

**AN ASSESSMENT OF THE HEALTH CHANNEL
BROADCASTING MULTIMEDIA FOR COMMUNICATION AND
DISSEMINATION OF INFORMATION IN THE HEALTH
SECTOR**

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**Thesis submitted in partial fulfilment of the requirements for the
M.Phil. in Social Science Methods**

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Date: December 2006

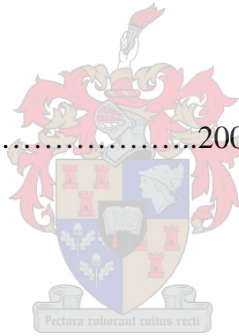
Declaration

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

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Lulama Dikweni

.....day of2006



Abstract

The study reported on here was conducted between December 2003 and April 2004. The aim of the study was to assess the use of Health Channel Broadcast Multimedia (HCBM) in order to maximise its success. The HCBM is an Information Technology method that was used to disseminate health information in public health facilities. HCBM was installed in health facilities and was used as an education tool. This was done by further developing the clinical skills of the health care workers (HCWs) and to inform the patients, including the community members on HIV/AIDS and related communicable diseases.

The study was conducted in eight health facilities in seven provinces where HCBM was piloted. Facilities and forty-nine health professionals (HCWs) were selected conveniently and one hundred and twenty-eight patients were sampled using a systematic random method. The convenient sampling method was relevant since these were key facilities with HCBM. There were very few HCWs who did view HCBM and they were drawn into the study. HCBM used programmes disseminating messages in Afrikaans, English, sePedi, seSotho, siSwati, isiXhosa and isiZulu. The Rapid Assessment Response (RAR) approach was used to give a quick appraisal of the study. The report focuses on the cross-sectional reporting of the quantitative technique of the RAR.

Of the HCWs, 86% had viewed the broadcast content, 70% were satisfied with the broadcast mode of service delivery; 56% indicated that the messages were good and added educational value to their professional work, while 52% chose to use the IP box content with HIV/AIDS topics. Ninety-two percent of HCWs stated that HCBM targeted patients and young people, 48% said HCBM had the ability to convey information and 48% said it was capable of addressing health problem. When HCBM was being set up, 62% HCWs engaged in decision making.

Patients mentioned that HCBM as a method of information dissemination was educative (62%) and informative (52%). They reported that they did hear messages on HIV/AIDS telling them that medication was available for free to treat within 72 hours after being raped (72%); they had the right to say no to unsafe sex (92%); and 76%

said the broadcast had the ability to change people's behaviour. Respondents reported that the messages were easily understood (44%).

The conclusion is that the findings will be useful to inform the government and managers of HCBM programmes on how to maximise the success of HCBM, especially at the implementation phase.

Opsomming

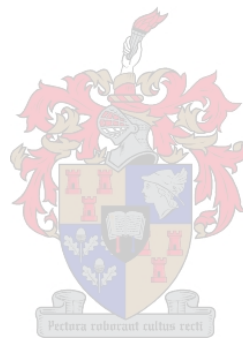
Hierdie verslag doen verslag oor die resultate van 'n ondersoek wat tussen Desember 2003 en April 2004 onderneem is. Die doel van die verslag is om die doeltreffendheid van die gebruik van 'n multimedia gesondheidsuitsendingkanaal, *Health Channel Broadcast Multimedia* (HCBM) te bepaal. Hierdie is nuwe tegnologie wat gebruik word om gesondheidsinligting slegs in die openbare gesondheidssektor te versprei.

Die studie is by agt openbare gesondheidsfasiliteite in sewe provinsies waar die HCBM volledig gevestig was, onderneem. Nege-en-veertig gesondheidskundiges (HPW's) is volgens 'n gerieflikheidssteekproef geselekteer, en 128 pasiënte is met behulp van 'n sistematiese ewekansige steekproef geselekteer. Die HCBM het programme gebruik wat boodskappe in Afrikaans, Engels, sePedi, seSotho, siSwati, isiXhosa en isiZulu uitgesaai het. 'n Benadering bekend as die *Rapid Assessment Response* (RAR) is gebruik om 'n vinnige evaluering van die studie te maak. Die verslag konsentreer op die deursneerapportering van die kwantitatiewe tegniek van die RAR.

Van die HPW's het 85% na die inhoud van die uitsending gekyk, 70% was tevrede met die uitsendingmodus van dienslewering, 56% het aangedui dat die boodskappe goed was en van opvoedkundige waarde in hulle professionele werk, terwyl 52% verkies het om die Internet Platform-inhoud met MIV/Vigs-temas te gebruik. Twee-en-negentig persent van die HPW's het te kenne gegee die HCBM is gerig op pasiënte en die jeug, 48% het gesê HCBM het die vermoë om inligting oor te dra, en 48% het gesê dit is geskik om na die gesondheidsprobleem om te sien. Tydens die instelling van die HCBM het 62% HPW's aan besluitneming deelgeneem.

Van die pasiënte met grade 0–6 as opvoedingspeil het 75% verkies om brosjures te gebruik bo enige ander massamedia, en 72% mans en 67% vrouens het na boodskappe oor die behandeling van MIV/Vigs-simptome geluister. Inligting oor vrywillige berading en toetsing voor swangerskap is deur 66% van die vrouens gehoor. Meer as 90% van hulle was bewus van die reg om nee te sê vir seks of onveilige seks. Pasiënte oor die hele residensiële gebied was dit eens dat die taalgebruik in die uitsendings maklik verstaanbaar was. Oor al die opvoedkundige grade heen is saamgestem dat die HCBM die voorgenome boodskap oorgedra het.

Die gevolgtrekking is dat die bevindings waardevol is om die regering en bestuurders van die uitsendingsprogram in te lig oor hoe om die ander fases te verbeter. Dit sluit Fase 2 in, wat die uitvoering van die HCBM behels.



Acknowledgments

My sincere gratitude goes to the National Department of Health and Mindset, who are the key organisations of the HCBM programme and the Telemedicine lead programme of the Medical Research Council. Most importantly, Dr. Moretlo Molefi, the director of the Telemedicine Lead Programme, for granting me permission to use the data for this study.

I would also like to acknowledge the following key people who have been instrumental in the successful completion of this report:

- my senior supervisor, Professor Cornie Groenewald, for his guidance and support and enduring patience;
- Dr. Nolwazi Mbananga, my second supervisor, for encouraging me and sharing valuable information on the research topic;
- Maupi Letsoalo of the Medical Research Council, for assisting me with the arrangement of data;
- Dr. Steve Olorunju of the Medical Research Council, for his commitment to my work, and for assisting me with the analysis of data;
- Mavis Kgaogelo Moshia, at the Medical Research Council, for sharing information and advice.

To all my colleagues at the Medical Research Council who assisted especially with administrative tasks, and those who shared meaningful ideas, with without them the completion of this work would have been a nightmare.

A special thanks to the Language Service at the University of Stellenbosch for their excellent work.

Last but not least, a special thank you to my daughter, Nolundi-Lulu, whose consistent encouragement, belief in me, and prayers formed a valued support foundation for me throughout my studies.

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Clarification of concepts

1. Communication

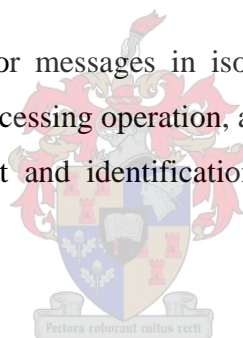
Communication is the art and technique of using words and images effectively to impart information or ideas. It is the transfer of information and ideas (Reflective Design Communication Aid, 2004).

2. Information

Information is the increase in knowledge obtained by the recipient through matching proper data elements to the variables of a problem. Information is the aggregation or processing of data to provide knowledge or intelligence (Burch & Strater, 1974).

3. Data

Data is raw unevaluated facts or messages in isolation, which, when placed in a meaningful context by a data-processing operation, allows inferences to be drawn, and these relate to the measurement and identification of people, events, and objects (Burch & Strater, 1974).



4. Knowledge

Knowledge is understood to be a cognitive capacity that allows its possessor to use or act upon fresh information (David & Foray, 2002).

5. Distribution and dissemination

Distribution in this report refers to the transportation of information by the sender to the receiver through a physical process. *Dissemination* refers to the transition of the stored information from the broadcast content and making it accessible to the health care workers through the Online Broadcast programme and the transition of information from the broadcast content, making it available to patients through the Live Broadcast programme.

5. Perception

This concept can be defined in a narrow and a broad sense. In this study, perception focuses on the viewers who were a group of 49 HCWs and 131 clients or patients (are

used in the report). Both groups had to express their personal understanding, views and knowledge of the HCB programme in its entirety, such as presentation, style and logistics. In a much broader explanation, perception comprises the knowledge, attitudes, values and beliefs within a cultural context, which may facilitate or hinder personal, family and community motivation to change (Airhihenbuwa, 1995).

6. Socio-cultural perspective

This may have different meanings for different writers and readers, but in this thesis is used with the particular meaning that considers:

- *Society*, which refers to the system of interrelationships that connects those individuals who share a common culture (Giddens, 1990).
- That without a society there can be no culture, and without culture there can be no society, as these are intrinsically linked.
- *Culture*, which is the way of life of the members of a given society – their habits, customs, and their dwellings, along with the material goods they produce (Giddens, 1990).
- The community's ability to define what is acceptable and what not, since people have the ability to think or to reason.
- It has to do with how people live their daily lives of defining acceptable behaviour(s), and how norms, values and their language use (the way they express themselves) shape them.

7. Community

In this thesis, the term *community* is used in a narrow sense, referring to individuals who are in a health facility, but who are not sick. They are viewed as a community on their own because they come from a larger community that is similar in all respects. Clients may comprise a community that has different lifestyle patterns, and they may behave differently when they are feeling sick, while they also understand they are different from ordinary members in the community who are not sick. In a broader sense, everybody belongs to a larger community in a particular locality which in turn belongs to a larger society in a country, such as South Africa.

CHAPTER 1 -

1. BACKGROUND INFORMATION OF THE STUDY

It is over twenty years now that the National Department of Health (NDOH) has been engaged in developing and disseminating health information for the South African people (World Health Organisation, 2000). In developing and disseminating this information, the NDOH has relied on conventional forms of mass communication or media. These methods include printed material such as pamphlets, posters, charts and billboards, which are usually put up on high or wide open spaces to increase access.

