> <p>Where do you buy? Do you think that you can buy it cheaper somewhere else?</p>
Health management	<p>How will you know when your baby is ill?</p> <p>How can you tell whether your baby has a high temperature (fever)?</p>	<p>What will the baby look like?</p> <p>For all illnesses mentioned in this section ask: What will you do about it?</p> <p>If the answer is: "Take the baby to the clinic" continue with: If the clinic is closed what will you do? If the answer is to give a particular medicine continue with: If you have no medicine what will you do?</p>

TOPIC	DISCUSSIONS	PROBES
	Can you tell anything about your child's health by looking at his/her stool?	What can cause a runny tummy?
	Are you aware of different rashes that babies can get?	What do you think can cause a rash on your baby's skin? Cause of nappy rash? Treatment for different rashes
	Small babies often have a problem with "sticky eyes". Did your baby have this problem?	What can you do about sticky eyes?
	Do you ever make use of medicine that you buy in the shop	What are you using the medicines for
Hygiene management		
Water supply	Where do you get water to use in the house?	How many times a day do you have to go and fetch water? How do you heat the water for bathing?
Nappy hygiene	What kind of nappy do you use?	How do you dispose of the child's wastes?
Clothes hygiene	What kind of soap do you use to wash clothes?	Do you sometimes have difficulty getting soap? What do you do then?
Bottle cleaning	Some of you use bottles; can you tell us how you clean the bottles?	
Closure	Recap main points discussed	
	Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. (Record all questions. Do not lecture on child feeding.)	

Duncan Village Nutrition Project
Phase 1

Focus group guide 2

Categories B/C/D

- Mothers with 14 – 18 week old babies
- Mothers with 8 – 12 month old children
- Mothers with 18 month old children

TOPIC	DISCUSSIONS	PROBES
Women's introduction (warm up)	Please introduce yourselves and tell and as you do tell how many children you have, the name and age of your youngest child.	Observer should record this information for use during analysis
Motherhood	As you all have young children, can you say something about how your child makes you feel?	Happy, why Proud, why Tired, why? Link to future Aspirations
Good mother	How would you describe a good mother	How would she care for her child?
Support with child feeding	From whom did you get the most support regarding the feeding of your child?	What obstacles did you encounter up to now?
Necessities for children of different ages (To place feeding among other needs)	Among us we have children of many different ages. Think of your youngest child and tell us: What was important for your baby right after birth? What was important for your baby during the first month? What about in the next months up to six months?	Care/ceremonies Foods Drinks/water Breast milk Why?
Child feeding decisions		
Breastfeeding	Some of you mentioned breast milk as important for a baby (may have to rephrase, depends on response) Who has breastfed their youngest child? Why did you breast-feed/why did you prefer breastfeeding? Who has influenced your decision to breast-feed?	Advantage of breastfeeding Problems with giving bottles or cow's milk People and reasons for influence – doctor, husband, relatives, friends

TOPIC	DISCUSSIONS	PROBES
Exclusive breastfeeding	Did you during the early weeks of breastfeeding give your child any other liquids?	Water Other milk Herbal drinks Why? On whose advice?
Use of other milk	Do some of you use milk other than breast milk for your youngest child? Why did you decide to do this?	Benefits of milk to child? Which type of milk? Why? Insufficient milk, what can be done, who do you ask? People and reasons influenced?
Continued breastfeeding	Let's say a woman from your neighbourhood has a child of one month. She had been breastfeeding her baby, but now comes to you for advice on what to do next. What would you recommend?	Why?
Weaning		
Introduction of complementary food	At what age did you start to give solid food (even in liquid form) to your youngest child Are there any foods that you think are particularly good for a young baby?	What kind of food Why On the advice of whom Preparation If breastfeeding do you think that your breast milk became less when you started giving the food? Specific order of introduction of food to a baby?
Introduction of family foods	Are there any of you who give the same food as the family to your youngest child?	At what age did you start? How do you give it? How many times a day?
Specially prepared food	If you are not giving the same food to the child as the rest of the family can you tell us a little bit about the food you are giving?	Who prepares the food? How many a times a day? How is it stored? Who feeds the child? How many times a day?
Food vs milk	Some of you are either breastfeeding or giving bottle feeds? I would like you to discuss how you give the milk and the food to the child.	Do you give the food before or after breastfeeding/bottle feeding? Do you sometimes give food and no milk? Do you find that the child drinks less milk now that you are giving food? (continued on next page)

TOPIC	DISCUSSIONS	PROBES
		At this age what do you think is the most important for a child, milk or food?
Feeding problems		
	Why do you think that children sometimes do not want to eat?	What do you do if the child refuses to eat? What do you do regarding food if your child is ill?
Miscellaneous		
	Do you decide when the child had enough to eat or does he/she decide? If you had plenty of money what would you have liked to give your child to eat?	
Resource management		
The following discussion is very personal so you only have to take part if you feel comfortable with it.	How many mothers receive the R100/month grant?	If no have you tried to get one? What problems did you experience?
	If you are given R100 a month for your child on what will you spent it? (<i>List in order of importance</i>)	
	Food is very expensive, how do you go about buying food?	Where do you buy? Do you think that you can buy it cheaper somewhere else?
	How do people in DV survive with meagre resources?	
Health management		
	How will you know when your baby is ill?	What will the baby look like?
	How can you tell whether you baby has a high temperature (fever)?	For all illnesses mentioned in this section ask: What will you do about it? If the answer is: "Take the baby to the clinic" continue with: If the clinic is closed what will you do? If the answer is to give a particular medicine continue with: If you have no medicine what will you do?

TOPIC	DISCUSSIONS	PROBES
	<p>Can you tell anything about your child's health by looking at his/her stool?</p> <p>Are you aware of different rashes that babies can get?</p> <p>Small babies often have a problem with "sticky eyes". Did your baby have this problem?</p> <p>Do you ever make use of medicine that you get from somewhere other than the clinic?</p>	<p>What can cause a runny tummy?</p> <p>What do you think can cause a rash on your baby's skin?</p> <p>Cause of nappy rash?</p> <p>Treatment for different rashes</p> <p>What can you do about sticky eyes?</p> <p>Where else do you get medicine?</p> <p>What are you using the medicines for</p>
Hygiene management		
Water supply	Where do you get water to use in the house?	<p>How many times a day do you have to go and fetch water?</p> <p>How do you heat the water for bathing?</p>
Nappy hygiene	What kind of nappy do you use?	How do you dispose of the child's wastes?
Clothes hygiene	What kind of soap do you use to wash clothes?	Do you sometimes have difficulty getting soap? What do you do then?
Bottle cleaning	Some of you use bottles; can you tell us how you clean the bottles?	
Hand washing	Can you tell us how important you think it is to wash hands (your own and your child's)?	How do you wash hands regularly if you do not have running water in the house?
Closure	<p>Recap main points discussed</p> <p>Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. (Record all questions. Do not lecture on child feeding.)</p>	

Duncan Village Nutrition Project
Phase 1

Focus group guide 3

FGD 3 – Category E
Grandmothers

TOPIC	DISCUSSIONS	PROBES
Introduction (warm up)	Please introduce yourselves and tell us about yourself, where you were born, how long you have lived in Duncan Village, how many children and grandchildren you have and how old your youngest grandchild is.	Observer should record this information for use during analysis
Good mother	How would you describe a good mother? Do you think that young mothers in Duncan Village are good mothers?	How would she care for her child? Does it differ today from when you were a young mother? Explain
Necessities for children of different ages (To place feeding among other needs)	What do you feel is important for babies right after birth? What is important for babies during the first month of their lives? What about in the next months up to six months?	Care/ceremonies Foods Drinks/water Breast milk Why?
Boys versus girls	Are girl babies traditionally treated differently from boy babies?	Today?
Traditional practices around birth	Was something (<i>milk, herbal mixture etc</i>) given to babies immediately after birth?	What was it? What was the reason for giving the mixture? Is it still being done?

TOPIC	DISCUSSIONS	PROBES
Child feeding decisions		
Breastfeeding	<p>Some of you mentioned breast milk as important for a baby (may have to rephrase, depends on response)</p> <p>Did your daughters/daughters-in-law breastfed their babies?</p> <p>Who has the most influence on mothers regarding their decision to breastfeed?</p> <p>Can you remember what you were told regarding breastfeeding when you were a young mother?</p>	<p>Advantage of breastfeeding</p> <p>Problems with giving bottles or cow's milk</p> <p>People and reasons for influence – doctor, husband, relatives, friends</p> <p>Do breastfeeding practices differ from when you were young? Explain.</p>
Exclusive breastfeeding	<p>What were the practices regarding giving liquids while you were breastfeeding when you were young?</p> <p>Do mothers today, in your experience give their children any other liquids during the early weeks of breastfeeding?</p>	<p>Water</p> <p>Other milk</p> <p>Herbal drinks</p> <p>Why? On whose advice?</p>
Use of other milk	<p>In your experience, is other milk often given to breastfed children?</p>	<p>Did you also give other milk?</p> <p>Benefits of milk to child?</p> <p>Insufficient milk, what do mothers do today/ traditionally?</p> <p>People and reasons influenced?</p>
Continued breastfeeding	<p>Let's say your daughter has a child of one month. She had been breastfeeding her baby, but now comes to you for advice on what to do next. What would you recommend?</p>	<p>Why?</p>
Weaning		
Introduction of complementary food and family food	<p>Can we talk about the introduction of food to a baby's diet? (Lead the discussion from birth to the introduction of family food)</p> <p>Do the introduction of food and the type of food differ from when you were young?</p>	<p>When</p> <p>What</p> <p>Preparation</p> <p>How is it stored</p> <p>Why</p> <p>How is it given</p> <p>How many times per day</p> <p>Explain traditional practices</p>

(continued on next page)

TOPIC	DISCUSSIONS	PROBES
	Can you explain to us how mothers fed their children when you were young and how they do it today?	The actual ritual around feeding e.g. putting the child on the lap while feeding, singing or talking to child while feeding.
Food vs. milk	In the age group 0 to 18 months how should milk and food be given over this period?	Is the food given before or after breastfeeding/bottle feeding? Is food sometimes given and no milk? At this age what do you think is the most important for a child, milk or food?
Resource management		
Budgeting	In your opinion do young mothers in Duncan Village spend their money wisely (if they do have money to spend even if it is irregularly)?	
Buying food	Food is very expensive, how do mothers go about buying food?	Where do they buy? Do you think that they can buy it cheaper somewhere else?
General survival measurements	How do people in Duncan Village survive with meagre resources?	
Health management		
Diagnosing and treating illness	How will you know when a small child is ill? How can you tell whether the baby has a high temperature (fever)?	What will the baby look like? For all illnesses mentioned in this section ask: What will you advise the mother to do about it? If the answer is: "Take the baby to the clinic" continue with: If the clinic is closed what will you do? If the answer is to give a particular medicine continue with: If she has no medicine what could she do? What did you do when you were a young mother and your child had this problem?
	Can you tell anything about a child's health by looking at his/her stool?	What can cause a runny tummy?

TOPIC	DISCUSSIONS	PROBES
	Are you aware of different rashes that babies can get?	What do you think can cause a rash on a baby's skin? Cause of nappy rash? Treatment for different rashes
	Small babies often have a problem with "sticky eyes".	What can you do about sticky eyes?
Medicine	Do mothers ever make use of medicine that they get from other places than the clinic?	Where do they also get medicine from? What are they using the medicines for?
Prevention of accidents	In general do you think that mothers do enough to prevent accidents around their homes?	Why do you say that? What do you think can they do?
Prevention of illness	Do you think that mothers do enough to prevent illness in their children?	What can they do?
Hygiene management		
General problems	Do you think that there are hygiene problems (personal and around the home) in Duncan Village?	What cause these problems? Do you have suggestions what mothers of young children could do about these problems?
Closure	Recap main points discussed Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. (Record all questions. Do not lecture on child feeding.)	

Duncan Village Nutrition Project
Phase 2

Focus group discussion guides

Explanation of procedure for all focus group discussions

TOPIC	DISCUSSIONS
Introduction	Facilitator's and Observer's names
Topic of Interview: <i>Categories A - C</i>	We would like to talk to you today about your feelings about and experiences with the clinics in Duncan Village
<i>Category D1</i>	We would like to talk to you today about your feelings about and experiences with mothers and expectant mothers attending the clinic where you work.
<i>Category D2</i>	We would like to talk to you today about your feelings about and experiences with the new mothers that you deal with
No right or wrong answers	There are no right or wrong answers to any of the questions – this is not a test. We would just like to know how you feel and what you have experienced.
Child Health Project	We are working on a project aiming to help mothers to care for their children in such a way to ensure that they never suffer from malnutrition.
Talking to one another	As we will be discussing many things, it will be important that we not all talk at once because we will want to hear each other so we can talk together
Explain note-taking and tape recording	_____ (Observer's name) will be writing down some of the things we talk about so we can remember them later. Also we would like to use a tape recorder so that we do not have to spend a lot of time writing down what you say. If we record it we can listen to it later and do the writing then. Does anyone object?
Confidentiality	This discussion is confidential and we will not use any names in any report, but if you wish you do not have to use your real name.
Check understanding	Does everyone understand?
Clarification if needed	Do you have any questions

Duncan Village Nutrition Project
Phase 2

Focus group guide 1

Categories A and B
Sub-categories A1/A2/A3 and B1/B2/B3

DISCUSSIONS

1. Please tell us a little bit about yourselves. *(Casual conversation about participants profile will at this stage help to build the relationship)*

Today we would like to talk about the clinics in Duncan Village. Please feel free to give your views. As was said previously your names will remain confidential and nobody in the health or community structures need ever know that you participated in this discussion.

2. I would like us first to discuss your feelings when you have to go to the clinic. How do you feel when you have to go to the clinic with your child?
3. *If mothers have not attended clinic at all continue with question 4.
If mothers attend clinic even if infrequently and if necessary - depending on the discussion around questions 2 – continue with this question)*

Can we now discuss what it is like when you go the clinic. What experiences have you had at the clinic?

4. What do you think is the benefit of going to the clinic?
5. What difficulties do you experience when you have to take your child to the clinic?
6. What do you think could be done to make it easy for everyone to attend clinic?

(Remember to recap after each point discussed)

7. Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. *(Record all questions. Do not make any promises about improving the situation at the clinics)*
-

Duncan Village Nutrition Project
Phase 2

Focus group guide 2

Category C: Sub-category C1 and C2
Pregnant women

DISCUSSIONS

1. Please tell us a little bit about yourselves. *(Casual conversation about participants profile will at this stage help to build the relationship)*

Today we would like to talk about the clinics in Duncan Village. Please feel free to give your views. As was said previously your names will remain confidential and nobody in the health or community structures need ever know that you participated in this discussion.

2. I would like us first to discuss your feelings when you have to go to the clinic. How do you feel when you have to go to the clinic?
3. ***(If the participants have not attended antenatal clinic (ANC) at all continue with question 4.***
If the participants attend ANC even if not according to schedule, continue with this question)
Can we now discuss what it is like when you go to antenatal clinic. What experiences have you had at the antenatal clinic?
4. What do you think is the benefit of going to antenatal clinic?
5. What difficulties do you experience with going to ante natal clinic?
6. What do you think could be done to make it easy for every pregnant woman in Duncan Village to attend clinic?

(Remember to recap after each point discussed)

7. Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. *(Record all questions. Do not make any promises about improving the situation at the clinics)*
-

Focus group guide 3

Category D: Sub-category D1 and D2

- Nursing professionals
- Community health workers
working at the Duncan Village Municipality clinics

DISCUSSIONS

- 1 Please introduce yourselves and tell us briefly where you have worked in the last few years

Today we want to hear from you what it is like working with the mothers who attend the baby clinics and the antenatal clinics. Please feel free to discuss the issue openly. As was said previously your names will remain confidential and nobody in the community structures will know that you participated in this discussion.