What is often noticed with these types of materials is that they have been written in English (Mbananga, 2002). Using just one language results in the exclusion of people who do not understand that language, in this case English. In most instances, by using this type of mass media the information does not easily filter down to all the people, especially not to those in the rural areas. The material tends to be more easily available in the urban and peri-urban or township areas. Consequently, people in these latter places stand a better chance of becoming exposed to health information that is communicated through these forms of media compared to their counterparts in rural areas.

Geographic proximity and language seem to have the ability to isolate certain people from gaining access to printed material. This can result in creating or increasing information gaps among groups of people in the same country. The literature advocates that to communicate health information, in particular to diverse populations with different approaches, such information should be employed to suit the target group's cognitive skills and thereby narrowing the information gap (Doak, Doak & Root, 1985; Sless, 1981).

Another form of mass communication that has been useful to communicate or disseminate health information in South Africa is the South African Broadcasting Corporation radio station. Radio is known to have been accessible even in remote rural areas. Some non-governmental organisations (NGOs), including government, took advantage of the radio stations by securing slots to broadcast health promotion and education programmes. These programmes were broadcast in most of the South African languages and that may have increased the scope of listeners to health programmes (Mbananga, 2002). However, people who did not own radios were still deprived of health information. With such exclusion, it was

vital for the NDOH to develop an advanced communication strategy that could accommodate the nation.

The NDOH collaborated with other organisations that have been engaged in producing comprehensive health information. Adding to the need for multimedia strategies is the increase in communicable diseases, which seemed not to be controlled by curative measures. Tuberculosis (TB) for instance, accounts for over 80% of all communicable diseases in the country. The prevalence of HIV/AIDS in South Africa continues to escalate from 17% in 1997 to 28% in 2003 (HIV/AIDS in South Africa, <http://www.avert.org/aidssouthafrica.htm>, 2006). In developing the multimedia strategy, government identified other organisations, which are also involved in the area of multimedia for health information dissemination.

1.1 Public and private partnerships (PPP) and dissemination of health information

1.1.1 Sentech Telehealth Channel

Sentech is one of the multimedia organisations identified in the multimedia strategy development by NDOH. Sentech is a local Broadcasting Corporation and one of the few companies in the country that uses the channel network to broadcast. In 2002, the NDOH for the first time formed a partnership with Sentech. The agreement was for Sentech to operate a health broadcast channel in the public health sector. The focus was concentrated on the rural areas where the problem of limited access to health information resources was experienced most acutely. It was during that period that Sentech piloted a programme called Telehealth Channel in thirty public clinics, which were all in the rural areas. The Telehealth Channel disseminated information on HIV/AIDS and related infections. However, it appeared that the NDOH needed a more advanced multimedia strategy than the Telehealth Channel. Subsequently, in 2003 the department extended its public and private partnership (PPP) to Mindset.

1.1.2 Mindset Health Channel

Mindset is another multimedia organisation identified by the NDOH. Mindset is a Gauteng-based non-profit organisation (NPO), registered under Section 21 of the Company Act. Mindset was the only organisation in the country which presented to the NDOH a concept or model that has a network with the Internet Protocol Platform or Box (IP Platform). This model is called the Health Channel (HC). Mindset was able to develop packaged information

and distributed effective education content via the broadcast satellite networks to support the multimedia. In the current report, the Health Channel is known as the Health Channel Broadcast Multimedia (HCBM).

The NDOH commissioned Mindset to take over and implement the health channel by continuing with the work that was done by Sentech in the thirty clinics in the rural areas. In addition, the department added twenty-six more health facilities for Mindset to pilot the HCBM. The fifty-six sites were mainly in the rural areas and townships (peri-urban), with very few in the urban areas. In 2004, Mindset managed to install the HCBM in eight sites in seven provinces as reported in the Chapter 3. After the installation of the HCBM in the sites, Mindset commissioned the Medical Research Council (MRC) to conduct a rapid assessment of the HCBM.

1.1.3 The Medical Research Council

The MRC is mainly a government-funded health research institution. A directorate of the MRC, the Telemedicine Directorate, was responsible for conducting the current pilot assessment study of the Health Channel. Telemedicine has conducted assessment of a number of projects that generally focus on the use of information technology (IT) to provide health services in places, which otherwise would have been inaccessible. Late in 2003, the MRC commenced with the pilot study of assessing the implementation of the HCBM in the selected sites in the rural, township and urban areas. The pilot study had to be completed in less than six months.

The current report presents only the quantitative results of the study, which the MRC has conducted. There is a compiled report on this study that was conducted by the Telemedicine Lead Programme in 2004. The Telemedicine Lead Programme report includes the primary or initial results from the time the pilot study was conducted. The author of this report has been involved in the study from the conceptual stage through to the report writing. It became clear that the primary report by Telemedicine concentrated mainly on qualitative data, while the quantitative data was partially analysed and reported. Based on this view, the author seized the opportunity to conduct further analysis of the data as part of her Master's study. The results of this further analysis are presented in order to provide in-depth reporting on the quantitative data for the NDOH.

1.1.4 Roles and responsibilities of the research team

In order for the MRC to conduct the study successfully, it employed the Rapid Assessment and Response (RAR) approach. This method is deemed appropriate because, according to the World Health Organisation (2000) it is designed to generate information that can help to plan and develop health policies and programmes as well as specific health interventions and services. The method is applicable in the following situations:

- i) where data are needed extremely quickly;
- ii) where relevant, current data are required by organisations to develop, implement, and monitor health programmes; and
- iii) when there are constraints of time or costs resulting in the exclusion of the use of the other conventional research methods.

All of the above-mentioned conditions were experienced in the MRC study. The study was conducted by two qualified researchers, namely the author and a colleague. The principal investigator was there to oversee to the overall processes of the study. The three co-workers functioned as a team in administering various processes and designing the research tools, which will be discussed in detail in Chapter 3.

The researchers were fully responsible for the selection of sites. This was conducted through ongoing consultations with the consultant who was responsible for installing the HCBM system in the sites. Another interaction was with the site managers who worked closely with the facilitators to make sure that both groups of audiences did view the broadcast programmes. The audience had to be familiar with the HCBM topics and its messages. It was vital for the viewer to be knowledgeable of the HCBM messages as such knowledge was a prerequisite for members of the audiences to qualify as interviewees.

The participants who were drawn temporarily in the study only to perform specific tasks were the statistician, a group of fieldworkers and those who translated and transcribed the data. Again, drawing from the literature (WHO, 2000), the RAR can accommodate the aforementioned constraints such as human resources, budget and time by relying on:

- a set of available tools and methods for example, the training manual was originally developed by the MRC and was refined to match the assessment study;

- skills and attitudes within the team that has to carry out the assessment, which included the researchers, statistician and fieldworkers;
- a set of processes that were in place, such as planning and consultation, which helped to identify and respond to problems of users of the HCBM.

Below are the procedures that the team of developers (PPP) followed when they designed the broadcast material on which the interviewees were assessed.

1.1.5 Development of the content for professional health workers

Mindset was responsible for developing the content for the two different types of broadcast programmes of the HCBM, namely; the Online Broadcast for health care workers (HCWs) and Live Broadcast for the patients. The organisation (Mindset) consulted a team of experts to develop a health information multimedia programme for the HCWs. While the experts were preparing for the task of programme development, they went through a comprehensive process of developing the curriculum. The newly developed curriculum was used to design the material of the Online Broadcast programme.

The defined team of experts came from institutions such as the Perinatal HIV/AIDS Research Unit at the Wits University Nursing Department, Goldfields Nursing College, Palliative Medicine Institute and the HIV/AIDS and Tuberculosis (TB) Directorate of the Department of Health. Subsequent to the completion of the development of the curriculum, Mindset organised the Health Care Worker's Content Reference Group (HCWCRG) to review the relevance of the developed content and to fill the knowledge gaps. During the interviews, the reviewing team focused mainly on pertinent topics on HIV/AIDS and Health Talk, which were developed in English, isiXhosa, isiZulu, seSotho and Afrikaans.

With regard to the curriculum, the PPP together with the team of experts agreed that the content should be aimed at the level of an enrolled nurse. This was with the view that it would appeal across all other levels, namely, registered nurses, auxiliary nurses, as well as to lay counsellors.

1.1.6 Outsourcing of the content for patients

The Live Broadcast content for patients was outsourced to media partners of the PPP team. The partners included the South African Broadcasting Corporation, LoveLife, Community Health Media Trust, Soul City, Ochre Media, and the Society for Family Health. The

consulted groups were mostly members of the community participating in community programmes. The consultants developed high quality media content in a form of edutainment and infotainment to educate and entertain the patients at the same time in five of the local languages (English, isiXhosa, Afrikaans, Sesotho and isiZulu). The Live Broadcast programme was also open for viewing to the general public at the health facility.

The sourced content of the Live Broadcast used existing information, which was repackaged as well as high-quality broadcast material on HIV/AIDS. It also included the Health Talk information on HIV/AIDS, which was also made available for HCWs. Partners from the Community Health Media Trust offered the Treatment Literacy series. The series were critical, as they were in line with the roll-out of antiretroviral treatment (ART). Below are some of the series and programmes, which were designed in order to keep the patients entertained:

- drama series compiled by Soul City;
- public service announcements (PSAs) from the Khomanani campaign;
- documentaries compiled by LoveLife's Sexual Mentality; and
- educational programmes from the Beat it! Series.

1.1.7 General overview of the HCBM

The HCBM is developed such that the two groups of audiences, HCWs and patients (patients include any member of the community/general public that is at a health facility and who is a potential viewer of the HCBM) are viewing two distinct programmes, the Online Broadcast and the Live Broadcast respectively. These two broadcast programmes started operating in October 2003 and lasted nine weeks. The programmes were broadcast daily from Monday to Friday, with timeslots between 08:00 and 17:00. During these hours, the Internet Protocol platform/box (IP box) created an "on-demand" viewing for the HCWs, meaning that they could view the content whenever they wanted to. Tuning in to the online viewing meant that the HCW was accessing the broadcast content, which was stored in a local PC storage device. Accessing the PC storage and viewing the Online content could only take place when the broadcast was on during allocated times. Another device was the ViKo box, which was programmed to functioned according to the set times. The IP box and Viko box have been prepared solely for the HCWs. Other additional broadcast contents for HCWs contained general information on –

Video content as follows:

- HIV/AIDS and related issues, in particular TB;
- ninety minutes of health professional workers' content initially covered in only three of the local languages, isiZulu, seSotho and English, although funding has subsequently been secured for isiXhosa and Afrikaans; and
- packaged sourced relevant media content for patients.

Educational material for HCWs in the video content

Other messages that were installed in the HCBM programme for the HCWs to access were:

- fifteen key educational messages for HCWs, each 6-8 minutes long, in the five local languages mentioned above.

Multimedia support as part of the broadcast programme:

- supporting print supplement;
- additional pdf files of text materials in the ViKo box; and
- additional multimedia programmes that were available in the ViKo box.

Key educational messages that were part of the broadcast for HCWs:

- working with HIV positive patients is safe;
- knowing a range of safer sex options improves your HIV/AIDS counselling;
- patients need to understand what HIV does to their bodies;
- there are different HIV tests and procedures;
- treating opportunistic infections can prolong the life of an HIV patient;
- HIV/AIDS affects all our communities.

1.2 Research problem

There is lack of understanding and knowledge regarding the use of multimedia technologies in education and dissemination of health information for health care professionals and patients in townships and rural areas in South Africa.

1.3 Research questions

- can the use of information and communication technologies improve access to health information in townships and rural areas?
- can access to information and communication technology broadcast programmes improve the knowledge of patients on HIV/AIDS and related infections?
- have the available information and technology programmes on HIV/AIDS increased the knowledge of health care workers?
- to what extent has language contributed to the understanding of health messages disseminated through the ICTs (television, computer, Internet protocol platform and broadcast programmes.)?
- what are the cultural barriers to the dissemination of health information to patients and HCWs?

1.4 Aim

The aim of the study is to provide information and knowledge regarding the use of multimedia technologies in the education and dissemination of health information for health care professionals and patients in townships and rural areas in South Africa.

1.5 Research objectives

- to assess the use of television, IP platform, pdf files database and broadcast programmes;
- to assess whether health professionals have accessed the different forms of the broadcast content;
- to assess the perceptions, opinions and views of the patients on the different health messages, which are disseminated from the HCBM programme;
- to examine the views of the groups of audiences on the general aspects of the HCBM as a tool to disseminate and communicate health information to the general public; and
- to assess the utilisation of the HCBM by HCWs and patients and community members in general.

1.6 Outline of the report

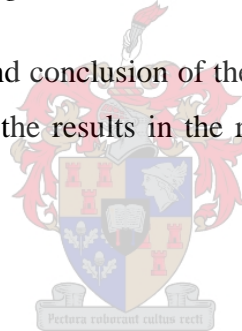
Chapter One comprises the background and introduction of the Health Channel Broadcast Media; the introduction of a public and private partnership and its contribution in the designing of the broadcast content for the HCBM in the sites

Chapter Two focuses on reviewing the literature, which systematically follows a communication strategy and information dissemination and distribution model

Chapter Three introduces and discusses the methodology of the study. The section includes the (a) research design, (b) development of research instruments, (c) training of fieldworkers, (d) sampling of the units of analysis, (e) data capturing and analysis, and (f) the limitations of the study.

Chapter Four is devoted to discussing the findings of the quantitative data. The section presents two sets of results/findings: one on the health care workers and the other on patients.

Chapter Five is the discussion and conclusion of the study. The discussion mainly deals with the integration of literature and the results in the relevant chapters, and also in the general report.



CHAPTER 2 - LITERATURE REVIEW

1. Communication models

1.1 Introduction and background to forms of communication

This section focuses on two types of communication models, namely the Basic Units Model of Communication and the New Multimedia Model of Communication. These models are discussed within the framework of the Health Channel Broadcast Multimedia (HCBM), which is a multimedia technology that is implemented in the public health facilities in seven provinces. The health facilities were located in rural areas, townships and urban areas. However, there was a special focus on facilities in the rural and township areas because they have limited communication strategies that are technologically-driven, like the HCBM, when compared to urban areas, or lack these altogether. The National Department of Health

(NDOH) initiated the idea of using the HCBM at the selected facilities in order to educate health care workers and patients, including community members, mainly regarding HIV/AIDS infections. The method of using information and communication technology like the HCBM is the basis of a Scientific Study of Health Informatics. Health Informatics Study advocates that different forms of technology may be used to augment human performance (Coiera, 1997).

The HCBM consists of two broadcast programmes, the “Online Broadcast” which was accessed by health care workers (HCWs), and the “Live Broadcast” for patients. The broadcast programmes operated distinctly for each group however, they both addressed issues of HIV/AIDS and the related infections as mentioned in Chapter 1. The HCWs’ broadcast was encrypted and they could use it autonomously. Encryption is a relatively simple measure that can be used to secure access to the computer database (Health Management Technology, 1999). With regard to patients’ Live Broadcast, they did not have direct access to their programme; they were supposed to find it readily operating every day. The facilitator and the site manager were the key staff members who were appointed by the managers of the HCBM to oversee the functioning of the broadcast like the switching on and off of the broadcast (see Chapter 3)

Since the HCBM is a new programme, a formative study had to be conducted to assess the success of the HCBM at the selected facilities (Rossi & Freeman, 1989). The assessment focused on the views, opinions and understanding of the HCWs and the patients as the audiences of the broadcast programmes. The groups gave their understanding on various aspects of the logistics, including the programmes of the HCBM as a communication strategy that conveys health messages.

1.2 Overview of communication

Communication in its simplest form is when two or more people exchange information (Johansen, 1991). Communication also takes place in an institution or organisation between different stakeholder who may be managers or groups of employees (Fielding, 1997; Swanepoel & De Beer, 1996). What has been identified with this latter communication, which is programme-or project-oriented, can be complex and difficult to maintain. Despite the complexity of the environment, it is important for people to communicate because it is the life and blood of any development taking place in an organisation or institution (Swanepoel

& De Beer, 1996). Another view is that communication is something that all people do by virtue of being human beings and this leads to them engaging in asking questions about their existence (Burch & Strater, 1974; Johansen, 1991). People can engage in communication in different ways, such as facing each other and observing the body language that they display unconsciously. This form of engagement takes place at the interpersonal level of communication.

It can also happen at times that people who are engaged in communication are far from one another and then the communication engagement becomes impersonal (Burch & Strater, 1974). This form of communication happens when people communicate at different levels, for example not at interpersonal level, as they are not all at the same place and at the same time. Communication at this level can take place by using the relevant communication channels also known as communication strategies. The channels or strategies transmit messages from the sender to the receiver (Murphy, 1994) and this applies to the HCBM.

The following discussion on the models of communication encompasses the levels of communication and the appropriate channels that may be used. Using different channels for different levels of communication comprises recognising that people are not homogeneous but may vary in many ways (Ansari, 2002). The author takes into account the psycho-social status and the traits of individual group members. These relate to among other things, the person's level of understanding of the topic that is discussed, his or her educational level and the social background, which is the environment or community of such person. It could also mean that there has to be a realisation of the health problems within the person's community and that these should be addressed adequately. This can be possible by using the relevant communication channels.

In this discussion, there are three levels that require different communication channels or communication strategies (the terms are used interchangeably). These are (i) individual level, (ii) group level and (iii) mass level. These levels of communication are best discussed in the models of communication below as the basic units of communication and the new multimedia model (Fielding, 1997; Indian Journal of Science Communication, 2002).

2. The Basic Units Model of communication

2.1 *Interpersonal communication channel*

The basic units model of communication is the two-way process of communication (Sless, 1981). The model has three components, namely the sender of the message, the message itself and the receiver of it (Doak et al., 1985; Sless, 1981; Windahl, Signitzer & Olson, 1993). The sender of the message communicates or sends (encode) message(s) to the receiver, who has to interpret (decode) it so that it make sense to her or his needs. The basic units model of communication is interpersonal, as it happens with two people engaging in a one-on-one communication; within group members or between two different groups who get together or in the case of a workshop with one person facilitating the discussion. All these forms of communication involve the sender, the message and the receiver and the two interact face-to-face. This type of interaction happens in the same place and time (Giddens, 1990).

The face-to-face interaction can also be interpreted as when sender of the message and the receiver exchange views, ideas, experiences or understanding. This form of communication allows a back-and-forth process as messages are sent by the sender to the receiver and a response is then communicated back to the sender. The face-to-face method of communication did take place at the selected facilities between the patients who viewed the HCBM, and the facilitator. The facilitator has a prominent role to play, and that is to guide the group discussion or workshop. The person who facilitates should see to it that group members maintain focus, as some members may loose focus and start to wander away from the purpose of the discussion (Compton & Galaway, 1989).

It is fundamental that in an interactive communication process the sender prepares and formulates useful messages, which are not only intended for his or her own purpose but which will also satisfy the needs of the receiver (Borcherds, English, Fielding, Honikman, Jacobs, Kurgan, Pickering-Dunn, Steyn & Van der Merwe, 1993; Murphy, 1994; Piotrow & Simon, 1997). To send useful messages is also defined as the time when the provider gives constructive feedback on questions that may be pertinent to the patient. Feedback can link the pilot study to the programme that is newly implemented in order to assess its level of viability (Bankole, 1994; Gikaru, Kinoti & Siandwazi, 1995). This HCBM is a pilot assessment study and the findings are intended to provide feedback to the management team.

2.2 Impersonal communication and printed material

This form of communication is a one-way process, as shown in the model in Figure 1 that is going to follow. The impersonal level of communication uses telecommunication connectivity to transmit messages from the sender to the receiver. There is therefore no personal connection between the sender and the receiver of the messages. Telecommunication connection includes devices such as telephone lines, a computer (keyboard, mouse, monitor and a hard drive) to send email messages and the Internet to interact with others globally (Coiera, 1997). By using telecommunication channels, this forms a link via a machine between the sender and the receiver. Both the sender and the receiver are able to communicate remotely. The other advantage of using remote access to communication, allows the sender and the receiver to give feedback to each other instantaneously in cases of emergency. These forms of media are viewed as interactive and may have multiple advantages especially for health communication efforts.

When patients have access to telecommunication connectivity, and have access to a telephone and related devices, they are able to manage their health even when they are at home or anywhere out of the health facility. Patients can connect with health workers; explain their health status and get feedback. Patients do not have to visit facilities often when such communication strategies are available to them. These forms of communication channels therefore help to facilitate access to health support, and services are extending the health communication efforts between the patient and the HCWs (Health Communication, 2006).

Among the other telecommunication devices that are impersonal, the computer is another valuable communication strategy that is used by the HCWs as an Online Broadcast Programme. One other importance of the computer is mainly its abilities, e.g. it has ample database storage and the size varies according to the needs of the owner. The data that is stored in the database can be retrieved, changed, deleted or added whenever the need arises. The user is able to reproduce data rapidly and easily, and this data can be printed from the database if there is a printing device connected to the computer. The advantage of having a printed document is its portability. The owner of the document can use for various reasons and in different situations (Coiera, 1997).