- 2 What do you like about working with the mothers and expectant mothers that attend the clinics?
3. Do you experience any problems when working with the mothers and expectant mothers?
4. We have done some research at the Duncan Village Day Hospital that shows that certain issues (summarised on the hand out given to you) have to be addressed to prevent growth failure in small children in Duncan Village. Could all these issues actually be touched on when the mothers come for their visits?
5. What difficulties do you foresee?
6. Do you feel that you have the skills and knowledge to help mothers with all these issues?
7. There are mothers and pregnant women who do not attend clinic. What do you think could be done to get them to attend?

(Remember to recap after each point discussed)

8. Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. *(Record all questions)*
-

Duncan Village Nutrition Project
Phase 2

Focus group guide 4

Category D: Sub-category D3

Nursing professionals working at the Frere Hospital Maternity Wards

DISCUSSIONS	
1.	Please introduce yourselves and tell us briefly where you have worked in the last few years.
	Today we want to hear from you what it is like working with mothers especially those from Duncan Village. Please feel free to discuss the issue openly. As was said previously your names will remain confidential.
2.	What do you like about working with the new mothers?
3.	Do you experience any problems when working with the mothers?
4.	We have done some research at the Duncan Village Day Hospital that shows that certain issues (summarised on the hand out given to you) have to be addressed to prevent growth failure in small children in Duncan Village. Could mothers with problems in these areas be identified in the hospital? <i>(If answer yes or no, ask why do you think so?)</i>
5.	Do you feel that you have the skills and knowledge to help mothers with all these issues? <i>(If answer yes or no, ask why do you think so?)</i>
6.	What difficulties are there in the hospital setting that can make it difficult to teach good feeding practices to mothers?
7.	What do you think can be done to ensure that mothers attend clinic once they are discharged from hospital?
	<i>(Remember to recap after each point discussed)</i>
8.	Thank you for your time. Now do you have any questions you would like to ask? I am not sure I will be able to answer them all, but I will try. <i>(Record all questions.)</i>

Addendum B:
Data analysis for message and help topic formulation

Addendum B

Data analysis for message and help topic formulation

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1 A guide for reading and interpreting the data analysis tables

The following table provides a guide to reading the data analysis tables that were used to formulate message and help topics.

Table 1: Guide to the interpretation of the tables in Addendum B

Column 1	Column 2	Column 3
Refer to the data set from which the information is taken	All related information from the questions in the interviews is grouped together and as such provide a thematic framework for further data analysis All relevant information from other data sources including the observations are added ¹	Integrate and interpret the data provided in column 2 in order to provide a qualitative description of important key factors that need to be addressed in the previously identified focus areas
Abbreviations used in column 1: Q/Ph1 – <i>Data from interviews</i> FGD – <i>Data from focus group discussions</i> DVDH – <i>Data from Duncan Village Day Hospital study</i> Obs – <i>Observation data</i>	<p><u>Interviews</u> 31 respondents were interviewed. Answers were not recorded for each respondent for each question. The number of responses recorded is indicated in brackets after each number cited. Some responses could therefore be less than 31 because of missing values or not applicable values</p> <p>Individual interviews were held with mothers in the 6 categories. If no reference is made to the different categories, it means that the answers are evenly distributed through the categories. The following categories were included:</p> <p>Cat A: Mothers with 6-8 weeks babies Cat B: Mothers with 14 to 18 week old babies Cat C: Mothers with children 8 months to 1 year Cat D: Mothers with 18 – 20 month old children. Cat D included the following sub categories: Cat D1: Mothers with stunted or wasted children [Cat D1 will be referred to as the undernourished group (D1)] Cat D2: Mothers with well-nourished children Cat D3: Mothers with overweight children</p> <p><u>Focus group discussions</u> Focus groups were only held with categories A, B and C and grandmothers (GM). Focus group data is presented as frequencies and descriptions. Where applicable direct quotations from the data are provided, and are indicated as quotations.</p> <p><u>DVDH findings</u> For the purpose of this document the 2 groups in the DVDH case control study will be referred to as the GF group (growth failure group) and the C group (control group). Duncan Village will be abbreviated as DV in the tables</p> <p><u>General</u> Grandmother – Refers to grandmother of the child and could include mother-in-law or any other older relative</p>	<p><i>The key factors to be included in the relevant message or help topic are highlighted in the discussion.</i></p>

Note: Readers must please note that all information in column 2 must be read until he/she gets to a dotted line. This concludes the presentation of relevant information. The reader can then proceed to column 3 to read the integration and interpretation of the data presented in column 2. A solid line indicates the end of the table.

¹ The taped interviews and the frequency tables of the responses of the respondents in the interviews and the focus groups as well as the field notes and observations are available on request.

Table 2: Being a mother in Duncan Village – Socio-demographic information

Data source	Categorised data	Integration and interpretation of the data sources
	Place of mother's birth?	
	Total number of years living in DV?	
Q/Ph1	22 (31) born in rural locations 17 (29) lived in DV less than 6 years and 12 less than 3 years.	<p><i>All data sources point to the fact that many mothers attending PHC centres in Duncan Village have strong rural backgrounds, this key factor could have many implications for these women including effects on their status, health status and support networks available. The DVDH findings point to the importance health workers should attach to this key factor.</i></p>
FGD	Nearly all mothers born in rural locations or small towns	
DVDH	Nearly 60% of mothers born in small towns, rural locations and on farms. Children from the GF group had a relative risk (RR) of 2.16 to have a mother not born in DV or in a city 65% of mothers had been living DV less than 7 years	
	Mothers' views of conditions in DV?	
Q/Ph1	28(30) Indicated that conditions in DV were very bad. A variety of bad conditions were specified ranging from poor environmental conditions (5) to crime(3) and poverty/unemployment (6), others just said that conditions were bad and people suffering (11)	<p><i>Mothers attending health centres in DV experience the conditions in DV very negatively. Unemployment is described as one of the "bad conditions" and will be discussed in more detail in Table 21. Mothers' experience of poverty and poor environmental conditions could influence their own well-being and caring capacity.</i></p>
DVDH	The same range of poor conditions in DV were identified	
	General feeling about being a mother?	
Q/Ph1	20(30) indicated that they were not happy about being a mothers, 8 specified because of bad conditions in DV, 4 because suffering financially and 3 because father of the child died or abandoned them. All cat D1 mothers indicated that they were not happy to be a mother, but so did all cat D3 mothers. Being unhappy was also not necessarily being unhappy about being a mother, but being a mother in DV.	<p><i>Unhappiness with motherhood because of the socio-economic and environmental conditions in DV or other unspecified reasons seems to be a problem with mothers in the study population. It seems as if there is a need for mothers to be supported in being a good mother in DV.</i></p>
FGD	Cat A: Not happy 3(5) Cat B and C: Happy 9(9)	
	How would you describe a good mother	
FGD	All categories: Figure 1 at the end of the addendum	<p><i>Participants of the focus groups highlighted many aspects of being a good mother. A good mother is described as a caring loving mother who satisfies the basic needs of her child even if she has "no means".</i></p> <p><i>The DVDH study found no difference in the number of children mothers with C group children and mothers with GF group children had. The interview data, especially in view of mothers feelings about being a mother in Duncan Village, does point to a need to emphasise birth control in the context of "being a good mother"</i></p>
	Number of children	
Q/Ph1	20 (31) had 1 or 2 children. 4 of cat D1 : 4 (5) had 3 or more children while 8 (10) in Cat D2 & 3 had 1 or 2 children only	
FGD	Cat A: 1 - 5 children, 4(7) had 3 or more children Cat B: 1 - 4 children. Only 1(4) had 4 children Cat C: 4 had 2 children and 1 mother had 3 children	
DVDH	67% of mothers had 1 or 2 children. No significant difference between the two groups	(continued on next page)

Table 2 (cont.): Being a mother in Duncan Village – Socio-demographic information

Data source	Categorised data	Integration and interpretation of the data sources
Highest standard passed		
Q/Ph1	<p>18 (31) ≤ Std 7 Cat D1 is the only category to have 4 mothers with schooling <St 5</p>	<p><i>Having a mother with a school education of Grade 9 or less has previously been identified as a risk factor (DVDH study) for children to develop growth failure. Although no new information concerning this issue emerged, the present data point to the need for “education on the need to attain the highest level of education possible”.</i></p>
FGD	<p>No information obtained but it was stated in the GM focus group that a good mother must make sure that she attends school for her children’s future (see Figure 1 at the end of the addendum)</p>	
DVDH	<ul style="list-style-type: none"> – 76% of mothers had schooling ≤ Std 7. Mothers of GF children were significantly more inclined to have had schooling ≤ Std 7 (RR = 2.9) – Less than half of the respondents could read and write English, (average to well) – Nearly 85% of respondents could read and write Xhosa (the indigenous language) well, mothers of GF children were significantly more inclined to be unable to read (RR = 2.53) and write (RR = 2.7) their mother tongue 	<p><i>The description of a good mother by focus group participants’ shows that woman’s educational levels are perceived to play an important role in their children’s well-being. The need to attain the highest education level not only to be a “good mother” but also to develop her “self” seems to be an important key factor.</i></p>

Table 3: Being a mother in Duncan Village - General caring practices

Data source	Categorised data	Integration and interpretation of the data sources	
	Where does the child spend most of his/her day?		
Q/Ph1	No useful information obtained		
	If you go somewhere do you take the child with you?		
Q/Ph1	18 (31) said they always take the baby with them 3 (31) said they take the child with them most of the time 7(31) said they leave the child with somebody	<p><i>The discussions that evolved around these questions were not very focused and very little deduction about specific caring practices (especially concerning feeding) that need addressing can be made.</i></p>	
Obs.	An 18-month old child was found all alone at home and the interviewer had to wait an hour for the mother to arrive		
	How do you feed the child when you are not at home?		
Q/Ph1	Only 11(31) indicated here that they never leave the baby. 14(31) said that they leave food and or tell the person looking after the child how “to measure the food for the baby”	<p><i>It does however seem as if many mothers do leave their children with somebody or even unattended at times. A lot of negative discussion came from grandmothers about the general caring attitudes of young mothers in Duncan Village and the DVDH also identified a general caring attitude (as determined through a subjective evaluation) as a risk factor for growth failure. If looked at together it does seem as if the general caring attitude of mothers could be a key factor that needs addressing.</i></p>	
	When you leave home and do not take the child with you, how do you arrange his/her feeding?		
Q/Ph1	12(31) indicated here that they always take the child with them. A variety of answers were given. Those most frequently mentioned involved leaving food and instructions for feeding with the caretakers/nanny 15(31).		
	Do the ways that young mothers care for their children differ today from when you were a young mother? / Do you think that young mothers in DV are good mothers?		
	<p>The following quotations illustrate the grandmothers perceptions of the general caring attitude of young mothers (Similar quotations are grouped together :</p>		
	<ul style="list-style-type: none"> - They give the baby cold food. When you ask them to cook porridge for the baby they say the baby does not like porridge/They give them the same food all the time. All babies have favourite foods, but this is not a reason to give them the same food at all times. Young mothers these days give their babies one type of food and funnily it is the type of food that does not need to be cooked (bread and sour milk) - Do not let baby wear the correct clothes according to weather/ They go up and down with the babies in cold weather/Mothers should not go out in the night with the baby 		
FGD	<ul style="list-style-type: none"> - They take the babies to parties/ They do not have time to care for their babies, you always find them in shebeens - Leave their babies unattended at times or with somebody they do not know. - Mothers do not care: Scold the babies when they cry - They do not give the babies the tender loving care that the baby needs - Mothers do not look as if they have missed their babies even if they have left the baby with other people for some time - They are lazy to get up at night, have to be woken up by grandmother - Instead of doing what is good for the baby, young mothers do what is good for them and make their lives easier. - They seem to love their babies but it is not easy to raise children in DV 		
DVDH	An inadequate general caring attitude (RR = 4) was identified as a risk factor for the development of growth failure in the study population.		

Table 4: Being a mother in DV - The needs of babies as seen by mothers and grandmothers

Data source	Categorised data	Integration and interpretation of the data sources
	<p>What was important for your baby right after birth?/ What will be important in the next months up to six months (to place feeding among other needs)</p>	
FGD	<p>What was important right after birth</p> <p>Cat A, B and C:</p> <p>Love and care:</p> <ul style="list-style-type: none"> - Love for the baby - I thought of the way of treating the baby's navel to heal faster - I thought of giving my baby all the love and care she needs - I hoped to get a job so that I can give my baby all the care she needs - I was praying that the baby must be well, since I lost the other one - I also wanted to know whether the baby will be okay. - I was praying that God must give me the strength to raise my baby and give her all the love she needs <p>Other:</p> <ul style="list-style-type: none"> - What was important for me right after birth, was the clothes for the baby, because I was not having money to buy them - The first thing that came to my mind was the name of the baby <p>Food and nutrition</p> <ul style="list-style-type: none"> - Prayed that baby would like breast milk because baby food is expensive - Breastfeeding (2) - I thought of what I am going to give the baby to eat. I was concerned about having a healthy baby. - Although I am self-employed I do not worry about what the baby is going to eat because I have my breast milk. <p>-</p> <p>GM:</p> <ul style="list-style-type: none"> - To be under supervision of older people - Mothers are supposed to stay at home for about 10 days after birth So that baby cannot catch an evil spirit which usually leads to the baby experiencing problems like crying and the mother having breast problems The mothers fall pregnant while still at school so they cannot wait for those 10 days. - No need to be given food right after birth, not even water especially during the first 10 days, breastfeeding is what is important. Things changed on the arrival of the clinics as the nurses advise mothers to give water and mothers also get medicines from the shop like gripe water. (continued on next page) 	<p><i>Most mothers and grandmothers felt that love, care and proper nutrition was important for babies. Some of the answers however point to concerns that mothers had and that they could have been prepared for before the birth of their babies. A few mothers for example said that they had concerns about what they would give to baby to eat or whether the baby would like breast milk.</i></p> <p><i>The observation data (see next page) also points to a need for preparing mothers for what will be expected of them after the birth of their babies. This is especially important for those mothers without any support or experience as well as very young mothers (also see discussion in next table – support networks).</i></p>

Table 4 (cont.): Being a mother in DV - The needs of babies as seen by mothers and grandmothers

Data source	Categorised data	Integration and interpretation of the data sources
	<ul style="list-style-type: none">- During first month immediately after birth, they used to smear the baby's body with a herb known as umthombothi for Ishimnce (fine rash) and when necessary mix it with about a spoon of breast milk and give it to the baby to drink <p>Important later on: Cat A, B and C: Solid foods from 2 months GM:</p> <ul style="list-style-type: none">- There was no need to give other food to the baby until the baby is 6 months old. Babies get easily used to what you give them so there is no excuse to give something extra to a baby unless you are lazy to breastfeed- Breast milk is important for the baby, through breastfeeding the baby gets to know the mother, this is a way to strengthen the mother/baby bond. When the baby looks at the mother, the baby knows when the mother is cross or happy. Through breastfeeding the baby starts to feel loved and cared for.	
	<p>General caring practices</p>	
Obs	<p>The interviewer observed that many mothers seemed to have good caring skills in two instances she however observed young mothers that were totally unprepared to care for their babies. The interviewer's comments were as follows:</p> <ul style="list-style-type: none">- Mother (age 19) no help from older people, no experience did not even know how to hold the baby to breastfeed- Mother very young did not know how to breastfeed, had no basic knowledge on how to care for her child. Child had runny tummy and stomach looked like a rugby ball	

Table 5: Being a mother in Duncan Village - Support networks available to mothers