Regarding the HCWs at the selected facilities with the HCBM that has been functioning, it also has a computer connection. The computer is a tool for accessing messages from the pdf

files which are found in the ViKo box database storage. According to Coiera (1997) the other advantage of having access to information communication technology (ICT) connection especially the Internet, it can broaden the scope of access of the user. For instance, HCWs can be able to interact with their peers anywhere in the world and communicate issues of best practice which are based on health.

3. New multimedia model of communication

The one-way line, which is the new multimedia model of communication, is shown in Figure 1 below. The new multimedia model consists of only two relations: the message and the audience (receiver) who is the viewer of the message (Sless, 1981). The new multimedia model is different from the two-way lines of communication in that, the sender or producer of the message is not physically present and the message can exist without the sender or producer. When the author is absent, the reader or receiver of the message needs to make his or her own interpretation of the message (Sless, 1981).

Figure 1 that follows illustrates the different categories of the one-way line of communication channels and those of the two-way lines of communication channels. One of the categories of the one-way line as mentioned earlier is the new multimedia which is an audio visual. The new multimedia devices produce images with sound, and viewers at the same time are able to listen to the communicated messages. According to Borchers et al. (1993), the language and tone of voice of the multimedia presenter should match that of the audience and the topic that is discussed should be relevant to the needs of the viewers. The HCBM communicated its messages in five languages. This will be discussed in detail in the chapter which deals with the research findings. Another form of multimedia that is different from rest is the radio. It is one of the popular man-to-man methods of communication as it is based on the audio-voice platform. It has been generally popular however, it does not form part of the HCBM.

The HCBM is a new multimedia communication strategy that is widely known for its benefits to the audience, especially as regard to health and a better life. Some of the aspects regarding the audio visual mode, like the HCBM, are the ability to change behaviour and the attitude of the audience (Piotrow & Rimon, 1997). It increases the knowledge on a particular topic depending on the need of the audience (Murphy, 1994). Multimedia have always been recognised for its effective communication by influencing change in behaviour (Compton &

Galaway, 1989; Murphy, 1994). In addition, by using multimedia to communicate information on behaviour change, this method is recognised as effective against the spread of HIV/AIDS. Multimedia has been used effectively as mass communication, mass education and creating HIV/AIDS awareness (Gudeta, 2004). Figure 1 below illustrates a variety of the one-way line of communication strategies and of the two-way lines of communication strategies.

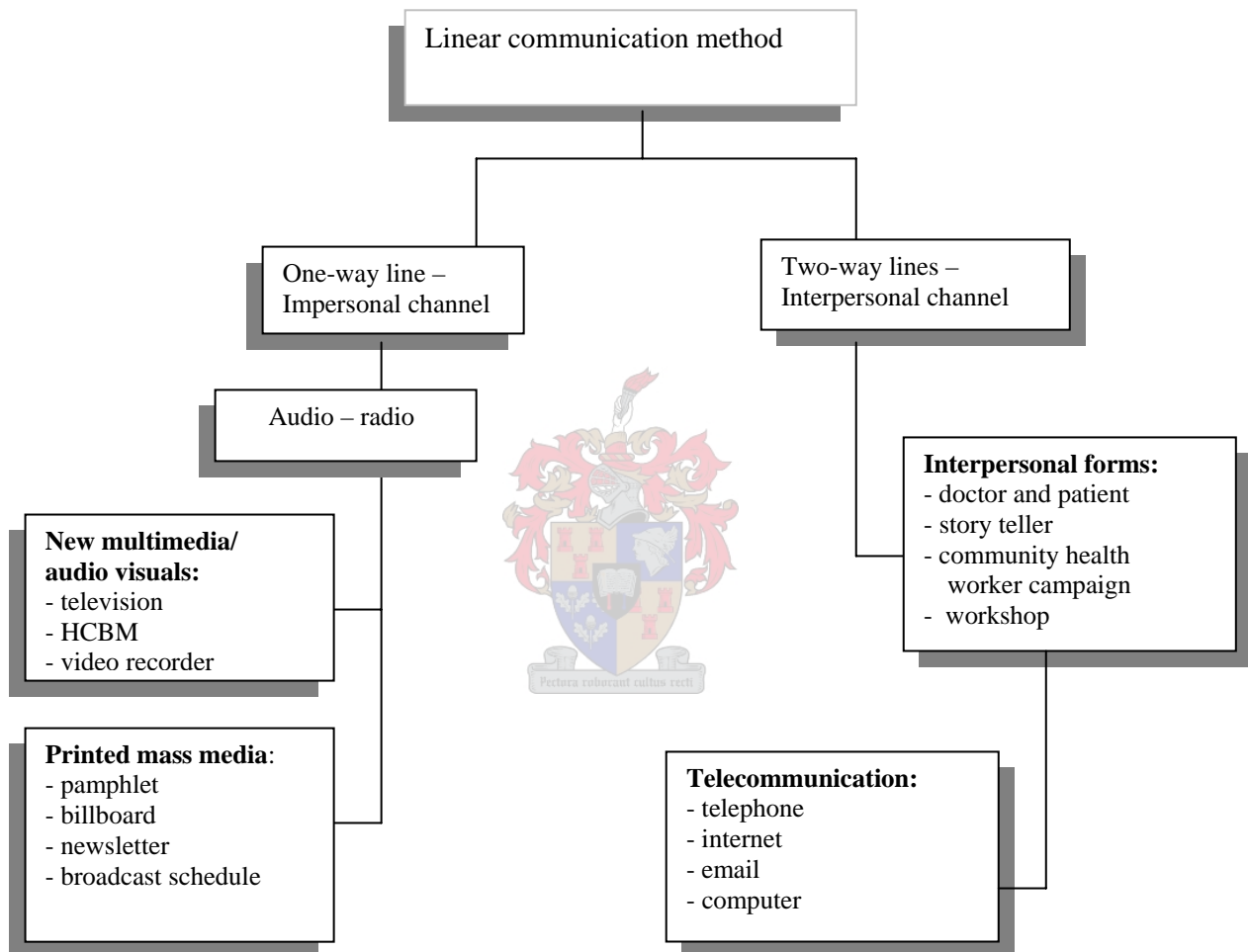


Fig. 1. Linear communication model with two separate lines of communication

The model in Figure 1 shows that the lines of communication are linear as they are distinct in their structure. The one-way line and the two-way lines of communication do not meet or converge anywhere in the model. The model further shows that under each line of

communication there are groups of communication channels. For example, the new multimedia or audio visuals include the television, HCBM, and the video recorder. The radio is only an audio communication channel. The other types are the printed mass media which are *voiceless* as they do not have any sound but require a person to be able to read the information. The model in figure 1 is important as it shows that for communication to take place; different channels should be used for different reasons (Sless, 1981; Windahl, Signitzer & Olson, 1993).

When using the correct channel, it is essential to promote good communication practice such as sending clear messages. This is done by taking care of barriers that may hinder the process of communication. One of the barriers that are commonly experienced is the noise, which plays a negative role in message transmission and interaction (Borcherds et. al., 1993; Swanepoel & De Beer, 1996). These authors are also of the opinion that reception and acceptance of the communicated messages may be affected by noise. If the place is noisy this may hamper reception of messages that are communicated and that may eventually have a direct effect on the acceptance of the messages as the listener or receiver of the message may not have heard it clearly (Swanepoel & De Beer, 1996). However, while there are definable hindrances in the communication process, the Swanepoel & De Beer (1996) emphasise that communication should continue to take place. They acknowledge that communication is not an easy process especially when there are a number of people involved.

4. Convergence method of communication

The convergence method of communication (CMC) is based on the understanding that the sender and the receiver of the communicated messages engage in an interactive process (Piotrow, & Rimon, 1997). The CMC has its basis in interpersonal communication. The CMC does not support the one-way line of communication, which is regarded as a monologue method of communication. A monologue method of communication transmits messages to the receiver or listener and the sender of the message is not present, as Sless (1981) indicated. Monologue method of communication is the audio-visuals, such as the HCBM or television monitor. The radio is a monologue method of communication, which has been commonly used for a long time by most communities, especially those that cannot afford technology-orientated multimedia (Mytton, 1983).

The CMC has redefined communication by shifting from the monologue model to adopt a more interactive model in which the sender of the message and the receiver engage in a dialogue (Piotrow & Rimon, 1997). The dialogue communication method allows the sender and the receiver of messages to get involved in sharing their views, opinions and experiences (Rogers & Kincaid, 1981). The dialogue form of communication is interpersonal and it promises to have more balanced power relationships between the sender and the receiver of communicated messages (Windahl, Signitzer & Olson, 1993). The change is also because both the sender and the receiver have reached a level where they are seen as participants in the process (Rogers, 1992). As participants, they can have mutual understanding on the topics that they are discussing and this may potentially influence them. When participants engage in dialogue communication, they share ideas, opinion, feelings, attitudes or emotions with one other person or as a group (Rogers & Kincaid, 1981; Theodorson & Theodorson, 1969). A dialogue communication might have taken place during the discussions between the groups of patients who were the potential viewers of the HCBM programme and the facilitator.

The interactive communication may further develop from mutual understanding to a mutual agreement on personal information. Mutual agreement among the participants can occur when there is trust of each other and this only develops over time. Participants consistently involve in a dynamic process of giving feedback to each other and thus strengthen their relationship (Piotrow & Rimon, 1997). Interaction that promotes feedback on the messages that were discussed is a key factor, especially in the light of the broadcast messages that are based on sensitive topics, e.g. HIV/AIDS. There is a high possibility that participant would gain knowledge from the feedback of the discussion.

5. Information dissemination strategy

5.1 Background and introduction

It is important to acknowledge that there is an overlap between the two concepts communication and information. In this document, an attempt has been made to discuss these concepts independently. There are two justifications for separate discussion. One is taking into account that the discussion that focused on communication has been presented earlier in the literature. The other reason for separate discussion deals with the structure of information. The structure of information consists of two categories: new information and given

information (Brown & Yule, 1983). New information concerns that which is not known to the person, while given information is already known. The Health Channel Broadcast Multimedia (HCBM) programme contains both types of information in its messages. In the case of given information, viewers may have listened or viewed similar information before but not from the HCBM, which means the information may be from other sources. It is assumed that viewers can gain additional new information from the messages of the HCBM, basing this on the fast growing rate of medical health information.