Data source	Categorised data	Integration and interpretation of the data sources
	<p>Marital status? Nature of relationship with father? Does husband assist with caring for the child?</p>	
Q/Ph1	<p>20(31) married or living with partner; 21(29) indicated a good relationship with husband/ partner or father of child/ 5 (29) indicated a bad relationship with father of child. All Cat D3 mothers (overweight children) indicated that they had a good relationship with the father of the child 18(31) indicated that husband/partner help with child care; 6 of these mothers receive help from only the father (It is not clear whether respondents understood financial support by this question.)</p>	<p><i>Fathers were identified as an important source of support for mothers. Fathers not only assist with childcare but also are often the main source of support for the mother. Although the support could also refer to financial support many mothers did indicate specifically that fathers help with childcare. In view of the DVDH findings educating fathers in the important aspects of childcare that could optimise nutritional well-being of young children seems important.</i></p>
DVDH	<p>39% of mothers were married to the father of child or living with partner 72% of mothers had contact with the fathers of the child 72% of mothers indicated that the father sometimes looked after the child and 50% that the father sometimes would help with the feeding of the child (no significant difference between the groups for any of the above)</p>	
	<p>Who else assists with the child Main source of support?</p>	
Q/Ph1	<p>12 (29) of the 24 that did receive some support from somebody other than the husband received it from the grandmother or grandmother and other. 10 (28) indicated the father as a main source of support 16 (28) indicated the grandmother or an old relative/friend as a main source of support In 2 of the above cases both the father and the grandmother were indicated as the main source of support</p>	<p><i>Older women (grandmothers or friend) were also identified as important in the support network of mothers. The observation data point to the importance of having someone to guide the young inexperienced mother in child care but it also point to another aspect of the support provided by grandmothers. Young inexperienced mothers must be taught how to provide the optimum care to their baby i.e. how to be a good mother. They must use the support provided by the grandmothers but they must also learn to be strong in themselves and to provide the care for their children themselves. This is important in view of the DVDH findings that children are at risk for growth failure if their mother is not the head of the household or their primary caregiver.</i></p>
DVDH	<p>There was a strong tendency for children from the GF group to have fathers who showed a lack of involvement in looking after their children.</p>	
Obs	<p>The interviewer noted that in 5 households it was clear that the grandmother provided the most support to the mother. In 2 instances the grandmothers seemed to play the most important role in the raising of the children, the mothers looked inexperienced. In another case the interviewer noted: "Mother trusted her mother on the raising of her children-referred to her as the first lady"</p>	<p><i>The special needs of young mothers will be further discussed in Table 8.</i></p>
	<p>In two households the interviewer found young mothers (ages 18 and 19) with no support available to them. Both these mothers did not even know how to hold their babies or how to breastfeed.</p>	
	<p>Mother's status</p>	
DVDH	<p>Children from the GF group had a RR = 4.3 to have a mother who is not the head of the household (RR = 4.3) and/or a RR = 8 to not have their biological mothers as primary caregivers</p>	

Table 6: Breastfeeding practices – Initiation and duration

Data source	Categorised data	Integration and interpretation of the data sources
	<p>How soon after birth did they give the baby to the mother to breastfeed? When did mother start breastfeeding?</p> <p>20 (29) was given the baby within 1 hour after the birth – 12 immediately 23 (29) indicated that they started breastfeeding immediately and 6 within 1 hour</p> <p>Cat A – 1 mother started immediately and another said that she gave birth at night and she started the next day</p>	<p>The answers given by mothers to two similar questions do not correspond completely. It is however clear that there are mothers who do not initiate breastfeeding immediately or within 30 minutes after birth.</p>
<p>Q/Ph1</p> <p>FGD</p> <p>FGD</p> <p>DVDH</p>	<p>Currently breastfeeding? If no did she breastfeed at all?</p> <p>21(31) were still breastfeeding. Cat A 6(6); Cat B 4(4); Cat C 5(6); Cat D1 1(5); Cat D2 2(6); Cat D3 3(4)</p> <p>Therefore All mothers with children ≤ 17 weeks were still breastfeeding At 10 months only 1 mother was not breastfeeding anymore At 19 months 9 of the 15 mothers were not breastfeeding anymore Of these 9 mothers 7, stopped breastfeeding when the baby was 4 months or younger All mothers that were not currently breastfeeding did initiate breastfeeding Cat A: 6(7) still breastfed. The one mother who was not breastfeeding did initiate breastfeeding. Her advice for a mother with a one month old child is to keep on breastfeeding if she is not employed or “having less milk” Cat B: Difficult to determine from discussion but at least 1(4) was not breastfeeding, she however did initiate breastfeeding Cat C: It seems as if all (4) was still breastfeeding or did at least breastfeed in the first weeks GM: Various remarks were made about initiating and sustaining of breastfeeding. One grandmother stated that “the minute the mother is out of the hospital all she thinks about is formula milk and Nestum”</p> <p>81% of mothers did breastfeed. No significant difference between the two groups</p>	<p>Initiation of breastfeeding does not seem to be a problem but sustained breastfeeding could be. The majority of the mothers who were not breastfeeding anymore stopped breastfeeding before the age of 4 months.</p> <p>Teaching the importance of sustained breastfeeding and practices that will enable mothers to sustain breastfeeding at least to the child’s second birthday seems to be important</p> <p>Inclusion of this key-factor in messages to ensure nutritional well-being of children is further supported by:</p> <ul style="list-style-type: none"> The variety of problems reported by mothers that could lead to ineffective breastfeeding and affect sustained breastfeeding negatively. Mothers seem to need advice on: care of breasts to prevent sores; stimulation of milk production; proper breastfeeding techniques and what to do if they get a job, are looking for a job or have to return to school. The grandmothers’ perspectives of the many problems young mothers have with breastfeeding. The important problems identified by the grandmothers are that young mothers do not give themselves special time when breastfeeding; they complain of sore nipples and swollen breasts because they do not want to breastfeed and they know there is an alternative; young mothers do not have enough milk because they do not persevere in breastfeeding and bottle-feeding is seen as more important than breastfeeding. <p>The problems experienced by mothers and the grandmothers perspectives on mothers’ breastfeeding practices and the reason for “bad practices” emphasise the need for better education on optimum breastfeeding practices and the need for support with breastfeeding</p>

(continued on next page)

Table 6(cont.): Breastfeeding practices – Initiation and duration

Data source	Categorised data	Integration and interpretation of the data sources
	<p>How long the child was breastfed? Reasons for stopping breastfeeding? Problems experienced with breastfeeding after returning from hospital?</p>	
Q/Ph1	<p>Of the 10 (31) mothers not breastfeeding anymore 8 breastfed \leq 4 months (7 from cat D). The other 2 breastfed for 12 – 14 months.</p> <p>Of the mothers still breastfeeding , all mothers in Cat A, B and C were still breastfeeding except 1 in cat C and only 6 of the cat D mothers were still breastfeeding.</p> <p>Reasons given: sores on breasts (3), not enough milk (3), baby did not want to suck (2).</p> <p>9 (24) experienced no problems when getting home from hospital, 1 had sores on her breasts, 1 indicated that the baby did not want to suck and 3 said that their breasts were swollen and the babies did not want to suck.</p>	
FGD 6.1.1.3	<p>Cat A: 1 mother raised the problem of “sores on the breasts” Other reasons that were discussed that could possibly lead to cessation of breastfeeding were if the mother got a job.</p> <p>Cat B: 1 mother raised the problem of the baby that did not want to suck. Other reasons given: if mother gets a job (1) and if the baby stops on his own (1).</p> <p>Cat C: Not discussed</p> <p>GM: Many young mothers complain of swollen breasts or sores on nipples.</p>	
DVDH	<p>Only 14% mothers breastfed less than 3 months (but another 20% did not breastfeed)</p> <p>The average length for breastfeeding was 12 months for the total group and there was no significant difference between the two groups</p> <p>A variety of reasons were given with the reason “had to go back to school/work given more often-7(34 that had stopped or never breastfed) by the GF group and “child did not want the breast anymore” by the control group than any other reason. Only 3 of the GF children’s mothers however were employed full time and the mean age of the mothers at the birth of the index child was 25 ± 6.3.</p>	
Obs.	<p>Two of the young first-time mothers were observed to have no knowledge of breastfeeding. They had no idea of basic childcare and did not know how to hold the baby during breastfeeding.</p>	

Table 6 (cont.): Breastfeeding practices –Initiation and duration

Data source	Categorised data	Integration and interpretation of the data sources
	<p>Did mother give colostrum? Why? Name for colostrum?</p>	
Q/Ph1	<p>31(31) gave it, 1 indicated that it was very weak 20 (31) gave it because they were told by nurses 5 (31) did not know that it was different from other milk. Most of the others probably also did not know that it was different. 12 (27) Umthubi/ 13(27) said no or did not know that it was different.</p>	<p><i>The giving of the “first milk” does not seem to be a problem. Very few mothers thought that it was not good to give it to the child. This issue probably does not need any special attention.</i></p>
FGD	<p>Cat A: All gave colostrum although 1 said she tried to get rid of the yellow milk by pressing her breasts into the sink. 1 said she knew it was good.</p>	
	<p>Use of both breasts: If no, why? If yes why?</p>	<p><i>Mothers seem to have no problems with using both breasts as well as with the duration of feeds.</i></p>
Q/Ph1	<p>25 (31) used both breasts. 2 said they never had milk in the one breast and 1 that the baby did not want to suck the one breast. A variety of reasons were given for using both breast 6 – both breasts had milk and 6 – wanted baby to be full/have enough milk.</p>	
FGD	<p>Cat A – all used both breasts</p>	
Obs	<p>14 (19) were observed to use both breasts</p>	
	<p>How long does/did mother breastfeeds in one session? How did/do mother know when baby had received enough during one feeding?</p>	
Q/Ph1	<p>13 (30) – 30 minutes to 1 hour with another 2 saying they do not know but for a long time 4 – until the baby stopped sucking Cat A – DI: A total of 6 said for 10 minutes only 21(27) said the baby was full when he/she stopped sucking or fell asleep</p>	
FGD	<p><input type="checkbox"/> Cat A: 1 response, 20 minutes on each breast</p>	
Obs	<p><input type="checkbox"/> 8 mothers breastfed for a long time while 10 others fed for varying times. Some fed between 1 to 3 times during the interview.</p>	

Table 6 (cont.): Breastfeeding practices – Initiation and duration

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>Biggest obstacles encountered with breastfeeding</p> <p>13(29) – no obstacles Variety of obstacles reported:</p> <ul style="list-style-type: none"> – Swollen breasts or sores on breasts (4) – Baby did not want to suck or vomited when given breast milk/no milk/not enough milk for two babies (5) – Felt lazy or did not enjoy breastfeeding (2) – It would be an obstacle if the mother is HIV+ (1) – Illness (1) – Her job/gave formula to look for job and baby did not want breast again (2) – Partner said baby was big enough (1) 	<p><i>Most of the obstacles encountered were all mentioned previously as problems experienced. More mothers however reported obstacles as the question allowed for the whole period while they had or have been breastfeeding. HIV+ as well as a lack of partner support are obstacles that were not mentioned as problems. Although they were only mentioned by 1 or 2 mothers they are pertinent issues that should be dealt with in nutrition education.</i></p>
FGD	<p>Cat A:</p> <ul style="list-style-type: none"> – My breasts had sores – The only obstacle I could encounter is if I get a job far away from East London – Nothing can be an obstacle to breastfeeding for me – I cannot stop breastfeeding because it is my only hope to raise my baby, nobody is working at home <p>Cat B:</p> <ul style="list-style-type: none"> – No one can stop me from breastfeeding, not unless the baby can stop on her own – I will not stop breastfeeding until my baby has turned 2 years – The only thing that can cause me to stop breastfeeding is when I get a job far away, since I would not be able to have a nanny during the first months <p>GM:</p> <ul style="list-style-type: none"> – Mothers think they are perceived as “outdated” if they do not use formula? 	<p><i>Most mothers said that they enjoyed breastfeeding, this could be used to motivate mothers to optimise their breastfeeding practices.</i></p>
Q/Ph1	<p>Do you or did you enjoy breastfeeding?</p> <p>27 (29) yes with another “yes but it was painful”</p>	
Q/Ph1	<p>If currently breastfeeding how will you know to stop breastfeeding completely?</p> <p>11(15) said when baby stop on his own/ just play with breast and 4(15) when he/she is 2 years old</p>	<p><i>No specific problems are evident with mothers’ knowledge about when to stop breastfeeding or not to stop breastfeeding when the child is ill</i></p>
Q/Ph1	<p>If currently breastfeeding do you ever stop for a few days?</p> <p>20(21) – never with only 1 saying she stops when the child is ill</p>	

Table 7: Breastfeeding practices –Frequency of breastfeeding

Data source	Categorised data	Integration and interpretation of the data sources
	How many times did/do you give breast milk If on demand how many times	
Q/Ph1	13 (28) gave milk on demand with another 3 more than 5 times a day. Of the mothers with children younger than 6 months (cat A and B), 6 (10) breastfed on demand. Four of the 6 mothers did not know how many times they breastfed per day and the other 2 breastfed less than the recommended 8 times per day. 7(13) did not know, 2 said ≥ 10 times per day and 1 almost the whole day and 2 5-6x/day	<i>It seems as if there are mothers with children younger than six months who do not breastfeed often enough. This could influence the quantity of milk that is produced. Nearly a third of the mothers interviewed thought that they did not have enough milk and it was mentioned in the grandmother focus groups that mothers always complain of not having enough milk. Advice about the frequency of breastfeeding and what mothers should do when they think they do not have enough milk is necessary to optimise breastfeeding practices.</i>
FGD	Cat A - 1 mother said on demand >5 times. 2 other mothers also said about 5 times 1 said she never bothers to count. GM: They used to breastfeed on demand	
	Number of times baby actually feeds and number of times baby is just comforted by breast	
Q/Ph1	12 (28) never used the breast as a comforter 10(28) used it as a comforter but do not know how many times	<i>Sleeping arrangements and breastfeeding at night seem not to be a problem</i>
Obs	13 of the children slept while they were being fed	
	Does baby sleep with mother? Do/did you breastfeed at night?	
Q/Ph1	29(31) yes, baby sleep with mother 28(31) breastfed at night with 4 saying that that is the main time for breastfeeding	
FGD	Cat A: 7(7) said that they breastfeed at night GM: 1 said that young mothers are lazy to get up at night – they have to be woken up by GM	
	When did mother start having enough milk?	
Q/Ph1	19(25) had enough milk immediately. The other answers varied from after 1 day to after 2 weeks.	
	Feelings about quantity of milk If not enough what did mother do?	
Q/Ph1	19(31) Normal or enough/more than enough/enough up to 1 year 2(31) More than enough, did not like it/made her wet 10(31) Not enough/Normal but not enough with half of the mothers in Cat A thinking that they did not have enough milk. Of these 10 mothers 5 gave formula; GM of 1 did not want her to give anything, 1 stopped breastfeeding and 3 missing values.	
FGD	Cat A – Enough (2) not enough (1) GM: One grandmother stated that her daughter did not have enough milk and that she had to give formula and another that “our daughters always complain of not having enough milk”	

Table 8: Breastfeeding practices – Grandmothers’ perspectives

Data source	Categorised data	Integration and interpretation of the data sources
FGD	<p>Do the ways that young mothers care for their children differ today from when you were a young mother? (Breastfeeding and exclusive breastfeeding responses only) – Grandmothers</p> <p>“Bad practices” that were reported :</p> <p>They always complain about swollen breasts/ sores on breasts/not having enough milk, because they do not want to breastfeed (6)</p> <p>Do not give themselves special time when breastfeeding (3)</p> <p>Formula milk is seen as more important than breast milk (6)</p> <p>Giving water/other liquids/gripe water to babies (4)</p> <p>Stop breastfeeding early (1)</p> <p>They want to do what their friends do or what is best for themselves (give formula etc.) (3)</p> <p>Manufactures and health workers encourage bad practices (3)</p> <p>The following quotations illustrate some of the perceived reasons for these” bad practices”:</p> <ul style="list-style-type: none"> – <i>I blame the manufacturers of formula milk and Nestum because today’s mothers do not care to cook or breastfeed; as they know that there are ready made foods.</i> – <i>When we try to tell them what we used to do they will tell you that we never had the means to do otherwise.</i> – <i>Today feeding your baby is just like a competition, it is a problem especially with the mothers who fall pregnant when they are still very young. They do not want it to look as if they do not have enough money to care for their babies</i> – <i>Not having enough milk is because they do not persevere in breastfeeding</i> – <i>Today once they see that the milk is coming out very slowly they rush straight to the shop to buy some milk, because they have a lot of money.</i> – <i>It is because they want to do what their friends do, they do not mind even if they are suffering</i> <p>“Good practices” that were described:</p> <ul style="list-style-type: none"> – <i>Breastfeeding was regarded as the most important way of raising a child. Our grandmothers had a belief that a breastfed child can never forget his/her mother even when the child is grown because of the special bond that they had through breastfeeding.</i> – <i>I was told to BF because breast milk is the only thing that is important for the baby. These days things are different because in our days there was no schedule on how to breastfeed a child, we use to feed on demand</i> – <i>Looking and comforting baby when breastfeeding, this is the time when you find out when there is something wrong with the baby (now grandmothers must remind the daughters what to do)</i> 	<p>The focus groups with grandmothers and observations made by the interviewer further point to a need for attending to the special needs of very young mothers. According to the grandmothers very young mothers do not want to look “outdated”, they want to do what their friends do, “they do not mind even if they are suffering”.</p>

Table 9: Breastfeeding practices – Advice and support

Data source	Categorised data	Integration and interpretation of the data sources
Place of child's birth		
Q/Ph1	25(30) of children were born in Frere Hospital, East London	<p><i>Most children attending the PHC centres in DV were born in Frere Hospital. Mothers' memories of what was told to them could be poor but all mothers should have received advice on breastfeeding in the hospital, this seems not to have happened.</i></p>
DVDH	64% of children born in Frere Hospital	
Advice that was given regarding breastfeeding in the hospital		
Q/Ph1	<p>6 (25) mothers received no advice or inappropriate advice, 16 (25) were told that breastfeeding was important. 2 (25) said that they only received advice on how to care for their breasts. Only 1 mother indicated that she was encouraged to breastfeed and shown how to hold the baby</p>	<p>Hospital staff remains the first reliable source of information on breastfeeding for many new mothers who did not attend antenatal clinics. All mothers should be advised and instructed during their stay in hospital. Special care should be given to instruct first-time mothers.</p>
FGD	<p>Cat A – 1 mother indicated that she was advised to get a birth certificate immediately – “they never talked about breastfeeding”.</p>	
Obs.	<p>Two of the young first-time mothers were observed to have no knowledge of breastfeeding. They had no idea of basic childcare and did not know how to hold the baby during breastfeeding.</p>	

Who did mother get most advice from re breastfeeding? Who gave greatest support with breastfeeding?		<p>Grandmothers were the most important source of advice and support on breastfeeding to mothers; far fewer mothers mentioned health workers. Some mothers had not received any advice or support from anybody. In the replies to the question posed to mother about who they would like to receive advice from about introducing food to the baby, grandmothers and the clinics were mentioned the same number of times. (See Table 14) This emphasises the importance of the health worker in providing education and support especially in view of the negative comments that were made in the focus groups with the grandmothers about young mothers taking advice from the older women.</p>
Q/Ph1	<p>16(29) got most advice from grandmother or grandmother + clinic; 5(29) said clinic or nurses in maternity ward and 4 (29) received no advice (3 of these from Cat A). 22(29) got the greatest support from grandmother /grandmother + clinic/grandmother + father).</p>	
FGD	<p>Most important source of advice and support: Cat A: Nurses (1), mother (1) Cat B: Mother (1), nurses and friends (1), lectures by hospital nurses (1) GM:</p> <ul style="list-style-type: none"> – <i>Our daughters do not want to listen to us</i> – <i>They do not take advise from us, maybe their husbands and boyfriends can do better”</i> – <i>Grandmothers know what needs to be done, but it is useless because their daughters do not want to listen to them</i> – <i>We keep on advising them on what to do, but they are the ones who decide what to do/</i> – <i>Yes you can drag a horse to the water but you cannot make it drink.</i> <p>And on a more positive note</p> <ul style="list-style-type: none"> – <i>We have to give them advice then it is up to them to take it or leave it.</i> – <i>We as grandmothers are the ones who have influence as we were influenced by our grandmothers.</i> 	<p><i>Being a grandmother does also not necessarily imply good knowledge about breastfeeding and many grandmothers in DV are quite young themselves. Grandmothers must therefore be targeted for education as well or health workers have to take a greater responsibility for educating mothers.</i></p>
DVDH	<p>GF children had a significant risk to have a mother who did not receive nutrition education (RR = 2.2)</p>	

Table 10: Breastfeeding practices – Supplementing breast milk with other milk

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>If currently breastfeeding: has the child been given any milk besides breast milk?</p> <p>15(22) – yes, 2 tried formula but baby refused it <i>What?</i> Formula (13) <i>Amasi</i> (sour milk) but as food (1) Fresh milk (1)</p> <p><i>Age?</i> < 5 weeks (6) < 4 months (4 at 2 months) (6)</p> <p><i>For what</i> Additional liquid (8) Wanted a replacement for breastfeeding (2) Additional liquid for solid food (2) As main milk source (1)</p> <p><i>Why?</i> Baby cries even after breastfeeding/baby always crying (2) Thought it was good for child (2) Wanted children to be used to it when they returned to work (2) Thought milk was not enough (2) 3 did not know, tired of breastfeeding</p> <p><i>What does she think about it?</i> Good/nutritious (4) Not good/made baby constipated (4)</p> <p><i>Frequency</i> 2x/day (7) 3-4x/day (4)</p>	<p><i>The majority of mothers still breastfeeding tried or were giving formula to their children, with many of these mothers starting this practice before the age of 5 weeks. It is mostly given as an additional liquid. Grandmothers mentioned that very few mothers in DV do not give bottles to their children and feeding bottles were also observed in many households, although it could have been used for water (see next Table).</i></p> <p><i>Although a variety of reasons were given for why the formula was given only in a few cases it was because the mother had to go back to work. Mothers seem to realise that there are other reasons why babies cry and not necessarily because the mother's milk is not enough or the baby are still hungry. There were however mothers who indicated that they supplemented breast milk because their children were always crying after feeding.</i></p> <p><i>Perceptions about the effect of formula milk range from nutritious to not good. Positive and negative feelings towards the effects of formula milk were evenly distributed between the two. Advancing the "superiority" of breast milk to formula milk should receive attention.</i></p> <p><i>Giving milk as a supplemental feed was not found to be a detrimental factor in the determination of the nutritional status of children in DV in the DVDH study. This could be because of a masking effect it had on a general poor dietary intake. Nutrition education should therefore address it in an appropriate manner for children older than 6 months. For younger children supplementing breast-milk should be discouraged.</i></p>
FGD	<p>Cat A: 6(7) gave formula, last 1 tried but baby refused <i>Why?</i></p> <ul style="list-style-type: none"> – Because I do not want to bother other people when I am not around – Because am looking for a job so anything can happen and I will have to go – My mother said that I must give it to my firstborn – Because father bought the Nespray/ Because it has a similar taste to breast milk – Because it is good for my baby – Since I used it with my other babies I thought it was a good thing to do. <p style="text-align: right;">(continued on next page)</p>	

Table 10 (cont.): Breastfeeding practices – Supplementing breast milk with other milk

Data source	Categorised data	Integration and interpretation of the data sources
FGD	<p>GM: The following quotations provide some insight about the grandmothers' perspectives about the use of formula milk</p> <ul style="list-style-type: none"> - <i>Bottlefeeding is seen as more important than breastfeeding.</i> - <i>The minute the mother is out of the hospital all she thinks about is formula milk and Nestum.</i> - <i>Our children think that bottl feeding proves that one is having a better status.</i> - <i>With my grandchildren I am forced to give them formula milk because the mothers come home from hospital saying that the baby was given formula milk when they were at the nursery.</i> - <i>Also see Table 8</i> 	
DVDH	<ul style="list-style-type: none"> - (84 of 114 mothers) - 74% of mothers gave their children other milk while breastfeeding. Majority of these mothers gave formula. - Children in the GF group had a 2 times higher chance (RR=2) not to have received other milk while they were breastfed by their mothers. - General: All children in the study had a relatively poor dietary intake. The only food item that the C group took in significantly more than the GF group was milk. 	
<p>If baby cries immediately after breastfeeding what do you think could be wrong</p>		
Q/Ph1	<p>8 (29)- baby still hungry/ 6 - nappy may be wet 5 - baby not feeling well 4 - baby needs to be comforted 4 - baby tired</p>	
<p>The use of feeding bottles</p>		
FGD	<p>GM: The following quotations apply:</p> <ul style="list-style-type: none"> - <i>...these days if a baby's mother does not give a bottle to her baby she is seen as an outdated mother</i> - <i>Our children believe in giving bottles to their babies</i> - <i>There are very few young mothers who do not give bottles to their babies</i> 	
Obs	<p>Feeding bottles were observed in 14 (26) households. (Five of the 6 cat A households had feeding bottles)</p>	

Table 11: Introduction of liquids - Giving water

Data source	Categorised data	Integration and interpretation of the data sources
	<p>Do you give the child water to drink? /How often? /How is the water given? /How much water is given? /Why do you think is it necessary to give a small baby water? /When did you give water for the first time?</p>	<p><i>No information was obtained about the practice of giving water to new-born and small babies during the DVDH study. In the present study the majority of the mothers interviewed indicated that they have given water, half of the children were given the water immediately after birth or when the mother came home from hospital.</i></p>
Q/Ph1	<p>29(31) had given water Cat A: varies from 1/d to 3/day 6(6) Cat B – D: 12 (24) water is given on demand or when mother thinks baby needs water Cat A: 2(6) give water with cap of the bottle All cat: 11(28) give water with a bottle Cat D: 9 (15) give water with a mug or similar Cat A: 2(6) – 15 ml per time and 4(6) between 60 and 100 ml per time Cat C – D: 14(18) give 60 - 240 ml/ time All cat: 16(30) feel that water is good for a baby and needed by the baby. All cat: 15(29) gave water immediately or day after birth</p>	<p><i>The majority of mothers indicated that water is needed by babies and good for babies. During the group discussion with the grandmothers it was stated that a spoonful of a herbal mixture was traditionally given to a baby 2 hours after birth to clean the baby's "stomach" and that mothers now mistakenly believe that water serves the same purpose as the herbal mixture. These findings make it clear that the issue of giving water to a very young baby must be addressed in a culturally sensitive manner. The number of feeding bottles observed in households with very young babies makes this an important key factor.</i></p>
FGD	<p>Cat A: 5(7) gave water with glucose/sugar/gripe water/saccharine. All said water was good for babies Cat B: Water with glucose immediately after home from hospital to clean baby's gut. Advice from GM 1(4) Cat C: 3(5) gave water with glucose/sugar/gripe water. All said water and glucose was good for babies/cleans baby's urine GM:</p> <ul style="list-style-type: none"> – A spoonful of a herbal mixture was traditionally given to a baby 2 hours after birth to clean the baby's "stomach" – Today there is a mistaken belief that water serves the same purpose as the herbal mixture. Young mothers are lazy to use isicakathi and give a lot of water to the baby". – Since there is no herb (isicakathi) mixture in town people use water with a little sugar or glucose to take the place of the herbal mixture that was usually given to the baby right after birth – The herbal mixture was to help the baby to clean the stomach, as it was making the tummy runny, now people believe that the water also cleans the stomach 	<p><i>There seems to be a tendency for glucose, sugar or gripe water to be added to the water. This practice should be discouraged in nutrition messages.</i></p>

Table 12: Introduction of liquids – Giving other liquids

Data source	Categorised data	Integration and interpretation of the data sources
	What other liquids has the child been getting up to now?	
Q/Ph1	*See matrix 1 at end of the Table Herbal drinks – none gave any herbal drinks but possibly see it as medicine. See Table 26: Health management.	<i>No information was obtained in the DVDH study about liquids other than milk given to young babies or the specific age at which other liquids were introduced. In the present study very few mothers had given liquids other than water or milk. The liquids (tea and juice) were mostly given with a mug or cup.</i>
FGD	Very little information obtained Cat B – 1 mother said she gave <i>umthombothi</i> for a fine rash.	
DVDH	The question asked in this study focused on liquids given after cessation of breastfeeding. 23% gave fruit juice and 14% tea with or without milk.	
	Has the child been given any <i>inembe</i> (roasted flour with water)? If yes in what form and why?	
Q/Ph1	Cat A + B: did not give <i>inembe</i> . Cat C, D1-3: 10(21) did give <i>inembe</i> , 4 of Cat D1 used it in comparison with only 3 from cat D2 + cat D3. Started giving <i>inembe</i> at 4 months or younger (7). Gave it as a milk substitute (2); as porridge (3) and as both (1) - (4 not known what it was used for). Had no means to give anything else (6). Gave it because they wanted to give additional food or that the baby was hungry (6). Positive feeling about <i>inembe</i> (7) with 1 saying that she will encourage other mothers to use it.	<i>It seems as if the early introduction of liquids other than milk or water is not widely practised. Although this could also be valid for the use of <i>inembe</i> as a milk substitute there are certain reasons for concern:</i> <ul style="list-style-type: none">• Most of the mothers using it started giving it before the age of 4 months and expressed positive feelings towards it. It is interesting to note that more mothers expressed positive feeling about <i>inembe</i> than about formula milk. This could point to the unaffordability of formula milk.• Mothers with growth failure children indicated that they use it as a milk substitute
FGD	<i>Inembe</i> only mentioned as a porridge in the FGD.	
DVDH	Only 2% of the total group indicated that they gave <i>inembe</i> when they stopped breastfeeding.	
Obs	Feeding practices Feeding bottles were observed in 14 (26) households. Five of the 6 cat A households had feeding bottles	<i>It therefore seems that the use of <i>inembe</i> as a milk substitute should be discouraged and help should be offered to mothers who are already using it as a substitute for breast milk.</i>

Matrix 1: What other liquids (tea, juice, and herbal drinks) have been given to the child up to now?