The discussion on information that is dealt with here, is within the framework of the dissemination and distribution strategy. On the whole, the study is centred on information and communication technology (ICT) and the HCBM that is assessed is one of the forms of ICTs. The HCBM was a government initiative, which recognised that most rural and townships areas have the largest health burdens and yet they have least access to information and health care services. The HCBM is an audio-visual strategy that is used in these areas in an attempt to narrow the information gap in the public health sector. The ICT disseminated health information to empower community members, especially as regards to health promotion (United Nations Information and Communication Technology Task Force, 2003)

5.2 Overview of the information strategy

Before embarking on the discussion of the information dissemination and distribution strategy, it is necessary to demonstrate the usefulness of the information strategy, which has been used at critical stages in the management of the information technology (HCBM). Some of the key processes that are relevant for the discussion and the study are (i) planning and (ii) controlling (Burch & Strater, 1974).

Planning is a process that takes place at management level and comprehensive information should be made available at this stage (Burch & Strater, 1974). Planning should be conducted prior to any activities. The information that is gathered during the process is used to guide management on the criteria they have to meet in order to achieve the goals and to pursue the actions of the programme or project. Throughout the planning process, the management team brainstorm ideas to produce information that will be used to develop a comprehensive plan of action. Information that is made available in the process should also include ways and means of reducing uncertainty or any reprisal that can be experienced on account of the programme. A plan of action document with the compiled information will be used as a guide for the

management team on how to conduct the programme successfully (Burch & Strater, 1974). Planning processes seemed to have been conducted by the team of management of the HCBM programmes (National Department of Health, Mindset and Sentech). Management became involved in collaboration processes at different levels before the HCBM could be fully developed and installed (see Chapter 1).

The *controlling process* follows planning and its purpose is to ensure that the goals from the planning are obtained via feedback information to management. Feedback is as fundamental as planning as managers rely on this information in order to measure the expectations of the project and of the targeted users against the programme goals (Burch & Strater, 1974). For instance, this study is conducted in order to assess the functioning of the HCBM in the selected facilities of the study. The report on the research findings will contribute to improve the broadcast programme further and thereby maximising its success. The findings are intended to provide feedback information that is mainly quantitative. This information is based on the analysed data collected regarding the views, opinions and understanding of the two groups of audience.

5.3 Information dissemination strategy

The information dissemination strategy is applied when the sender takes the initiative to prepare information, and to disseminate or dispatch it to the user (Defining a Distribution Strategy, 2006). The information that is disseminated should be interpreted as meaningful and it should be developed from the context of the needs of the group of the audience (Coiera, 1997). Disseminating information from the computer, which is part of a valuable information technology network, should reach the end user at the time of need. The disseminated information is meaningful for the needs of the users, if it is relevant and appropriate for the time, and, if it is of good quality, users are able to gain access to it and there are minimum or no charges that the user has to pay in order to gain information (affordability) (Moholi, 1994). It was important for government to undertake the task because of the high costs involved in developing the infrastructure that can maintain and sustain the production of multimedia. The following authors (Corner, 1995; Delanty, 1999; Murphy, 1994; Schuurman 1994) are of the view that those who want to engage in the production of the multimedia should form a partnership in order to share the high costs and resources. The HCBM is managed by a public (NDOH) and private partnership namely, Mindset and Sentech.

5.4 Methods of disseminating information

When information is disseminated to the users, the sender can apply two methods: it can be done manually, which is the same as using traditional means or through the electronic technology (IT). Disseminating information manually means that the information is physically made available and this involves many tasks that are discussed later. By using IT means that there is remote access to information (Burch & Strater, 1974). Both methods for disseminating information are available at the selected health facilities. The management of the HCBM delivered copies of the printed supplement to the facilities as additional information to the broadcast programme that the HCWs were viewing. At the same time, the audience at the facilities had the advantage of viewing the HCBM broadcast. The discussion below relates to the different forms of sending information that the sender can use to reach the receiver or viewer. Distribution in this discussion is associated with physical delivery of information as compared to using IT.

5.4.1 Traditional forms of distribution information

The following discussion on traditional forms of information distribution deals with five points. An attempt has been made to cover a broad spectrum in this area.

There are commonly known traditional methods of making information available, such as books, pamphlets, newspapers, health news and news letters. Some of these are obtainable at the health facilities to inform the public. Pamphlets are generally available in most facilities. A pamphlet is a small piece of information that is designed in such a way that it touches on different areas of health. All the printed forms of information that have been mentioned are portable. The user can take it with and read it at a convenient time. When the printed documents are ready and compiled, they require physical engagement. What is noticeable with the information distribution strategy is that, people participate in different tasks of collating, writing, printing, binding of books and news letters and sorting of pamphlets (Giroux, 1992).

When the printed information has to be distributed, this can become a huge task as piles of printed material are sent to specific users or outlets. The distribution task can be done physically or a mailing system can be used, depending on the geographic location of the distributor and the users. If distribution is within the neighbourhood, then the package can be delivered by hand or it may be transported. The prepared package may have to be sent to

areas that are far from the despatching point. With such long distances such as other countries, it involves mailing services of different kinds (Giroux, 1992). Some of the options can be by sea and this can take some days before the packages reaches its destination, while when using the airfreight the package can be reach be received within hours. Whenever the sender has to mail printed material, he/she has to take precautions to insure the parcel against theft, lost or damage, and also considering the quickest time to reach the user. All these mechanisms involve high costs, mainly on the side of the sender. The entire process of preparing and distributing the mass material requires human labour to engage physically, this could be the reason that it is known as manual labour.

Disseminating information traditionally has been commonly practiced in most health facilities, especially those that do not have ICT in place, like the HCBM. For many years facilities have mainly depended on approaches that are managed by staff (Health Communication, 2006). Health care workers have engaged in health education and health promotion tasks in the facilities and during community awareness campaign. The involvement of professional health care workers in health education and promotion has not always been well managed. One reason for this is the shortage of adequately trained personnel (Health Communication, 2006). The lack of trained personnel has been a problem for a long time (especially in the rural and township areas). Inadequately trained staffs that provide health information can have direct implications for the individual service users and the rest of the community members who intend to use the information meaningfully in their lives (Health Communication, 2006; IAPA, 2002). In Chapter 1, it was mentioned that government has used the HCBM, to try and deal with underdevelopment of health staff for health care in areas that have been lacking such services.

Another challenge of using the mass printed material for health promotion and education programmes, is the language in which it is written. According to Doak et al., (1985) and Suchman, (2000) the language issue should be taken into consideration during conceptual stages. The authors add that, failing to accommodate the language needs of the target group(s) can have negative effects on them. Thiong'O, (1993) is of the view that, in most cases, health care workers do not have the ability to address the audience in their respective languages. One other contributing factor to the poor use of other languages by HCWs, is that their curriculum had been written in English and when they have to produce health programmes, they use English, as it has been their medium of instruction (Mbananga, 2002).

However, management of the HCBM have tried to accommodate the problem of language diversity by introducing five local languages in Online and Live Broadcast programmes (see Chapter one).

5.4.2 Disseminating information using the information technology

When an electronic system, which is information technology system, is available, the sender of the information can use it to disseminate information instead of the conventional form. To use IT both the sender and the user can have access to a number of advantages that may assist in disseminating the information in a much more meaningful way and within a very short space of time. Some of the opportunities that are readily available in an IT system it defeats the problem of insufficient space for storage for example the patients files in a health facility. The data is made available electronically anywhere in the world within a very short time (Coiera, 1997). Sending information electronically does not use any physical mailing processes, and the fees which are required for the task can be minimal (Harris, 2002).

In the event that the facility or institution is changing from the traditional forms of sending information to using IT (HCBM), it is advisable to provide training of personnel to capacitate with the relevant skills (Rodriguez & Ferrante, 1996). When personnel are not trained with the skill to use IT, this may *derail* the process of the personnel embracing the IT system and using it. The authors further maintain that there is a need to have adequate training programmes that are suitable for professional staffs (personnel). The programmes should be designed such that the professional staffs should find it easy to use the IT systems. By having such a programme in place, the professional staffs have higher chances of becoming competent for the new functions, which may be assigned to them in the workplace (Rodriguez & Ferrante, 1996).

This could relate to the HCWs, who had to use the On-demand Broadcast programme independently. The HCWs were not given any options but to access the stored files from the Online Broadcast. The ability for the HCWs to use the Online Broadcast programme was meant to prepare them (health care worker) to take part in the rollout of antiretroviral (ARV) treatment that government was conducting nationally.

The discussion that follows focuses on the forms of disseminating information, which can be either active or passive.

5.4.3 Active and passive information dissemination strategies

Active information dissemination/distribution

Active dissemination takes place when the search, exchange or interaction pattern of information is encouraged by using ICT. This happens when the user has access to ICT. By having access to ICT, this may encourage productive processes of searching and accessing information. Individuals may find themselves conducting intellectual routines and becoming more absorbed in the search (Rodriguez & Ferrante, 1996). In such a situation, it is advisable to implement a simple automated system for the users to operate. A simple IT system can eliminate the manual system, which is associated with bureaucracy (Rodriguez & Ferrante, 1996). Users become encouraged in viewing the stored data, which may be what they already know and some additional new ideas that they can learn. The problem may arise when people are regular users of IT and the systems are easily available. This may have negative consequences, when the sender or manager of the IT system may be unintentionally promoting information-seeking behaviours among the users (McQuail, 1969). The author is of the view that the sender or manager can assist those with limited computer skill to access data and that may help to eliminate such behaviours among users.

Passive information dissemination

It may also happen that what was designed to be an active information disseminating strategy ends up in a “time-filling” type of a strategy (McQuail, 1969). This occurs when the sender becomes dedicated mainly in distributing pamphlets and printed leaflets routinely and in an almost passive way. Passive dissemination of information is found where people receive or take information randomly, because it happens to pass before their eyes (McQuail, 1989). However, receiving information indiscriminately does not suggest that there is a direct need for the printed information or material. This form of distributing and obtaining useless information results in information pollution (Rogers & Rogers, 1976). Information pollution occurs when “worthless” information is circulated or supplied or where people are readily exposed to it all the time. At the facilities with the HCBM, the managers supplied HCWs only with the printed supplement monthly. Patients could use the pamphlets with the general information but also with health-related information.