	Ceylon tea	Rooibos	How given	What added	What age	Fruit juice	How given	What added	What age
Cat B	None	None				1	mv	Nothing	2m
Cat C	2	None	1- bottle	3 – milk +sug	1/4m 3/6m	2	1 – cup 1- mv	Nothing	7-12m
Cat D	4	6	8 - mug	7 – sugar 1 – sometimes milk	5/7-12m 2/16-18m	12	4- bottle 7 – cup 1-mv	3-Water	2-4m 1-6m 7/7-12m 1/16-18m
	1 - both								

Mv = missing values; m = months

Table 13: Introduction of complementary food – When and Why

Data source	Categorised data	Integration and interpretation of the data sources
	<p>Has the child ever received any solid food (Even in liquid form?) At what age did you begin to give the solid food</p> <p>Q/Ph1 23(31) gave solid food 8(31) have not given solid food (6 from Cat A and 2 from cat B) 8 started at between 1- 2 months (4 each at 4 and 6 months and 3 children between 8-10 months)</p> <p>FGD Cat A: 4(7) have started giving food and the others were planning to start soon Cat B: 3(4) gave solid food not known at what age Cat C: 5(5) gave solid food not known at what age GM: Grandmothers stated that traditionally food was not given to children until they were six months old. One GM felt that these days young mothers immediately start thinking about giving Nestum when they come from the hospital.</p> <p>DVDH The mean age at which mothers reported they had introduced solid food was 4.42 ± 1.9 with no difference between GF and C groups</p>	<p><i>The data obtained in the interviews seems to correspond with the older introduction age found in the DVDH study, but not with the focus group data. Most of the mothers with 6-18 week old children participating in the focus groups had already started giving solid food or indicated that they planned to start soon. It is however not known if the interviewed mothers from cat A were also planning to introduce food soon. The data for the rest of the categories also point to a young age for the introduction of food.</i></p>
	<p>If solid food has been introduced, why?</p>	
	<p>Q/Ph1 The interviewer did not always probe for the reasons for the decision. The one Cat B mother who had introduced food already, said that she did not want to breastfeed for a long time</p> <p>FGD Cat A: Of the 4 mothers. 2 indicated that their breast milk was not enough and the other 2 wanted their babies to stop crying all the time. Cat B: 1 mother started giving <i>inembe</i> at 2-3 months on advice from GM and another at 16 w because she wanted the child to be able to eat with a spoon if she left her with somebody. Cat C: - A variety of reasons corresponding with those in cat A and B was given. One mother, the only one giving a variety of foods said that she felt that it would be good for her baby to eat a balanced diet. GM: Grandmothers offered the following explanations for the early introduction of food and formula:</p> <ul style="list-style-type: none"> - <i>When we try to tell them what we use to do they will tell you that we never had the means to do otherwise.</i> - <i>Today feeding you baby is just like a competition especially with the mothers who fall pregnant when they are still very young. They do not want it to look as if they do not have enough money to care for their babies</i> 	<p><i>The reasons for introducing solid food were not probed sufficiently in the questionnaire. During the focus groups a variety of reasons were given with no specific trend emerging. However delaying the introduction of solid food until the baby is 6 months old should be emphasised. On the other hand it seems as if some mothers wait too long before introducing solid food and this should also be discouraged.</i></p>

Table 14: Introduction of complementary food – Advice and support

Data source	Categorised data	Integration and interpretation of the data sources
On the advice of whom was solid food introduced?		
Q/Ph1	11(23) were advised by GM or older person in the neighbourhood	<p>Nearly half of the mothers who had introduced solid food indicated that their mother or an older person advised them. They were furthermore evenly divided on from whom they would like to receive this information namely, from their mother or the clinic.</p>
FGD	<p>3 started giving the food on advice from their mothers</p> <p>GM: It was twice mentioned that their daughters did not want to listen to them but it was also said “we as grandmothers are the ones who have influence as we were influenced by our grandmothers”.</p>	
DVDH	<p>No direct information was obtained but it was determined that 55% of the total group received education on the nutrition of their children from a professional nurse, with more of the control group receiving education from this source.</p>	<p>The data obtained during the focus groups suggest that a lack of knowledge about when food should be introduced is not the problem. Emphasis should therefore be placed on providing mothers with continuous support in making the correct feeding choices for their young children.</p>
<p>Let’s say a woman (GM: your daughter) from your neighbourhood has a child of one month. She has been breastfeeding but now comes to you for advice on what to do next. What would you recommend? (FGD only)</p>		
FGD	<p>Cat A: Continue breastfeeding if no problems like being employed or not having enough milk (1) Give water with breastfeeding it will help the kidneys (1)</p> <p>Cat B: Keep on breastfeeding until 4 months and decide then whether you want to introduce food at 4 or 6 months(1), Keep on breastfeeding but give other milk if she feels that her breast milk is not enough (1)</p> <p>Cat C: Would advise her to give water (1) Give breast milk and water for the next 5 months (1)</p> <p>GM: The following quotations apply:</p> <ul style="list-style-type: none"> – Continue breastfeeding until child is 6 months old – I would not waste my time advising today’s young mothers, because they do not take advice from us, maybe boyfriends and husbands can do better. – We have to give them advice then it is up to them to take it or leave it. My advice would be not to give any other food as this will help the baby to grow strong and be protected from many diseases 	<p>It is evident that a need exists for both clinic and older woman to play a supporting and advising role to young mothers in DV. Only one of the mothers in the present study however mentioned the clinic as a supporting system, this could possibly point to a need from mothers that are not addressed by the clinics at present.</p>
From whom or by what means would you want to hear information about the introduction of food?		
Q/Ph1	<p>The fieldworker failed to ask this question to the most important group namely category A. The other categories were evenly divided between grandmother of child and the clinic.</p>	
FGD	<p>GM: see comments at previous question.</p>	
From whom did you get the greatest support during introduction of food?		
Q/Ph1	<p>11(23) indicated grandmother or older person, with only 1 saying that nurse and her mother supported her. 6 mothers, 3 from Cat D1 indicated that they received no support</p>	

Table 15: Introduction of complementary food – Specific practices and problems

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>What were the biggest problems that you experienced when you started to introduce the food?</p> <p>11(23) reported no problems, with the only problems reported by more than one person, baby vomited when given food according to instructions (2) and baby constipated (4)</p>	<p><i>It does not seem as if there are any specific problems experienced by mothers with the introduction of food. Problems are probably only experienced in the later stage of introducing foods when a lack of access to a variety of suitable foods are experienced (see next discussion)</i></p>
Q/Ph1	<p>What was given as a first food? Specific order of introducing food? What food are you giving now What did the child eat and drink yesterday? ² How many times per day do you feed the child?</p> <p>First food 21 (23) mothers indicated that they gave commercial cereals before or at 6 months (1 at 4w and 12 between 1 and 3 months) with 16 of these mothers giving it as the first food. The 2 mothers who gave it at 1 month both indicated that they “tried to make it weaker”. 4(5) children in Cat D1 received <i>inembe</i> (burnt flour) or mealie meal as first food. The reasons for choosing baby cereal as a first food varied but the reason most often mentioned was that Nestum is a food specially for babies/good for babies (See focus group data on the next page)</p> <p>Order of introduction 7(23) indicated that they do not know with another 4 saying that they do not know about a specific order of introducing food</p> <p>Number of meals 12 (22) received 3 meals with milk in between the <i>previous day</i> (of the other 10, 5 received fewer meals and 5 more). All cat D1 children (except 1) received <3 meals the previous day. The only exception in this category stated that her child received 3 meals with milk in between but the fieldworker did not observe any food in the house. These responses can be compared to the responses on the <i>usual number of meals</i> given to children: 14 (22) of the mothers indicated that they usually feed their children 3 x per day. However no mother admitted to feeding their child less than 3x per day and 8(22) indicated that they feed their children 3 or more time per day. (All cat D1 mothers said that they feed their children 3x/day.)</p>	<p><i>Most mothers give commercial baby cereals as first food with undernourished children getting other low-density energy cereal. No information was however obtained about how sustainable the practice of giving an expensive baby food is for mothers (the observation data showed only 2 households to have had commercial baby cereal in the house at the time of the interview) and the introduction of a suitable but inexpensive first food should be recommended.</i></p> <p><i>In view of the recommended order of introducing food to 6 –12 months old children it seems as if foods other than cereals were introduced too late in the first year of life. There could be various reasons for this practice amongst which are a lack of means, a lack of knowledge and a lack of motivation because of the effort involved to produce these foods in the DV conditions (see comments of GM about laziness).</i></p> <p><i>For older infants the variety of foods and number of meals consumed also seem to be inadequate and should be emphasised in nutrition education.</i></p> <p><i>The findings from the DVDH study were that there was a significant difference between the two groups as regards the intake of the number of milk items. This combined with the present information that the only 3 children who did not receive milk the previous day were undernourished, may have significance in terms of the importance of continued breastfeeding and or recommendations in cases where breastfeeding has failed (HIV+ included).</i></p>

² No attempt was made to do a nutritional analysis of the previous day’s intake because the field worker was not trained to do a proper 24-hour recall. Type of foods and number of meals were used to speculate on nutritional adequacy.

Table 15 (cont.): Introduction of complementary food – Specific practices and problems

Data source	Categorised data	Integration and interpretation of the data sources
	<p>Nutritional adequacy <i>Cereal versus other food</i></p> <ul style="list-style-type: none"> - 7(23) children already receiving solid food received cereals and or milk only, the previous day - 14(21) children only received food other than cereal (any type) at 9 months or older or they fell into the 8-12 months category and has not received any other food than cereal yet. Of the 5 undernourished children (cat D1) 3 only received other food at between 10-12 months and 1 still had not received any other food at 18 months. 	
	<p><i>If all food received is grouped as follows:</i></p> <ul style="list-style-type: none"> ❖ Milk –all types breast milk included ❖ Fruit ❖ Vegetables including potato ❖ Protein source ❖ Baby cereals ❖ All other starches including mealie meal, rice, bread etc 	
FGD	<p>Then the following were found: 3 (23) mothers all from cat D1 indicated that they gave no milk whatsoever 16(23) mothers indicated that they gave vegetables. Only 6(23) of the children received foods from 4 or more of these “groups”. All cat D1 children received from 3 or fewer groups.</p> <p>Cat A: 4(7) gave commercial cereals from 4-5 weeks Cat B: 1(4) gave commercial baby cereal at 2 months, 9 <i>inembe</i> at 2 months and 1 commercial baby cereal at 16 weeks Cat C: 2(5) gave commercial baby cereal at 1-2 months and 2 at 5-6 months. All mothers except one in this 8-12 month old group indicated that they only give cereal to their children. GM: Two grandmothers indicated that mothers give their children cold food and when they ask them to cook porridge they say the baby does not like porridge. Another one said that mothers do not give a variety of foods to their children, they prefer to give bread and sour milk that does not need to be cooked. It seems the GM’s think that laziness is the reason for these practices.</p>	
DVDH	<p>No information obtained on complementary food given except first food. A risk (RR= 2.6) was identified for children from the GF group not to have received commercial baby cereal as their first food. It was concluded that mothers of these children do not have sufficient knowledge about appropriate weaning foods</p> <p>The food frequency data pointed to a lack of dietary diversity in both the C and GF groups. Significant differences between the two groups were found for the daily intake of the number of items from the milk group, with the GF group consuming fewer milk items than the control children.</p>	

Table 15 (cont.): Introduction of complementary food – Specific practices and problems

Data source	Categorised data	Integration and interpretation of the data sources
	Who usually feeds the child?	
Q/Ph1	13 (23) were fed by the mother with the mother being one of the people usually feeding the child in another 6 cases. Other people involved are the father, a nanny, grandmother (only 2).	<i>Mothers are the ones that usually feed their children and therefore the target group for education on the feeding of young children.</i>
FGD	Cat B: 2 mothers indicated that they feed the baby themselves Cat C: Only 1 mother responded she said that she feeds the child most of the time but sometimes her husband helps.	
DVDH	Mothers usually fed their children. In the total group investigated in the DVDH study 13% of father helped feeding their children on a daily basis, another 13% 1-2x/week or weekends and another 24 % occasionally. Fifty percent of the fathers never helped or the mother had not contact with the father. There were no significant differences between the groups.	

Table 16: Introduction of complementary food - Family food

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>Is child getting the same food as the family? If yes, when did you start with family food? How is the food given?</p> <p>Cat B-D: 8(23) do not get same food as family. (4 from cat D1-3). 9(23) received the same food as the family and 6(23) received some family food items. 10(23) received family food from 1 year and older 5(23) received certain food items like mealimeal from 2 months on 14 (23) ate from his or her own bowl</p>	<p><i>The importance of these findings depends on the type of food that the families are taking. This information is however not available. It could perhaps be recommended that children younger than 1 year can eat the same mealie meal as the family but that it should be enriched. Recommending family food before age 1 year should therefore be approached with caution and further investigation into this matter is probably necessary before recommendations could be made.</i></p>
DVDH	<p>About 2 thirds of the children investigated ate the same food as the rest of the family. C group was more inclined to eat the same food as the family as the GF group. The difference was however not significant.</p>	
If not who prepares food for child?		
Q/Ph1	<p>9(13) food prepared by the mother (others nanny or grandmother)</p>	<p><i>These data point to the mother being actively involved in food preparation for her children and that unsafe food because of incorrect storage probably is not a problem. Because there are mothers who prepare food in advance, it is recommended that children should be fed more frequently during the day than the present practices. This key factor should receive attention in general health and hygiene education.</i></p>
How many times per day is food prepared for the child?		
Q/Ph1	<p>16 (22) mothers indicated that food is prepared 3 or more times per day</p>	
FGD	<p>Cat B: 1 said 3 x per day, never stores food Cat C: 2 mothers said about 3x per day</p>	
If prepared in advance how is food stored		
Q/Ph1	<p>14(22) stated that they never prepared food in advance with another one that only prepares in advance in winter.</p>	
FGD	<p>Cat B: 1 cooked <i>inembe</i> and stored it in a flask GM: Not a good thing to store food, cook food when baby is about to eat. Let the baby eat at fixed times then you know when to start preparing.</p>	

Table 17: Introduction of complementary food – Milk versus food

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>If currently breast or bottle feeding: Do you give the food before or after breastfeeding or bottle-feeding? Do you sometimes give food and no milk?</p> <p>12(15) who were giving both food and breast or bottle-feeding said that they gave food before the milk. These mothers were spread over all categories (B-D). Even the 2 mothers in cat B who were already feeding their children indicated that they gave food before milk 9(15) yes and 5(15) no, to these answers also spread evenly over the categories except cat D1 where 3 of the children were not breastfed or bottle-fed and the mothers of the remaining 2 indicated that they sometimes give food and no milk.</p>	<p><i>It could be speculated that in the case of children younger than 1 year, especially those younger than 6 months, food is given to the detriment of milk intake. With the older children it is not known how much milk the children drank and whether mothers who are not breastfeeding can afford enough milk for children to take so much milk that it will negatively affect their appetite for food.</i></p>
FGD	<p>Cat A: 2 indicated that they gave food first and then milk and 1 that she gave milk first Cat B: 2 said that they gave food first then milk with one indicating that her child likes food more than milk and another one that her child does not drink much now that he is getting food. Cat C: All participants said that they gave food before milk GM: The following quotations apply:</p> <ul style="list-style-type: none"> - Baby must get food first , then washed down with milk - If the mother does not breastfeed and does not have money for milk it is clear that the child will not get milk after his/her food. - Give both food and milk equally until 1 yr. Once child eats family food it is important to give less milk - From 1 year on give food first and then milk other wise the child may not want to eat the food. 	<p><i>A matter for concern is that mothers of children younger than 18 weeks old (who were still breastfeeding at the time) also said that they give food before milk and that their children drink less milk since they introduced food. This points to a need for the formulation of recommendations around the introduction of complementary food to the baby's diet and how the introduction process should be managed.</i></p>
Q/Ph1	<p>Do you sometimes find that the child drinks less milk now that you are giving food? Do you think that your breast milk became less when you started giving the food?</p> <p>9(15) indicated yes with 6 of these from cat B, C, D1 5(15) said their children likes milk more than food and 1 said it depends on how much food he has eaten Only 1 from cat D3 said that her breast milk became less, all other mothers that were still breastfeeding and giving food said no.</p>	<p><i>The importance of milk in the diet and therefore the need for continued breastfeeding especially if you cannot afford other milk is emphasised by the practices of mothers with undernourished children. Most of these mothers were not breastfeeding anymore and the data points to these children probably not getting any milk. The highlighted remark of the one grandmother supports this notion (Also see the recommendations on adequacy of food intake in Table 15).</i></p>
FGD	<p>No change to breast milk (2)</p> <p>At this age what do you think is the most important for the child milk or food?</p>	<p><i>Mothers with undernourished children seem to know that milk is important. A lack of knowledge about the importance of milk is therefore not the reason for not giving milk but most possibly rather a lack of means.</i></p>
Q/Ph1	<p>Cat B: 1 said milk and 1 both Cat C: Food (2), both (2), milk (1) Cat D1 Food (1), Milk (2) missing (2) Cat D2-3: Food (6), Milk(2), missing (2)</p>	<p><i>The fact that these mothers are also often the ones that do not attend clinic also limits their access to milk through one of the schemes aiming to help malnourished children. Mothers must made aware of help that is available.</i></p>