5.4.4 Advantages and disadvantages of the information distribution strategy

Advantages of applying the distribution strategy at the institution

If there is an information sender who manages both the ICT and the manual systems, this could be advantageous to the information users and also to some extent to the sender. The advantage is that both systems are available in the same place and the users have the opportunity to choose which system they prefer. However, this may be disadvantageous if the systems are not well managed. For instance, if the systems are complex, the users may not know what is available or where to search for their information needs (McQuail, 1969). But, this does not mean that individual users do not know what their needs are, it problem can be that management is not organised in such a way that there is easy access to the necessary information.

The *advantage* of having an information manager (sender) is that she or he may assist in defining and to some extent providing the information needs of the individual users. The sender can make the necessary information available manually or electronically, to ensure that people have access to information on time. It is critical to have a trained manager who can assist users who want to conduct information searches on the ICT system, especially users who are attempting to search for the first time (Rodriguez & Ferrante, 1996). The authors regard this stage as a premature stage where users are exposed to the ICT like the computer for the first time, and they (users) may be going through drastic changes of adapting to new systems. At early stage change, users may find it difficult to adjust to the new system and to move away from the conventional methods of accessing information (Rodriguez & Ferrante, 1996).

Disadvantages of making information available for users

The discussion on the disadvantages of preparing information for the users may be linked to what was discussed earlier on passive information dissemination or distribution of the printed supplement for HCWs and pamphlets for patients that took place in the selected facilities. Generally, this section mainly focuses on how the sender and the user are able to use the information dissemination strategies more meaningfully. It is also necessary to show the value of having a sender or manager, who takes care of needs of the users.

If the information sender or manager distributes printed information, he or she can view the process as an advantage. The sender may have to prepare printed material for large groups of users. The information sender/manager would therefore have the opportunity to produce the printed material at a very large scale than just assisting an individual. At the same time to

produce at such large amounts, the sender/manager is making sure that the costs to reach each user are low (Windahl, Signitzer & Olson, 1993). This mass production is possible, especially when a distribution strategy is in place in the area or at the institution. This means there is an infrastructure available, the necessary resources and a skilled manager to successfully manage the place.

However, Rogers and Rogers (1976) are contesting whether the sender who produces large quantities of information is making any gain. This is considering that the cost per relevant information consumers or users may be high as they are being reached in an indiscriminate way. The sender who produces information randomly may prepare additional printed material, which may be unnecessary. By producing information randomly, the sender could find him or herself in a situation of having to cover the cost of the additional printed material (Murphy, 1994).

The other disadvantage is experienced by the *user*, when the prepared written material is delivered too late for him or her to use. The late delivery is possible because the sender is solely responsible for collating and sending the printed information to the users. This can happen only when the production of the written material is complete. What can also be of concern is that the collated information is based on sender's assessment of the needs of the users, (Windahl et al., 1993). It can happen that the users realise that the information does not address their current health needs which may be because it is late and outdated. When the information is not related to what the users need, most of the time they will not react to it and the prepared information becomes obsolete (Windahl et al., 1993).

The other challenge is when the information sender/manager prepares written material in the language that can only be understood by some of the user. This can be seen as a form of controlling the access to information that is produced. This can imply that only a certain group of users are catered for, although this may not have been done deliberately.

With regard to producing written material it can be viewed as a strategy that only caters for a group of literate users and excludes those who do not have any form of schooling and are unable to read. The problem of having illiterate people is most common in some African countries where people have been exposed to spoken words and or those who are accustomed to learning by listening as opposed to reading (Airhihenbuwa, 1995; Faseke, 1990). With the

audio-visual like the HCBM in place, both groups are accommodated as the presenter communicates and at the same time the viewer can observe the actions.

6. Information-gap theory

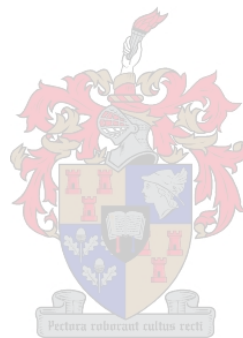
The focus here is on a group of users who have been identified as active information seekers, who use IT. The information seekers are also enthusiastic and motivated to search for information on the computer. According to Abrahamsson (1972), people who are busy and continue to seek and search for information, often feel motivated to do so. The motivation to conduct information searches regularly depends on whether the information seeker realises the danger of the situation need in which he or she is and conduct the search. The search is because the person or seeker wants to use the information to resolve the identified problem (Hornik, 1988). Both the HCWs and patients were exposed to the HCBM health messages which may have empowered them with meaningful ideas that relate to their health needs.

The information-gap theory describes motivated people as those who are already well informed, but who continue to seek additional new information to increase their knowledge (Bonfadelli, 1987). According to the author, these people have already been identified as the potential group of information seekers. Their participation in information searches widens the gap between the information-rich and the information-poor (Bonfadelli, 1987). This can also be termed *media-rich* and *media-poor* when users continue to view the multimedia like the HCBM in order to gain more information and to some extent knowledge.

7. Challenges regarding access to information technology (IT)

While it may be that only some motivated information users are regularly using ICT. It can happen that highly motivated users may tend to think they have the right to use the system above others, and therefore seize the opportunity to display aspects of control of ICT above their subordinates (Dick, 2002; Lyonn, 1990). To reduce control for example in a workplace, it may be necessary to make ICT equally available to everybody and promote free access (Rodriguez & Ferrante, 1996). ICT should not be the privilege of a few people who may be computer literate but should also be available to those who are least skilled in operating IT. By allowing control to continue, the motivated group may think they are the ones who have the power or right to use the system above others as they may unintentionally be controlling or depriving others of access to information system (Dick, 2002; Lyonn, 1990)

The subordinates may have fewer opportunities to use IT and will therefore experience powerlessness. It is essential to encourage people to use ICT especially where the system is available. People should be given the necessary support, to train them so that they can be computer literate. With the knowledge that they gain by retrieving information from the computer, people can be in a position to express themselves freely in most situations when they are confronted with challenges (Dick, 2002). The HCWs who used the Online Broadcast programme of the HCBM seemed to have had the chance to gain valuable information as mentioned by accessing the pdf files and archives from the database as stated in Chapter four.



CHAPTER 3 - METHODOLOGY AND THE DESIGN

1. Introduction

This chapter focuses on the methodology and design of the study, which was conducted in public health facilities. These facilities are situated in townships as well as rural and urban areas in seven provinces (see sampling section below) in South Africa. The purpose of the pilot study was to conduct a formative assessment of the success of the Health Channel Broadcast Multimedia (HCBM) functioning at the facilities. This chapter consists of the introduction of the research design, which is the rapid assessment and response (RAR) method. The RAR method was used to conduct a quick appraisal of the HCBM. The key areas of the RAR are highlighted and the quantitative method or the form of the survey is also discussed.

The chapter further describes how different types of research instruments and documents were designed and used to perform different tasks of the study during fieldwork. The instruments were the two types of structured questionnaires. One was used with the health care workers (HCWs) and the other with patients. The consent form was also developed and used with every respondent. In addition, an existing training manual from the MRC was upgraded and used to train fieldworkers. With regard to sampling, facilities and HCWs were sampled by using the convenient method because of the limited number of these. Respondents who are the patients were selected by applying the systematic random sampling method. Other key areas that have been discussed in the study include the process of negotiation with the gatekeepers to gain access to the sites and the method of recruiting fieldworkers who collect data using a structured questionnaire to collect data, which was then analysed using the statistical package, the STATA Version.

2. Research design

2.1 *Rapid assessment and response method*

The RAR method was used to conduct a quick assessment of the HCBM programmes. The HCBM is an information and communication technology (ICT) system, which is currently operating in the selected areas. The RAR was useful for the study because of its ability to generate data under difficult situations by applying the triangulated methods. Triangulation is applied when the study design requires using a range of methods to improve the validity of

the collected data (Patton, 1987). Multiple methods have been applied in the initial report of study. Some of the methods that were used include focus group discussions, in-depth interviews, obtrusive and unobtrusive observation methods and structured interviews.

A report on the primary study has already been published. This current secondary analysis relies on the quantitative data of the study because it was not adequately utilised in the original or main document. It should be noted further that this is not a re-analysis of the data, as the notion of secondary studies normally imply, but a first and the main analysis thereof. The term *secondary analysis* is used only to distinguish it from the first or so-called *primary analysis* of the report.

RAR key areas

The RAR method was recommended for the study because of some of its key characteristics. By applying these fundamental aspects of the method, the primary research team was able to complete the major areas of the study within a set timeframe of six months. The key advantages of the RAR as recommended by the World Health Organisation (WHO, 2000) which were of value for the study included the following:

use of multiple strategies to maximise data collection and validity because the traditional methods were not feasible due to logistic constraints;

RAR methods, which were instrumental in overcoming limited resources such as human resources, financial constraints, physical resource and time limitations;

usefulness of the method because its aim was to produce an action plan and data quickly within time limitations; and

methods, which enabled the research, team to establish community assistance or participation in the study, which was a requirement.

3. The quantitative technique

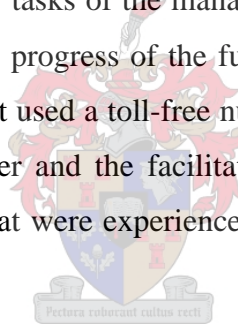
As mentioned above, the RAR method also provided the application of the quantitative technique that produced quantifiable and measurable data. This application included a structured questionnaire, which generated numerical responses. The responses were the

views, opinions, understanding and experiences of the groups of audience, namely HCWs and patients.

3.1 Scope of the sites

Each site where the HCBM was installed was identified by certain features. The site had to be a public health sector with health care facilities ranging from clinics to primary health care centres and hospitals. The rural areas and townships were areas, which were identified as having the need for ICT systems to disseminate health information, especially on HIV/AIDS. The site with the HCBM had to have a fully trained facilitator who was well informed about how to operate both the Online and Live Broadcast programmes. Another task for the facilitator was to conduct focus group discussions with the patient viewers and to train HCWs to use the Online Broadcast independently.

The selected site had to have a site manager who was responsible for overseeing the daily functioning of the HCBM. Other tasks of the manager included liaising with the manager of Mindset to give feedback on the progress of the functioning of the HCBM. In addition, the site had to have a connection that used a toll-free number. Having such a connection enabled key people, like the site manager and the facilitator, to contact the technician in order to report any technical problems that were experienced during the functioning of the broadcast programmes.



3.2 The research instruments

Certain research instruments were designed, namely two structured questionnaires – one for the HCWs and the other for patients. The consent form was developed and a training manual that was available was upgraded.

Pre-testing of the instrument

Before the questionnaires were used for the interviews, they were pre-tested at the facilities involving the lay counsellor, nurse, site manager and the patients. All these people had viewed the HCBM programme beforehand. Viewing the broadcast programme was required before the person could participate in the interview since the research questions were based on the HCBM messages. The test checked for reliability of the local languages that were used in the questionnaires.

3.3 *The structure and use of the questionnaires*

Two structured questionnaires were developed. One was used with the HCWs and the other with patients. The questionnaires asked mainly close-ended questions. Most questions were in a matrix form to make it easier to compare the responses from different respondents. In order to counteract the monotonous process of using matrix questions, a filtering question was introduced at the beginning of each section to guide the interviewer and the respondent on the questions that were to follow. The method of using different key statements at the beginning of each section helped to reduce ongoing expectations with both the interviewer and the respondent (Babbie, Mouton, Vorster & Prozesky, 2003). Both questionnaires were originally developed in English and then the questionnaire for patients was translated into isiXhosa, isiZulu, Sesotho and Afrikaans. These were the languages that were widely spoken by patients. The questionnaire was translated into the language of the respondent, in order to increase the reliability of the instrument and to maximise the respondent's understanding of the content of the questionnaire. When the respondent has better understanding of the questions, this will influence his or her level of participation and will improve the quality of responses to the questions.

3.4 *Training manual*

The training manual that was used for training fieldworkers in the sites, was an existing document, which was developed at the MRC. It was upgraded to include terminology that was relevant for the HCBM content. The content of the HCBM manual was designed in such a way that the fieldworkers could adapt to it reasonably quickly. The upgraded document was written in English as it was used by retired professionals, such as nurses, schoolteachers and health educators. The assumption was that these professionals were conversant in English. This assumption is based on the general understanding that these professions make use of a curriculum that uses English as a medium of instruction. When the manual was completely designed, researchers used it to train fieldworkers on site. The aim of the training was to empower fieldworkers on how to collect quantitative data using a structured questionnaire. Fieldworkers were trained in such a way that they were able to conduct interviews independently at the facilities.

3.5 *Consent form and the concession process*

The consent form was originally developed in English. This was later translated into the languages of the patients. The interviewer had to explain the content to the respondents explicitly, so that they could make informed decisions on whether or not to participate in the study. On agreement, the respondent signed the form together with the interviewer and a third person, who witnessed the agreement. This process was enforced so as to protect both the respondent and the interviewer.

Ethical approval

The National Department of Health and the Medical Health Council Ethics Committee granted ethical approval for the study to assess the HCBM in the selected public health sectors

4. Sampling method

Two different sampling techniques were employed to select the units of analysis, the sites (i.e. health facilities) and the groups of audiences (patients and HCWs).

4.1 Sampling of health facilities at the sites

The convenient sampling method was used to select public health facilities in the rural areas, townships and urban areas. To sample the facilities conveniently, only facilities, which had managed to install the HCBM, were selected. The facility had to have a toll-free connection to liaise with the management and technicians and to update them on the progress of the HCBM. The facility also had to have a site manager who could liaise with researcher to discuss the preparation of the visit to the site. The selected site also had to have a facilitator who was responsible for training the HCWs to use the Online Broadcast programme. Training of the HCWs to use the Online Broadcast was not optional, as they had to use the broadcast material. The facilitator had to conduct group discussions with patients who were the potential viewers of the Live Broadcast programme. The active involvement of the HCWs and patients in the HCBM programmes determined their chances of participating in the interviews. The facility had to be accessible for commuters and to community members. Facilities that did not comply with the aforementioned requirements were not sampled. An example of sites that could not be included in the study, are identified below.

4.1.1 Sites excluded from the selection

Two of the nine provinces were excluded from the study, one in the Free State Province and in the Mpumalanga Province. In the Free State Province, there is a similar ICT programme, which was already operating successfully. To duplicate the same ICT system would therefore have been a waste of resources. In the Mpumalanga Province, the HCBM was not yet completely installed. Table 3.1.1 and Table 3.1.2 below shows the stratified method of selection of sites by province, location, type of health facilities and the area where these are situated.

Table 3.1.1 Sampled sites and the locations of the facilities by province

Province	Location	Type of facility	Area
KwaZulu-Natal	Umlazi	Clinic (1)	Township
Limpopo	Mahwereleng	Clinic (1)	Township
Gauteng	Esselen	Clinic (1)	Urban
	Levia Mbatha	Health care centre (1)	Township
Northern Cape	Galeshewe	Health care centre (1)	Rural
North West	Taung	Hospital (1)	Rural
Western Cape	Eben Donges	Hospital (1)	Urban
Eastern Cape	Cecilia Makhwane	Hospital (1)	Township

Table 3.1.2 Number of sampled sites, facilities and areas

Number of different sampled facilities	Areas
• provinces=7	• townships = 4
• locations = 8	• urban = 2
	• rural = 2
Facilities	
• clinics 3	
• health care centres =2	
• hospitals = 3	

Table 3.1.1 and table 3.1.2 show that the types of facility were relatively sampled across health facilities, which were the clinics, hospitals and less health care centres. Most of the selected facilities were situated in the township areas than in the urban and rural areas.

4.2 Sampling of the patients

A sample frame was drawn from the total population of all the patients who presented at the facility on the day of the interviews. The patients at the facility could be regarded as a sample frame, since they were already exposed to the HCBM programme. Exposure to the broadcast

programme made such person a potential viewer of the Live Broadcast programme. A systematic random selection was applied by using case intervals. The interviewer selected every third or fifth potential viewer in the waiting room. The interval also depended on the number of viewers on that particular day. The patient sample size was based on the list of the monthly attendees; and an assessment could be drawn from this list. The interviewers had an idea of how many patients to expect for interviewing on certain days of the week. For instance, Mondays were very busy, while there were fewer patients on Fridays. The site manager supplied the interviewer with the latter information.

Systematic random sampling was used to increase the validity of the sample. Random sampling is seen as being more conducive to accurate findings than “ordinary” systematic sampling (Bailey, 1987). The other advantage of using a probability sampling method is that it excludes the possibility that interviewer/investigator bias plays a role in the selection of cases/patients. The initial sample size was 131. Only three questionnaires were dismissed because they were incomplete. In the end, 128 questionnaires were returned from the field.

4.3 Sampling of HCWs

The convenient sampling was also used to select forty-nine HCWs. To sample conveniently implied that the interviewer had to include all the potential HCWs who have viewed the HCBM in the study. The potential respondents were identified as *information-rich* respondents. Information-rich respondents are those respondents who have knowledge to share on the topic of the study. The assumption was that the potential HCWs would share a great deal of new information of the HCBM Online programme. The sampling method was non-probabilistic and could not be generalised to the larger population with only forty-nine respondents. These were the only relevant HCWs across the selected sites. The respondents were used intensely throughout the study as some had significant roles to play, for example the site manager and the facilitator (see further below).

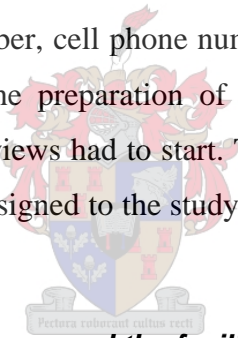
5. Negotiating entry to the sites

Before fieldwork processes were conducted at the identified facilities of the selected sites, the researchers had ongoing discussions with the individual site managers on the procedures that had to be followed during the visits at the facilities. Researchers also held discussions on the logistics of the installation of the HCBM with technicians who were responsible for installation tasks and training of facilitators.

The visits to the sites to discuss matters of getting started with the study got underway in November 2004. The MRC executed an action plan and part of the plan was to conduct a thorough examination of the installation work. The examination processes were completed early in December 2004 and only then the technicians were able to provide the researchers with relevant information. These were names and physical addresses of the facilities that were due for installation of the HCBM.

When installation at the facility was completed, the technician provided details of the work that is completed including the dates. It was vital for researchers to have such information, as they were able to arrange for fieldwork to start at the facilities where installation was completed at an earlier date. To apply the method of early finish and early start for fieldwork, researchers wanted to allow the viewers enough time to view the HCBM programmes and to become familiar with its messages prior to the interviews.

The technicians provided researchers with names and contact details of the site manager, namely the office telephone number, cell phone number and e-mail address where available. The contact details facilitated the preparation of the site visits with the manager to set appropriate times when the interviews had to start. The manager also provided the list of the names of the HCWs who were assigned to the study and the dates and times when they could be interviewed.



5.1 The role of the site manager and the facilitator

The site manager was the facility manager who is also the sister-in-charge by profession. The site manager was appointed by the management of the HCBM. The role of the site manager was to oversee the overall functioning of the HCBM. Most of the time the site manager interacted with the facilitator to get feedback on the progress of the training of HCWs and the responses of patients which were identified during focus group discussions. The facilitator received first-hand training on both HCBM programmes from the technicians. The facilitator and the site manager had the ability to make suggestions to the technicians and the managers of the HCBM on behalf of other staff members.

5.2 Recruiting fieldworkers

When the researchers decided to involve community members as fieldworkers in the study, they relied on the knowledge of the site manager since she/he had a direct link with people

from the community. The researcher required that the fieldworkers should be retired professionals. By tasking the site manager, it was believed that he or she would know the professionals who retired at the facility. To have the site manager as a recruiting source, researchers could get reliable fieldworkers based on the relationship that the professionals had with the site manager.

Other supplementary characteristics of a potential fieldworker were the following: (1) the person should at least have a reasonable understanding of any form of research work so that she/he was able to adapt quickly to the processes of research and work independently in the field; (2) the person had to reside in the neighbourhood where the selected facility for study is situated; (3) the person had to be knowledgeable about the language of the community in the area where fieldwork was going to be undertaken. It was imperative to have fieldworkers with all these characteristics to reduce the differences or to narrow the distance between the fieldworkers and the interviewees. To include community participation also contributed positively in terms of limited human resources and the insufficient budget of the study.

At the time fieldworkers interacted with both the site manager and the researcher, some of the areas that were highlighted and emphasised, included the following:

- The fieldworker had to maintain confidentiality and was not allowed to expose the information to anybody except the researcher. In addition, it was arranged with the site manager that the fieldworker would leave all the documents with the site manager when finished for the day. The aim was to protect the information from getting lost and to strengthen confidentiality.
- Respondents had to be people who had viewed the broadcast before they participated in the study.
- When interviews were completed, the fieldworker had to mail the following documents to the MRC: completed questionnaires, consent forms and the observation guides. The fieldworker was provided with a return envelope that was pre-addressed which she/he had to use for mailing all the documents in the overnight mail. This quick mailing system was preferred, because the questionnaires were protected from becoming damaged in the post, while securing the possibilities of high return.