Table 18: Introduction of complementary food – If child will not eat

Data source	Categorised data	Integration and interpretation of the data sources
What do you do if your child refuses to eat?		
Q/Ph1	A variety of answers were given, with no trend between specific categories. The answer most often given is “Never had that problem” 6(23), 3 mothers said to leave the child until he wants to eat, with another 4 indicating that they will breastfeed the child. One mother in category D3 said that she would leave the child and stop breastfeeding him.	<i>No clear picture of “incorrect practices” emerges from the data. There seems to be a perception that a monotonous diet could lead to a child’s refusal to eat. This ties in with the data presented in Table 15 about a lack of variety in the diet of children and shows that many mothers either have been told or intuitively know that a varied diet is needed.</i>
FGD	Cat B: if ill change to liquids until baby is better (1) Cat C: If mother is breast- feeding stop giving food and give breast milk only(1)/ If not breastfeeding change food that is given at the time (1)	<i>Providing information around the feeding of sick children should be included in any program especially in the light of the AIDS problem. However no specific key-factor was identified.</i>
Why do you think that children sometimes do not want to eat?		
Q/Ph1	A variety of reasons were given over all categories with the ones mentioned most: “child tired of one food” (9) and child ill (6)	
FGD	Cat B: teething problems(1), child not feeling well (1)/If you do not give a variety of food (1) Cat C: Teething problems (1), child not feeling well (1)	
What do you do regarding food if your child is ill?		
No specific trend in answers. Most frequently mentioned answers: “Never had that problem” 5(23), stop solids and give milk only 5(23) and in cat D the mothers said that they will change the type of food 4(23)		
Do you decide when the child had enough to eat or does he/she decide?		
Q/Ph1	11(23) said the child decides with another 3 saying that the mother measures but the baby decides.	
FGD	Cat B: Mother has to decide at this age, because baby can sometimes go on eating even if they are full (2) but some babies show they have had enough by wanting to vomit (1) Cat C: All agreed that it is the mother who decides, she is the one who “measures the food”	

Table 19: Introduction of complementary food – Foods that are good for children

Data source	Categorised data	Integration and interpretation of the data sources
	<p>If you had plenty of money what would you have liked to give to your child to eat? (FGD Cat A: Are there any foods that you think are particularly good for a young baby?)</p>	<p><i>The items mentioned by mothers and the number of items mentioned point to a lack of knowledge about the components of a varied diet. Very few of the mothers that were not breastfeeding anymore mentioned milk as one of the items that they would buy if they had plenty of money.</i></p>
Q/Ph1	<ul style="list-style-type: none"> - A variety of food items were mentioned as the first item they would buy, with vegetables, cereals and Purity mentioned each by 3 of the mothers. Another 3 indicated that their children are already receiving everything that they need and only 1 mother named meat/eggs or milk each as items that they would buy. - Only 11 mothers mentioned a second item that they would buy with 4 naming milk or milk products, 4 vegetables and 3 Purity - 16 mothers named a total of 39 food items in descending order. - 3 of the Cat D1 mothers were the only mothers to complete all 5 categories and cat D1 mothers mentioned 15 of the 39 items. 	<p><i>It can be speculated that the many food items mentioned by mothers with undernourished children, could point to these mothers' wishes to feed their children properly. However circumstances like poor household food security or a lack of capacity to care are preventing this. Reassuring mothers that they could be good mothers in "desperate circumstances" is necessary.</i></p>
FGD	<p>Vegetables were the food item most frequently mentioned namely 10 (all cat D mothers) Purity was mentioned by 7 mothers Milk or sour milk by only 5. Eggs or meat was only named by 3 mothers Cat A: Purity and Nestum (1) <i>Inembe</i>, not everybody can afford Purity and Nestum(1) Cat C: Purity(2) butternut(2), squash(2), cereals (1)</p>	
Q/Ph1	<p>Are there any foods that you think should not be given to a child of this age?</p> <p>Cat C & D: Samp [13(31)] was the food most frequently mentioned Cat B: "no food at this age"/ "nothing else than Nestum and Purity"/ "do not know".</p>	<p><i>The information obtained does not point to any misconceptions existing regarding the types of food that should not be eaten by children and therefore no specific recommendation is needed.</i></p>

Table 20: Feeding practices – Grandmothers’ perspectives

Data source	Categorised data	Integration and interpretation of the data sources
FGD	<p>Can you explain to us how mothers fed their children when you were young and how they do it today?</p> <p>The following quotations from the GM illustrate their responses:</p> <p>Practises:</p> <ul style="list-style-type: none"> – From 6 – 12 months we used to put the baby on the lap while feeding her. – Sing and talk to baby while you feed him/her. <p>Reasons:</p> <ul style="list-style-type: none"> – This motivates the baby to eat the food she is being given and this is one of the ways of letting the baby know mom better. Even when the mother is not around, she will always think about her through their special songs as a connection. – This is the way that your baby gets to know you better. – Important way to communicate with your baby and you can notice easily when the baby responds to you as she will smile to you – It is a way of showing love and care to your baby – It also makes the bond between mother and baby stronger. <p>Present practices and consequences:</p> <ul style="list-style-type: none"> – These days they have the feeding chairs where they put their babies while they feed the baby Our children have adopted the western style whereas they do not have enough money to do all the practices. The mother and baby bond is therefore disappearing 	<p><i>The grandmothers reported feeding time for young children as a special time, shared by mother and child. Singing and talking to the child creates a bond between them. No observations were made and no questions were posed to mothers about this, however based on the GM perspectives it is suggested that promoting feeding time as a special time could possibly assist in improving the general caring attitude of mothers.</i></p>

Table 21: Household Food Security: Income and employment

Data source	Categorised data	Integration and interpretation of the data sources
	Employment status?	
Q/Ph1 FGD	4(31) [from Cat C and D2 &3] formally employed 14 (15) unemployed and 1 indicated that she was self-employed	<i>These data does not provide a clear picture around financial resources available. Obtaining accurate income data is not easy. It is also very difficult to make any deductions if it is not compared with the number of people living in the households. However nearly a quarter of the households included seemed to be destitute or had a very uncertain income. More than a quarter of the mothers indicated that they had no money to spend on themselves and their children. More than a third of the mothers did indicate that they had input in the decisions on spending of money.</i>
DVDH	Only 2% employed and 13% indicated that they do part time jobs or sell items	
	How many people in your household have an income?	
	Do you know how much they earn?	
Q/Ph1	4(29), 2 from cat D1 – Household has no income 3(29) somebody in the household sometimes has an income through a “job”. 15(29) 1 person has an income and a further 3 that the grandmother has an income 9(27) did not know 5(27) between 500 to R800 a month 8(27) R1000 or more in a month	<i>A third of the mothers indicated that they did not know how much income came into the household This probably points to many of them not having any control on how the income is spent.</i>
DVDH	The average household income in the DVDH study was found to be R542.14	
	Who controls the income?	
Q/Ph1	11 (28) mothers indicated that they or together with the father controlled the spending of the income and in 13 cases the father or grandmother/father controlled it.	<i>The observation of a destitute mother who did not want to attend clinic with her child could provide support for a remark by a respondent that there are mothers who do not have money for clothes or food and that they then “hide” their babies.</i>
	How much money do you have available to spend on yourself and your children?	
Q/Ph1	A variety of answers were given with 10(28) mothers indicating that they have between R200 – R600 available and 9(28) had no money available and were dependent on other people to provide for the child.	<i>The income and employment data points to the importance of making people aware that they must try to generate some income of their own so that they can have some control over what is available for their children</i>
FGD	The following quotations from the grandmothers are applicable: – A good mother must try to have the means even if she has no income – At the same time there are those who do not have money to buy food and clothes for their babies. They tend to hide their babies. – We cannot tell that they know how to spend money wisely because some do not even have money to spend	
Obs	4 households had baby food or baby cereal in the house	
	<i>The following observation was made when the interviewer visited one of the destitute mothers with a undernourished child (cat D1): “Child not found at clinic, mother did not want to talk about taking her child to the clinic/a lot emotion involved especially when asked why she was not attending the clinic”. (continued on next page)</i>	

Table 21 (cont.): Household Food Security: Income and employment

Data source	Categorised data	Integration and interpretation of the data sources
Hardships presently experienced		
Q/Ph1 DVDH	23(28) indicated that unemployment was a problem 55% of respondents indicated that they had money related problems but there was no difference between the groups.	

	Keeping in mind that this interview is confidential would you like to tell me how you manage to survive on a very small or no income?	<i>People in DV make use of a variety of survival techniques. Many receive help from relatives while buying and selling also seems to be an important survival strategy.</i>
Q/Ph1	This question was answered in a variety of ways and therefore difficult to report: 4 indicated that they have enough income while 7 said that they are helped by relatives or that they themselves find "jobs" that provide a little bit of income. Survival strategies that were mentioned are: <ul style="list-style-type: none"> - GM buy wisely in large quantities - Lay-byes - Collect boxes from dump and sell it - One month buy large quantity of groceries then next month buy clothes 	<i>Awareness programmes on how to run a micro-enterprises (buy and sell) successfully and the principle of groups and small co-operatives could be addressed in nutrition related education.</i>
FGD	<p>Cat A: Most people buy and sell (all)</p> <p>Cat B: No info obtained</p> <p>Cat C: Helped by relatives (3)</p> <p>GM: Most people buy and sell and have "jobs". Relatives and neighbours help people or people belong to stokvels or groups that pay out lump sums of money.</p>	

Table 22: Household food security and resource management: Child grant

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>Do you have a grant for your child? If yes what problems did you experience? If no have you tried to get one? If no, why not?</p> <ul style="list-style-type: none"> - Only 2(31) had a grant with 17(31) not having tried to get one and another 2 indicating that their income was enough. - Of the ones that did try 4 (10) were waiting and another 2 indicated that the baby had no birth certificate or she did not have an ID. - Of the ones that did not try to get one, 6(17) did not know about it and 6(17) did not have an ID book or other documentation necessary for applying <p>It seems as if 20(31) of the respondents would be eligible for a grant</p>	<p><i>The income data was not obtained in such a way that it is clear which mothers were eligible to apply for a grant, but the small percentage of mothers that had the child support grant confirmed the findings of the DVDH study. A concern is that the majority of the mothers who seemingly qualify for the grant have not even applied for it.</i></p>
FGD	<p>Cat A: none had grants all were still waiting for birth certificates.</p> <p>Cat B: Yes (1) No (3) – no ID book, no birth certificate, did not know if I could apply</p> <p>Cat C: None had because of no birth certificates or mistake on birth certificate</p>	<p><i>The income and employment findings discussed in the previous table also point to the importance of creating an awareness of procedures to follow to obtain the child support grant that is available to mothers with children. The importance of obtaining this grant although it is such a small sum must be emphasised.</i></p>
DVDH	<p>Less than 1% (only 1 person) indicated that she received a grant.</p>	
<hr style="border-top: 1px dashed black;"/>		
Q/Ph1	<p>If you have a grant on what do you spend the R100 per month?</p> <p>Only 2 mothers had grants 1 indicated that she buys clothes and the other one washing powder and food.</p>	<p><i>The small number of the mothers who indicated that they would buy basic food items before anything else if they receive R100 per month for their child is a concern. Expensive baby food and formula and non-food items likes clothes were mentioned by the majority of the mothers.</i></p>
FGD	<p>Cat B: The money is so little even when I receive it, it is difficult to know what to do with it (1).</p>	<p><i>These findings, together with</i></p> <ul style="list-style-type: none"> • <i>the negative perceptions of the grandmothers about their daughters abilities to buy wisely and</i> • <i>the findings in the DVDH study regarding the positive effect involvement of mothers in buying food for their households could have on the nutritional status of their children</i>
Q/Ph1	<p>If you are given R100 a month for your child on what will you spend it?</p> <p><i>(Nine mothers were by mistake not asked this question because their children were not eating yet and 2 answered previous question, Only 20 responses were therefore recorded)</i></p> <ul style="list-style-type: none"> - Items mostly mentioned first were clothes (7) and commercial baby foods and milk (7), - Second items to be mentioned most were ordinary food items (5) - 5 mothers indicated that they would buy and sell fruit and vegetables so that they could try to make a profit to buy things for the baby. 	<p><i>suggest that recommendations be made in a nutrition education program on spending the grant money wisely.</i></p>
FGD	<p>Cat A: will buy Nestum and formula milk (1) will buy something to sell, then use profit for food for the baby (1)</p>	

Table 23: Household Food Security and Resource management – Procuring food

Data source	Categorised data	Integration and interpretation of the data sources
<p>Where do you buy your food? (FGD: Food is very expensive how do you go about buying food?)</p>		
Q/PhI	14(31) well known supermarket mentioned with no trend among the other answers, only 2(31)mothers indicated that they buy from spaza shops	<p><i>The place where food is purchased does not seem to be something to be concerned about. Mothers also said that they plan before buying and or see to basic needs first (it does seem as if the interviewer led the respondents in a certain direction with the question whether they plan before they buy, because of the similarity of the replies).</i></p>
FGD	<p>Cat A: Baby food cheaper at a doctor's surgery (1) 6 week old babies do not eat that much (1)</p> <p>Cat B: Buy what baby like best (1) Buy basic needs/buy specials (3)</p>	
DVDH	No specific information obtained, but this study found a strong tendency for the mothers of GF children not to have been involved in buying food for the household.	<p><i>Of concern are the few mothers who indicated directly that they would meet their children's basic needs first if they had money available. Attention should possibly be given to wise planning to address the child's needs first.</i></p>
<p>Do you think you can buy it cheaper somewhere else?</p>		
Q/PhI	11(31) said no and another 8(31) that they do not know with only 4(31) indicating that they think that you can buy cheaper food from some shops in town or Cash and Carry's.	
<p>If you have any money available (on a regular or irregular basis) how do you decide on what to spend it?</p>		
Q/PhI	10(31) indicated that they decide on what to spend it by planning before they buy. 6(31) said that they buy the basic things first or that the children's needs are met first.	
DVDH	Just over 40% of the sample indicated that they budget before they spend their money. Money was mostly spent on food (82%) and then on clothes (5%). No significant difference between the groups.	
<p>Home food production</p>		
Obs	7 (31) households had a vegetable garden 23(31) no vegetable garden but have no space	<p><i>Motivating people to grow their own food is not an aspect that needs to be addressed as those who can do it already have their own gardens.</i></p>

Table 24: Resource management – Grandmothers’ perceptions

Grandmothers’ perception of mothers ability to manage resources		
	<p>FGD The following perceptions were listed in this regard.</p> <ul style="list-style-type: none">– Mother’s put their own needs first– Young mothers like fashion– The grant money they get it today and they have nothing left the next day– Mothers do not want to compare prices they just buy from spaza shops.– The young mothers are in competition especially the ones who fall pregnant while they are still very young they do not want to look as if they do not have money to care for their child.– There are those who do not have money to buy food and clothes for their babies. They tend to hide their babies.– There are those who do not have any money to spend wisely.– Those who have money feed their babies one type of food only; the child therefore does not get a balanced diet.	<p><i>Grandmothers generally seem to be very negative about young mothers’ ability to manage their resources. Their perceptions are not always in line with what is reported by the mothers themselves. For example grandmothers’ perceptions about mothers using expensive spaza shops while very few mothers reported buying from spaza shops (Table 23). However the GM’s perceptions point to the need for mothers to learn that basic food items are not inferior to commercial baby foods and formula. The “good mother concept” discussed previously is of importance here as well. The “good mother” will put her baby’s needs for basic items like food and clothes first. Mothers must not “hide” if they experience problems but learn to make use of all available support networks.</i></p>

Table 25: Health management – Mothers health and nutrition

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>Did you experience any health problems with your pregnancy?</p> <p>No (14) Yes (17) varied from swollen feet, high BP, lower abdominal pains and leaking breasts</p>	<p>More than half of the mothers reported having problems during pregnancy. A positive experience of pregnancy could possibly improve the openness of mothers for nutrition messages. Motivating mothers to attend antenatal clinic from early in the pregnancy could help them deal with and understand the problems and provide an opportunity for nutrition education.</p>
Q/Ph1	<p>Do you smoke or did you smoke while you were pregnant?</p> <p>Do you drink or did you drink while you were pregnant?</p>	<p>Although this data does not show a difference in alcohol consumption between the various categories, the grandmothers' perceptions and the observations of the interviewer do suggest that alcohol consumption could be a problem in the target population and needs to be addressed.</p>
FGD	<p>GM: 1 GM said that there are 2 groups of mothers in DV those who drink and those who do not. GM in both FGDs mentioned the drinking habit of mothers as a problem. One GM also mentioned it as a problem that mothers take their babies to the shebeens with them.</p>	
DVDH	<p>Children in the GF group had a significantly higher chance to have a mother who smokes (RR=10) or drank beer (RR=10) regularly in comparison with the C group</p>	
Obs	<p>The interviewer conducted a few interviews in shebeens and she noted that many of the clients were women. 3 of the mothers interviewed had obvious drinking problems</p>	
Q/Ph1	<p>Have you been eating any differently while breastfeeding?</p> <p>15 (31) said no 6(31) said they ate more. More porridge was eaten by 4 of the mothers 2 (31) said they drank more milk.</p>	<p>Despite the fact that about half of the mothers indicated that they did not eat more while breastfeeding, weight gain during breastfeeding seemed to be a problem. Another 5 mothers indicated their unhappiness about their weight</p>
Q/Ph1	<p>Have you taken more fluids while breastfeeding?</p> <p>7(31) said no 24 (31) said yes with tea being the fluid mostly likely to be drunk but soft drinks, juices and <i>amarhewu</i> (sour meal meal drink) also being taken</p>	<p>This perception about having gained weight or being overweight could influence perceptions on breastfeeding negatively. Recommending good eating practices to pregnant women early in their pregnancy as well as giving them information in advance about nutrition while breastfeeding therefore seems to be important. Unhappiness about weight can result in a negative view of breastfeeding.</p>
Q/Ph1	<p>What is your feeling about the influence of breastfeeding on the health of a woman?</p> <p>12 (31) – No problem/no change 8(31) said they gained a lot of weight, 1 mother indicated that she feels that she cannot get a job because of this weight gain 5(31) said they wished it had caused them to loose weight but it did not.</p>	

Table 26: Health management – Child health

Data source	Categorised data	Integration and interpretation of the data sources
	Prevention of illness: What do you think a mother can do to prevent her small baby from getting ill?	
Q/Ph1	<p>Mothers listed the measures that can be taken to prevent their children from getting ill in order of importance: 28 (31) mentioned 1 measure that can be taken 20(31) mentioned 2 measures 9(31) mentioned 3 measures 3(31) mentioned 4 measures 1(31) mentioned 5 measures No trends between the categories The measure most frequently mentioned first was to keep to immunisation dates/take baby to clinic (12) The measure most frequently mentioned in the second position was to protect the baby from heat and cold.(12) From the 61 responses to this question good nutrition was only mentioned twice. The other responses mostly had to do with good hygiene.</p>	<p><i>Although mothers mentioned immunisation as important to prevent illness, it was still only mentioned by less than half of the mothers and very few mothers mentioned good nutrition as important.</i></p> <p><i>Mothers need to be informed about the important role nutrition could play in preventing illness but also in the future health and performance of the child.</i></p>
FGD	<p>GM: It was mentioned in the second focus group that there are mothers without any money for food and clothes that tend to hide their babies. Others do not even attend clinic as they say they are being treated differently.</p>	<p><i>In view of the DVDH data where it was found that more undernourished children were incompletely immunised mothers must be informed about the importance of immunisation for their children's health. Attending immunisation clinics also provides the opportunity for health workers to monitor children's progress and provide health and nutrition education.</i></p>
DVDH	<p>Nutrition knowledge: Significantly more mothers of children in the C group indicated that they had been educated on good nutrition for their children than the mothers of children in the GF group. Immunisation status: 36% were incompletely immunised. More children in the GF group tended to be incompletely immunised than in the control group. Antenatal attendance: 85% of the total group attended antenatal clinics. Although the difference was not significant only 75% of the mothers with GF children attended versus 89% of the mothers of C children.</p>	<p><i>However non-attendance of antenatal or immunisation clinics definitely poses a problem. Most children are born in Frere Hospital and the time in hospital should therefore be seen as a first and important opportunity to motivate mothers to attend immunisation clinics.</i></p>
Obs	<p>25 (29) were appropriately immunised with 4 incompletely immunised. Two of these mothers indicated that they were afraid of the nurses. Between 1 to 10 visits to the clinics were recorded on the clinic cards with the majority 13(29) between 6 to 10 visits. Cat D1 mothers visited the clinic between 5 to 10 times (1 had no card).</p>	
	Clinic card	
Q/Ph1	30 (31) had clinic cards	
DVDH	<p>94% of children had clinic cards 63% of children had appropriate immunisations (> C group children were appropriately immunised than the GF group</p>	
Obs	30 produced the card and 4 (3 from cat D1) were incompletely immunised	

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Table 26 (cont.): Health management – Child health

Data source	Categorised data	Integration and interpretation of the data sources
	What do you think a mother can do to prevent accidents around the house?	
Q/Ph1	26 (31) mentioned 1 thing (measure) that could be done to prevent accidents 11(31) mentioned 2 measures 4(31) mentioned 3 measures 2(31) mentioned 4 measure The measure most frequently mentioned in all positions was to keep the child away from dangerous appliances/paraffin/medicines/open fires/ the street.	<i>No statistics is available on whether household accidents are a major problem with small children in DV. The question was included as an indicator of the caring practices of mothers in DV. Mothers did show an awareness of potential hazards around the house. Although some grandmothers again expressed concern, the findings possibly reflect a positive caring attitude and could mean that mothers will be receptive to advice regarding general caring.</i>
FGD	GM: One GM said that she does not think that mothers do enough to prevent accidents instead they cause some.	

	Diagnosing illness and seeking help or providing home treatment? /How will you know when your child is ill?	
Q/Ph1	13(31) mothers mentioned high temperature as the first indicator for illness and 8(31) mentioned it as a second indicator. 8(31) mentioned the child being restless, irritable and crying or becomes dull and stops playing as the first indicator and 6(31) mentioned this as the second indicator. 31 mothers listed 1 indicator, 18 listed 2 and 7 listed 3.	<i>The available data do not point to misconceptions or lack of knowledge about diagnosing illness.</i>
FGD	Cat A: 3 replies: baby do not want to eat, high temp, restless and cries a lot Cat B: Baby becomes hot and restless/dull and does not want to eat Cat C: Child does not want to eat/starts to cry from time to time/cries even after changing the nappy and breastfeeding GM: Same as above	
	How can you tell whether your baby has a high temperature? /Advice for high temperature?	
Q/Ph1	This question had 15 missing values. 5(16) do not want to eat 9(16) child feels hot	
FGD	Cat A: Wipe baby with wet cloth/put wet cloths under the baby's arms Cat B: Baby feels hot Cat C: Baby becomes very hot/hot and does not want to eat. GM: Same as above	
	Can you tell anything about your child's health by looking at his/her stool?	
Q/Ph1	6 (31) do not know and no 25(31) yes, stool green/running/jelly-like, trace of blood, constipated were all mentioned as things pointing to something being wrong with the child	
FGD	Cat A: 3 replies: constipated, loose stool and jelly like, then know something is wrong Cat B: Yes, constipation means that what child has eaten is not good for her Cat C: Yes, when baby is constipated/ when the stool is very loose	

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Table 26 (cont.): Health management – Child health

Data source	Categorised data	Integration and interpretation of the data sources
What can cause a runny tummy?		
Q/Ph1	<p>10(31) do not know 8(31) teething 8 (31) what child ate/drank: unsafe food/water, sweet things, orange 7 (31) mothers also mentioned a second cause ranging from allergy, unsafe food and teething</p>	<p><i>Unsafe food or water and by implication unhygienic practices around bottle feeding were mentioned by some mothers and although no difference was determined between the two groups in the DVDH study concerning diarrhoea, the importance of safe food could be included in hygiene education. The fact that nearly a third of the mothers did not know what causes a “runny tummy” strengthens this motivation.</i></p>
FGD	<p>Cat A: because of something child ate Cat C: The type of food the child ate/The formula milk, mother then has to change to another kind of milk/Dirty bottles/Teething GM: Teething/food</p>	
Are you aware of different rashes that babies can get? Causes of these rashes?		
Q/Ph1	<p>8 different rashes were identified 21(31) identified <i>Ishimnce</i> (fine rash after birth): caused by what mother ate during pregnancy 6(31) identified <i>measles</i>: do not know what causes it 1(31) <i>Irhwabayi</i>; 6(31) big rash (<i>irhashalala</i>) ; 1(31) small rash (<i>punayi</i>) and these are all caused by dirty surroundings or water 2(31) <i>Amaqhakuva</i>, fine rash (<i>umrhuwuzelelane</i>) caused by teething 6(31) fine rash (<i>umrhuwuzelelane</i>) (caused by sun/hot temp Nappy rash – not changing the nappy and not rinsing the nappy after washing (all)</p>	<p><i>Mothers seem to be aware of the different types of rashes and education or knowledge in this regard is not a problem. Mothers believe that ishimnce the fine rash that babies often have after birth is caused by what the mother ate during pregnancy. If this belief leads to inadequate eating practices by the mothers during pregnancy it needs to be dispelled. The present data unfortunately does not provide any information about this but the myth should be dispelled in nutrition education to mothers.</i></p>
FGD	<p>Cat A: Fine rash caused by not ironing baby’s clothes/ Nappy rash caused by not changing the nappy/ <i>Ishimnce</i> caused by what the mother ate during pregnancy Cat B: Nappy rash caused by not changing nappy/ <i>Ishimnce</i> caused by what the mother ate during pregnancy Cat C: <i>Ishimnce</i> caused by what mother ate during pregnancy GM: <i>Ishimnce</i> – caused by what mother ate during pregnancy/ Nappy rash caused by not changing nappy or type of soap used to wash nappy</p>	
Sticky eyes. Did your baby have this problem?		
Q/Ph1	<p>23(31) said no but 5 said they know to use breast milk, 1 to use a herb, 1 to take child to hospital and 2 that they did not even know about it. 6 (31) said yes, 2 used Vaseline, 2 got medicine from hospital , 2 used breast milk</p>	<p><i>The available data do not point to any misconceptions or lack of knowledge around the problem of “sticky eyes”.</i></p>
FGD	<p>Cat A: No one knew about the problem Cat B: One mother said her child had sticky eyes and she cleaned the eyes with breast milk Cat C: Caused by what mother ate during the pregnancy, treated with breast milk GM: Caused by what the mother ate during pregnancy especially potatoes. Use breast milk/tea to wash the eyes and give child <i>umthombothi</i> to drink.</p>	

Table 26 (cont.): Health management – Child health

Data source	Categorised data	Integration and interpretation of the data sources
Q/Ph1	<p>Illness mentioned by mother and treatments</p> <p>(13 missing values)</p> <p>9 (18) mentioned high temperature</p> <p>11(18) first action is to go to clinic</p> <p>2 (18) if clinic closed always make sure that you have medicine from clinic or buy Panado</p> <p><i>If no medicine available</i></p> <p>4(18) use cold water to bring temp down</p> <p>2(18) use soapy enema</p>	<p><i>No problems seem to exist with the type of medicines bought by mothers and home treatment for illnesses. Although not all medicines and treatments are advisable, the practices are not dangerous and a very small minority only mentioned these specific practices.</i></p>
FGD	<p>GM:</p> <p>Runny tummy – takes baby to clinic and give Darrows.</p> <ul style="list-style-type: none"> – When no medicine give egg white mixed with 1 spoon vinegar before food or milk and afterwards until mixture is finished – Take half a teaspoon of flour and mix it with water give it to baby. It was also said by the grandmothers that mothers “Do not look after their children’s health, do not know what to do when child has diarrhoea ” <p>High temperature: Take baby to clinic, if clinic closed give 2 spoons of camphor/soapy water enema/put child in bath with cold water.</p> <p>Rashes: <i>Ukhwekhe</i> – treat with sulphur and pork lard</p> <p><i>Ishimnce</i> – treat with herb – <i>umthombothi</i></p> <p>Vomiting: Use the inner hard layer of a chicken gizzard that has been dried previously, grind it and add warm water, strain and give to baby</p>	
	<p>Do you ever make use of medicines that you buy in the shop?</p>	
Q/Ph1	<p>A list was obtained. Between 1 to 9 different medicines were used with 10 mothers using only 2 types and 8 mothers using no medicines from shop The most common reason for the use of these medicines was for:</p> <p>colic/wind/cramps – 13</p> <p>constipation - 6</p> <p>temperature, flu/coughs – 11</p> <p>protection against evil spirits – 3</p> <p>The medicines most often used are:</p> <p>Panado – 6</p> <p>Gripe water (all categories) – 11</p> <p>Milk of magnesia – 5</p> <p>Cough syrup – 5</p>	
FGD	<p>Cat A: Panado, gripe water and behoedmiddel</p> <p>Cat B: Buys a herbal mixture from a herbalist to stop baby crying</p> <p>Cat C: Entress druppels to protect from evil spirits</p> <p><i>Umthuthuzeli mama</i> – good for cramps</p> <p>GM: Milk of magnesia for constipation</p> <p>Gripe water for colic</p> <p>Entress and Haarlemensis to wash the baby, this helps to stop baby crying especially if sensing an evil spirit causes it.</p>	

Table 27: Hygiene management

Data source	Categorised data	Integration and interpretation of the data sources
	Where do you get water to use in the house?	
Q/Ph1	17 (23) tap reasonably close 5 (23) own tap inside 1(23) tap far away	<i>The data do point to certain key factors that could be addressed in messages concerning hygiene management. Quite a few mothers admitted that they have trouble getting hold of soap on a regular basis and mothers admitted to doubtful cleaning methods for bottles (data appear on next page).</i>
FGD	Cat A : 1 – from public toilets Cat B : All had taps inside the house	
DVDH	14% of the total sample had running water in the house and only 4% had taps further away than 100m	<i>These admissions seem important in view of the subjective evaluation results from the DVDH study namely that GF children had a much higher risk of having clothes that were not clean and tidy as well as having a mother whose clothes were not clean and tidy.</i>
	How many times per day do you have to go to fetch water?	
Q/Ph1	13 (27) said that they had to go between 3 to 10 times, with another one saying many times	<i>Washing of hands of both mother and child could be a problem. This is key factor that needs to be addressed keeping in mind that most mothers have no running water in the house.</i>
FGD	Cat A : 1 said 3x/ day	
	How do you heat the water for bathing?	<i>Good hygiene of child and everything regarding the child, clothes, bottles should receive attention. Innovative and practical suggestions for people too poor to afford soap should be looked at. The observation data also point to the fact that general hygiene must receive attention. This will have to happen against the background of the environmental hazards existing in DV, the overcrowded homes and the poor housing available.</i>
Q/Ph1	16(28) paraffin stove 10 (28) electric kettle (No one in cat D1 had electricity)	
FGD DVDH	Cat B : All had electricity in the house 90% of the total sample made use of paraffin as their energy source	
	Number of people living in the household	
Q/Ph1	13(29) had 5-7 people living in the house 4 (29) respondents between 8-10 people	
DVDH	Respondents lived in 1.6 ± 1.38 rooms with 4.79±3.18 people per room	
	House and environment	
Obs	8 (31) live in 4 to 6 roomed houses 17(31) in 1 or 2 roomed shacks 3(31) number of rooms unknown Another 4 live in 1 or 2 roomed houses, the condition of which is not much better than those of shacks	
	What do you use to bath the child in?	
Q/Ph1	30(30) use a baby bath	
DVDH	94% of mothers indicated that they used a free standing bath (waskom) to wash the baby	
	How often do you bath the child?	
Q/Ph1	18 (26) twice per day 7 (26) once per day	
DVDH	99% of the total sample indicated that they washed the children once or twice a day. This was not backed up by the subjective hygiene evaluation	

Table 27 (cont.): Hygiene management

Data source	Categorised data	Integration and interpretation of the data sources
	What kind of soap do you use to wash the child and clothes?	
Q/Ph1	26 (31) indicated that they either used baby soap, Protex or Lux for child	
FGD	31(31) Preem, Sunlight or Omo for the clothes Cat A: All Sunlight soap for baby and clothes	
	Do you have trouble getting hold of soap on a regular basis?	
Q/Ph1	No – 17 (27) Yes – 10 (27)	
	What kind of nappy do you use for the child?	
Q/Ph1	28(31) Towel 1(31) Towel and old sheets 2(31) Disposable and towel	
FGD	Cat A: Towel nappy Cat B: Towel nappy Cat C: Towel nappy	
	How do you dispose of the child's wastes	
Q/Ph1	The information gained was in connection with cleaning the nappies and not what was done with the actual waste or the waste water – therefore not useful	
	If you use a bottle how do you clean the bottle	
Q/Ph1	18 (31) said that they did not use bottles 5 (13) used good cleaning methods 3 (13) used doubtful cleaning methods 5 (13) used poor cleaning methods, 3 of these were from cat A	
FGD	Cat A : use good cleaning methods (1), all others wash with brush only (doubtful cleaning) Cat B: 2 used doubtful cleaning methods they however know what they are supposed to do (2).	
	GM: The following quotations apply – Mothers in DV believe in giving bottles to their babies and the next thing you find the bottles kept uncovered and when the baby cries, they just give it to the baby without cleaning it first. – A bottle needs a good mother who will be able to take good care of a baby. – Dirty bottles can spoil the milk and cause upset tummies.	
Obs	Are feeding bottles observed: Yes – 14 No – 12	

Table 27 (cont.): Hygiene management

Data source	Categorised data	Integration and interpretation of the data sources
Can you tell me how important you think it is to wash your hands?		
Q/Ph1	15(31)mothers identified 2 instances where hand washing is important 2(31)gave 3 and 11(31) only 1	
FGD	Cat B: NB to wash hands before working with baby's food, after changing nappy. When baby old enough important to wash child's hands before he/she eats (1) Cat C: NB to wash hands before working with baby's food/when coming from the toilet (2)	
DVDH	Children in the GF group had a significantly higher chance not have had their hands washed than the control group children (RR = 10)	
How do you wash hands regularly if you do not have running water in the house?		
Q/Ph1	11(31) – use water from a bucket 2(31) - keep a bucket specially for this purpose 5(31) - know it is important but do not do it all the time, if baby cries just prepares bottle 10(31) – has water very close by or inside	
Child hygiene		
DVDH	Children from the GF group had a much higher risk to have untidy (RR = 2.3) and dirty (RR = 2.7) clothes than children from the control group.	
General hygiene		
Obs	The observer judged the hygiene in the respondents homes to be poor in 6 households, average in 20 and good in 3 Immediately outside the house, hygiene was judged poor in 14 households, average in 11 and good in 2 households.	
DVDH	Children from the GF group had a much higher risk to have mothers whose clothes are not neat (RR = 2.9) and clean (RR = 2.7) than children from the C group.	

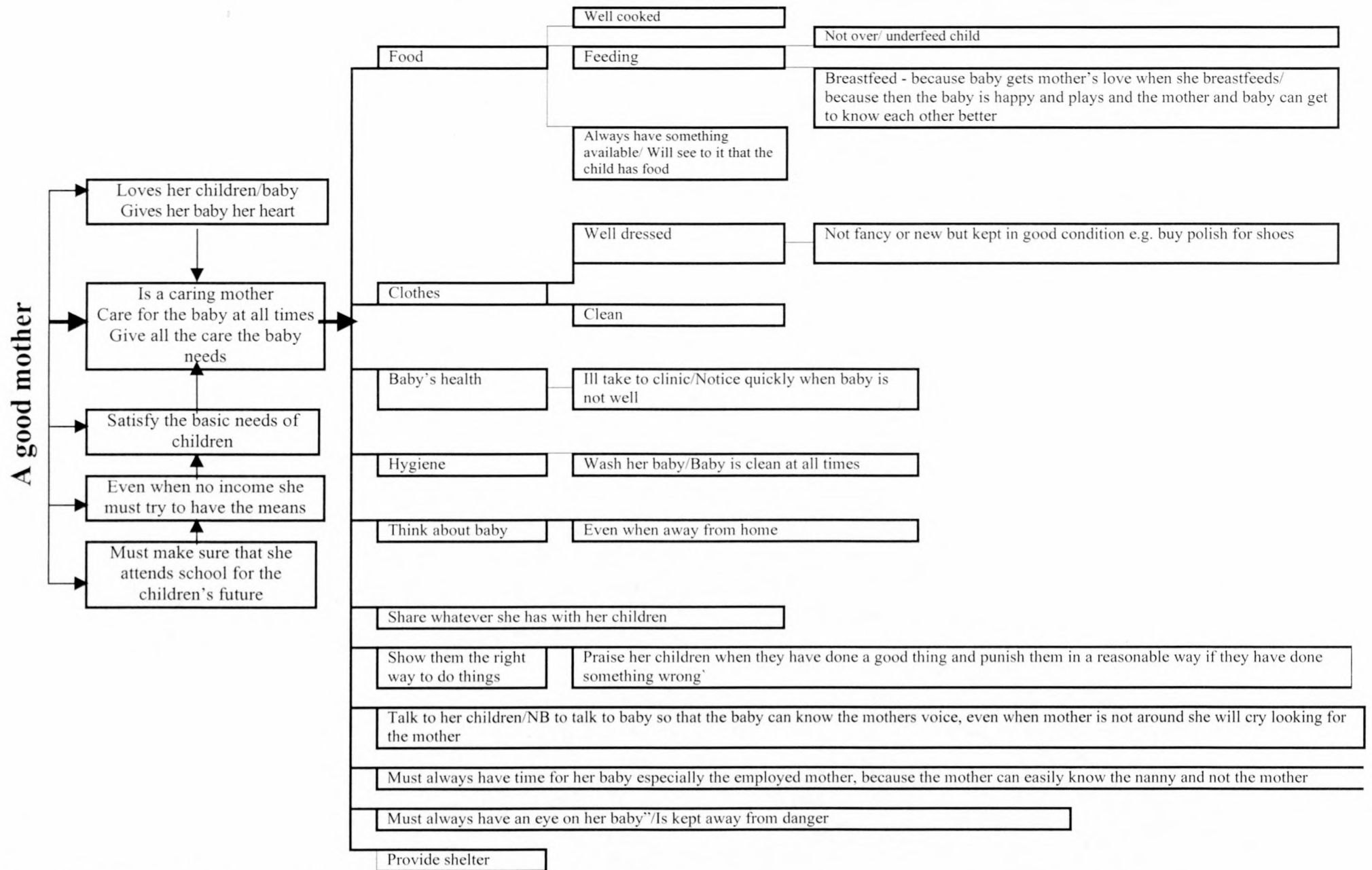


Figure 1: Summary of all references in the 5 focus groups about "a good mother"

Addendum C:

Code list

Addendum C: Code List

Code	Clarification
Difficulties mothers experience to attend the clinic	<u>Difficult to attend clinic because:</u>
Mdif: Being in school	Mothers in school
Mdif: Booking in time	Of the early time mothers must be at the clinic in order to be helped
Mdif: Duties and preparation	Things that mothers must attend to before they can go to the clinic
Mdif: missing appointments	Once an appointment is missed mothers are scared to go back because of consequences
Mdif: No means	Of not having enough money to buy food or proper clothing for children
Mdif: prerequisites Mdif: Waiting	Of the need to have a clinic card or identification document The long wait is physically uncomfortable
Perceptions mothers have about the clinics	
MP-: No help	Mothers thought they would not get any help, no indication is however given that they had not received help previously
MP-: Verbal abuse	Mothers thought the staff would verbally abuse them, no indication is however given that she has encountered verbal abuse before
Benefits mothers perceive they would gain from attending the clinic	
M: Benefit	Benefits that mothers feel they receive from attending the clinics
M: Limited benefit	Mothers feel that there are certain benefits to gain from attending the clinic
M: No benefit	Mothers feel there are no benefit in attending the clinic
Mothers feelings about attending the clinics	
MF-: Afraid	Afraid of the treatment they will receive
MF-: But attend	Attend but with negative feelings

(continue on next page)

Code	Clarification
MF-: Distressed	Distressed about the clinics
MF-: Fear of embarrassment	Scared that they will be embarrassed
MF-: Frustrated	Frustration that arise from experiences at the clinics
MF-: Intense dissatisfaction	Even stronger feelings that mere frustration
MF-: Not interested	Not even interested to attend the clinic because of negative experiences
MF-: Uncertainty	Uncertain of what treatment from staff await them at the clinic
<hr style="border-top: 1px dashed black;"/>	
MF+: Getting help	Mothers feels they are getting help at the clinic
<hr/>	
Mothers experiences with the nurses at the clinics	
MExNurses-: Behaviour	Nurses behaviour towards the mother in terms of courtesy
MExNurses-: Caring attitude	The general care that nurses extend to mothers when they attend clinic
MExNurses-: Corruption	Comments that unavailability of medicines are due to corruption
MExNurses-: Favouritism	Unequal treatment of clients by the nurses
MExNurses-: Time-keeping	Nurses have poor time-keeping for example arriving at work late
MExNurses-: Verbal abuse	Mothers are shouted and sworn at by nurses
MExNurses-: Work ethic	Nurses do not put patients first
<hr style="border-top: 1px dashed black;"/>	
MExNurses: Mothers to blame	Mothers could be to blame for the way nurses treat them
MExNurses: Some good	Not all nurses are bad some are good nurses
<hr/>	
Mothers' experiences with the services received at the clinics	
MExSR-: Disorganised	The referral system and record-keeping are often disorganised
MExSR-: Limited service	A full service are not rendered five days a week by the clinics
MExSR-: Medical procedures	The specific medical procedure received were experienced negatively
MExSR-: No help	No help is being received at the clinic

(continued on next page)

Code	Clarification
MExSR-: No medicine	There are often no medicine available at the clinic
MExSR-: turned away	Mothers are turned away from the clinic without receiving any help
MExSR-: Waiting	Mothers must often wait for a long time
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MExSR+: Education	Education is received at the clinic
MExSR+: Help with pregnancy	Help with pregnancies were received from the clinics
MExSR+: Immunisations	Immunisations for children is a positive aspect of the clinic service
<hr/>	
Health service related recommendations about what could be done to make the clinic services more accessible to mothers	
MrecHS: Investigate conditions	The authorities must send people to investigate the conditions and the treatment of patients at the clinics
MrecHS: Mobile clinic	A mobile clinic must be made available
MrecHS: Provide help	The clinics must provide help at all times to the mothers
MrecHS: Provide programmes	The clinics must provide “programmes” for the poor
MrecHS: Provision of medicine	Medicine must be made available at the clinics
MrecHS: Records and control	The administrative system at the clinics must be improved
MrecHS: Rotate staff	Staff must be rotated
MrecHS: Scan at clinics	An ultrasound sonar must be made available at the antenatal clinics
MrecHS: Staff shortages	Staff shortages at the clinics must be addressed
MrecHS: Trained volunteers	Trained volunteers could assist at the clinics
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Interpersonal related recommendations about what could be done to improve the accessibility of clinic services to mothers	
MrecNurses: Behaviour towards patients	Nurses behaviour towards clients must improve
MrecNurses: Time-keeping	Nurses timekeeping must improve

(continued on next page)

Code	Clarification
Difficulties health workers experience in service delivery	
HCWdif: Beyond scope of clinic	Some problems of mothers are beyond the scope of the clinic
HCWdif: Heavy workload HCWdif: Implementation	Nurses have to carry a very heavy workload Mothers do not easily implement what they have been taught at the clinic
HCWdif: lack of means	Mothers do not always have the means to implement what they have been taught or to access the services that they have been referred to
HCWdif: Lack of skills	Health workers experience a lack of skills to deal with all the aspect contained in the six focus areas
HCWdif: Literacy	Mothers are often illiterate
HCWdif: Missing clients	Mothers do not attend the clinics when they are supposed to
HCWdif: Time in hospital	The short time new mothers spend in hospital make nutrition education very difficult
How health workers experience mothers	
HCWExMoth-: Abuse help	Some mothers abuse the grant or the nutrition scheme
HCWExMoth-: Age	Some mothers are very young to have children
HCWExMoth-: Breastfeeding	Many mothers do not want to breastfeed
HCWExMoth-: Health and hygiene	Mothers have poor hygiene practices
HCWExMoth-: Household Food Security	Many mothers suffer from poor household food security and they are to “blame”
HCWExMoth-: Ignorant	Mothers are ignorant about proper health management practices
HCWExMoth-: Negligent	Mothers are negligent in their and their children’s health management
HCWExMoth-: Trusting other advice	Mothers will rather listen to other advice than to the nurses advice
HCWExMoth-: Uncaring	Mothers are uncaring towards their children
HCWExMoth: No difference	There are no difference between mothers from Duncan Village and other areas
HCWExMoth+: Attend health talks	Mothers do attend the health days organised by the clinics (continued on next page)

Code	Clarification
HCWExMoth+: Solving conflict	It there is conflict between a mother and a nurse the mother try to solve the conflict
HCWExMoth+: Understanding	Mothers often understand the difficulties experience by nurses
HCWExCom: Difficult	The community is experienced as difficult by the health workers
HCWExCom: Household Food Security	Experiences with Household Food Security issues
HCWExCom+: Appreciation	The community is experienced as showing appreciation for what the health workers do for them
HCWExCom+: Caring	The community experienced as a caring community
HCWExCom+: Felt needed	Health worker felt needed by the community
HCWExCom+: Formed attachments	Has experiences of forming attachment with people from the community
HCWExCom+: Motivating	The community is seen as motivating the health workers in their work
HCWExCom+: Open for help	Community being experienced as open for help
HCWExCom+: Referring others	Positive experiences of community members led them to refer others to the clinic
Health workers coverage of the 6 focus areas	
HCWcov: Breast feeding	Education that is given about aspects of breastfeeding
HCWcov: feeding practices	Education that is given about aspects of feeding practices
HCWcov: Health and hygiene	Education that is given about aspects of health and hygiene
HCWcov: Household Food Security	Education that is given about aspects of household food security
HCWcov: Inadequate	Education on any of the focus areas that is considered to be inadequate by the health workers
HCWcov: Nutrition	Education that is given about nutrition
HCWcov: Refer	Mothers are referred to another source of help or support
HCWcov: Resource management	Education that is given about managing resources
HCWcov: Self-development	Education that is given about aspects of self-development

(continued on next page)

Code	Clarification
Recommendations of health workers on what can be done to get mothers to attend the clinics and improve nutrition-related service delivery	
HCWrec: Encourage patients	Mothers must be encouraged to attend
HCWrec: Inservice training	Health workers must receive in-service training
HCWrecClin: Home visits	Home visits must be made
HCWrecClin: See 10 day olds	Ten day old babies must be seen with their mothers at the clinics
HCWrecEd: Appropriate information	Appropriate information must be given to mothers
HCWrecEd: Clinics primary role	The clinics must play the primary role in giving nutrition-related education
HCWrecEd: Co-operation with other role-players	Nurses at the clinics must co-operate with other service providers
HCWrecEd: Educate men	Men must also be educated on nutrition-related matters
HCWrecEd: Groups	Nutrition-related education must be given to groups
HCWrecEd: Longer stay	For effective nutrition-related education to be given in the obstetric unit, new mothers will have to stay longer in the unit
HCWrecEd: Patience and perseverance	Health workers must be patient and persevere when providing nutrition related education
HCWrecEd: Start at school	Health education to mothers must already start with young girls at school
HCWrecMoth: Patience and understanding	Mothers must be patient and understanding when they attend the clinics

Addendum D:

Aerial photograph of Duncan Village



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