6. Data collection and analysis

6.1 Data collection

The process of *data collection* took the form of a survey as fieldworkers used standardised structured questionnaires to collect quantitative data. The data collection process was conducted by interviewing one hundred and twenty-eight patients and forty-nine HCWs. Each questionnaire contained questions that were related to the broadcast programme of each group of viewers. The HCWs responded to questionnaire that asked about the content of the On-demand Broadcast (used interchangeably with Online Broadcast) programme, while patients were interviewed on the Live Broadcast programme. All the responses were written on the questionnaire during the face-to-face interviews. The data management process between the researchers and fieldworkers could have been conducted more efficiently, however, there were limitations, which are discussed at the end of this section. Although the questions were quantitatively structured, in order to avoid “don’t know” and no answers, a filtering question was used at the beginning of each section.

6.2 Data analysis

The statistician analysed the data, using the STATA computer package. This was translated to Microsoft Word to make the data easily accessible for the researchers and any other person who is less knowledgeable about statistics. Responses that were in different languages were translated into English. The next step was to identify all the open-ended questions that may have developed during probing and these were systematically arranged, coded and then entered into the computer for data capturing. The data was then processed by re-examining every questionnaire and afterwards these were compared to look for any outliers while cleaning the data. The process also checked for inconsistency or incompleteness that might have occurred during fieldwork. While checking the patients’ data, it was identified that out of one hundred and thirty-one questionnaires, three had incomplete data and one hundred and eight were complete. There are questionnaires with missing information.

The distribution checks were run on responses as the first line of analysis. Cross-tabulation was done on selected variables. Background variables, such as gender and age were used as independent variables for most of the analyses.

7. Limitations of the study

7.1 Limitations affecting data

This current study is based on existing data, which implied that any problems that were in the data before were carried over. For example, some of the data for the questions of the existing questionnaire were missing and could not be accounted for. Conducting a study in public health care facilities carried a number of challenges, especially regarding the external validity and reliability of the collected data. External validity can be linked to some of the issues that relate to the scope, which could have an effect on the data that was collected. For instance, the study was limited to out-patients, and these are transient by nature. These patients were only available for an interview at the time of the visit, and it was not easy to follow-up to complete any gaps in the questionnaire. The instability of the out-patients may have directly contributed to reduction of the completed questionnaires, including missing information in the questionnaires. Problems of conducting a study in a health sector, especially with the ambulatory patients, have also been cited by Grady and Wallston (1988).

7.2 Limitations of the RAR

The RAR method has been found useful because it can use multiple methods. There are however, some constraints that may be linked to the method. For instance, insufficient time was not fully covered in the current process since there was inadequate staff to reach all the provinces within the set time. The other issue was the training of data collectors who were chosen on the basis of the recommendation by the site manager. One of the qualities of a data collector was that she or he should have some knowledge of research. While these data collectors were trained on data collection, it may not have been enough to make sure that they did gain adequate knowledge in the area. As a result, not all the data were available for analysis. The triangulation method requires enough human resources, especially when the sites are located in different provinces as this is the case in this study. Travelling to reach the sites and to assimilate the data was necessary. The process could be done better when the sites are situated in a single province.

CHAPTER 4 - RESULTS

1. Introduction

This chapter provides the findings of the quantitative analysis of the data, which was collected on the assessment of the different aspects including the two distinct broadcast programmes of the Health Channel Broadcast Multimedia (HCBM). The analysed data were collected from the responses, views, opinions, perceptions and the understanding of the two groups of audiences, the health care workers (HCWs) and the patients. Patients included any member of the public (the same as the community member) who was a potential viewer of the HCBM, who could therefore stand a chance of becoming a potential respondent. Patients viewed the Live Broadcast, which was readily switched on for them in the health facility. The Live Broadcast operated throughout the day from Monday to Friday.

HCWs viewed the special On-demand Broadcast with the Internet protocol platform or box (IP platform/box). The IP box was encrypted and only HCWs accessed it independently. It is important to be reminded that the HCBM was designed (i) to develop the HCWs further in terms of their clinic work, particularly in the areas of HIV/AIDS and its ongoing challenges and to prepare them for the national rollout of the antiretroviral (ARV) treatment; (ii) to educate patients further as regards HIV/AIDS and other sexually transmitted infections. All these were based on the initiatives of the National Department of Health (NDOH) (see Chapter 1).

This chapter on the findings first presents the findings of analysed data collected from the patients (other terms that are used interchangeably are clients, respondents, participants). The second part of the chapter consists of the findings of the analysed data from the health care workers who are the nurses. These analyses used different questionnaires for each group of respondents (see Appendix 1).

2. Demographic characteristics of the patients

The demographic characteristics of the patient respondents of the current study are indicated in Table 4.1 below. The information came from the 128 questionnaires that were collected from the field and which were analysed. In some sub-sections, not all the responses are available, however, an attempt has been made to provide explanation as reflected in the

questionnaire. It has also been mentioned earlier that the analysed data was readily provided and this had its limitations including with the data.

Table 4.1: Background demographic characteristics of patients showing frequency distribution and relative percentage

CHARACTERISTICS	%	(N)
AGE		
18-25	37	45
26-30	27	33
31-35	12	15
36-40	8	10
41-45	7	8
46-50	9	11
TOTAL	100	122
GENDER		
Males	44	54
Females	56	68
TOTAL	100	122
POPULATION GROUP		
Black	77	102
White	4	5
Coloured	19	21
TOTAL	100	128
EDUCATION		
0-6	7	9
7-9	19	24
10-12	43	54
12 and above	32	40
TOTAL	100	127
RESIDENCE		
Township	60	69
Rural	20	23
Urban	20	24
TOTAL	100	116
LANGUAGES		
Afrikaans	25	32
English	42	54
IsiNdebele	4	5
Sepedi	14	18
Sesotho	10	13
SiSwati	2	2
Setswana	19	24
Xitsonga	00	00
Tshivenda	2	3
IsiXhosa	16	21
IsiZulu	26	34
TOTAL	100	206

Table 4.1 is discussed as follows:

Age: The majority (64%) of the patients who participated in the study were young people between ages 18-30 years. The other group was between 31-40 years with 20%, and rest was between 41-50 years of age. The young people were the largest group that was interviewed.

The reason to have many young people visiting the health facilities and viewing the HCBM can be that they were excited about viewing the broadcast. The Live Broadcast has been designed such that its messages were entertaining and educative. The broadcast contained drama series and documentary as mentioned in Chapter 1. It is also not expected that older people can be frequenting to the clinics or healthcare centres like the younger people do. This is because older people usually visit the facilities on specific days for their chronic ailment appointments, such as diabetics or hyper tension.

Gender: There were more females (56%) who viewed the broadcast programme than males. A general interpretation for this could be that females were visiting the health facilities more often in order to obtaining their birth control treatment since they were still within the childbearing age group as indicated above. Males were less than their counterparts by 12%. The discrepancy between males and females patients is based on the conception that males visit the clinic or hospital only when they are ill (Ntlabathi & Mankayi, 1999).

Population groups: Among the population groups, white respondents formed a lower proportion of 4% when compared to the coloured group at 19%. Black respondents formed the largest group at 77%. The results are not surprising since the NDOH aimed at installing the HCBM mostly in the rural and township areas where black people are a majority.

Level of education: A high percentage of the respondents who participated had school education up to Grade 10-12, with 43%; followed by Grade 12 and above, with 32%. It appears that respondents in the higher Grade spent more time viewing the broadcast. Those in lower Grades (namely 7-9) and Grades 0-6 seemed to have been viewing the HCBM less frequently and few of the group participated in the interviews. The interpretation for this response is founded on one of the criteria that was used for selecting the respondents, namely that they had to have knowledge of the broadcast messages since the questionnaire was focusing on their views, opinions and understanding of the messages.

Residence: There were more respondents from the township (60%) compared to respondents from the urban and rural areas with 20% each. Twelve of the respondents did not indicate which area they came from and that reduced the number of respondents from 128 to 116 in this case.

Language spoken: Although there were only 128 patient respondents participating in the interviews, a high number of 206 respondents were recorded. One of the reasons for the high

responses may be that the question that was posed as “What language do you speak?” This resulted in respondents mentioning many languages they were able to speak.

Most respondents could speak English compared to other languages. There was a relatively small difference between the isiZulu-speaking respondents (26%) and the Afrikaans-speaking respondents (25%). The remaining languages were less than twenty percent, for instance those who spoke Setswana were 19%, isiXhosa 16%, sePedi 14%, and seSotho with 10%. There was no data available for people who spoke Xitsonga as none participated in the interviews. Other smaller groups of participants spoke isiNdebele 4%, tshiVenda and siSwati each had only 2%. There was no data available from the people who spoke xiTsonga. The results of the demographic data also show that, while there were only five languages that were used in the broadcast, viewers across the different language groups did view the HCBM.

3. Broadcast coverage

In this section, respondents were asked whether they did view the broadcast. From the analysis of the findings, it became clear that none of the respondents answered this question. Regarding the question which asked for reasons for not viewing the broadcast, respondents gave the following responses: one mentioned imprisonment; another said she lived in the rural area and did not have television at home, and the last one reported illness. The interpretation of the response of the patient that she or he *lived in the rural area*, may be that the patient expected to find the HCBM where she or he lived. Currently the broadcast is only available at the selected facilities. This may be a suggestion to the managers as part of the feedback, informing them about the expectations of the people. The suggestion is also based on the understanding that rural areas were targeted for the installation of HCBM.

3.1 Methods of information dissemination

Questions here were based on the broadcast coverage, primarily on the different methods of mass media that were used to disseminate information from the HCBM. Respondents were asked questions on the three following areas: 1) to give opinions on the broadcast (HCBM) as a tool that communicated and disseminated health information, 2) to give reasons for their choices, and 3) to choose the method that they preferred most from the six forms of mass media.

Patients gave their opinions on the broadcast methods, namely that it is an informative method (33%), others said it was a good method (49%), while others said the broadcast was the least choice with 7%.

Respondents gave different reasons for the choices they made. Some of the responses they echoed were that the methods were informative (16%); the majority said the methods were educative (62%) and others stated that they made their choices because the methods were practical (28%).

Figure 4.1 below indicates the different types of information dissemination methods, which are rated according to the preferences of the respondents.

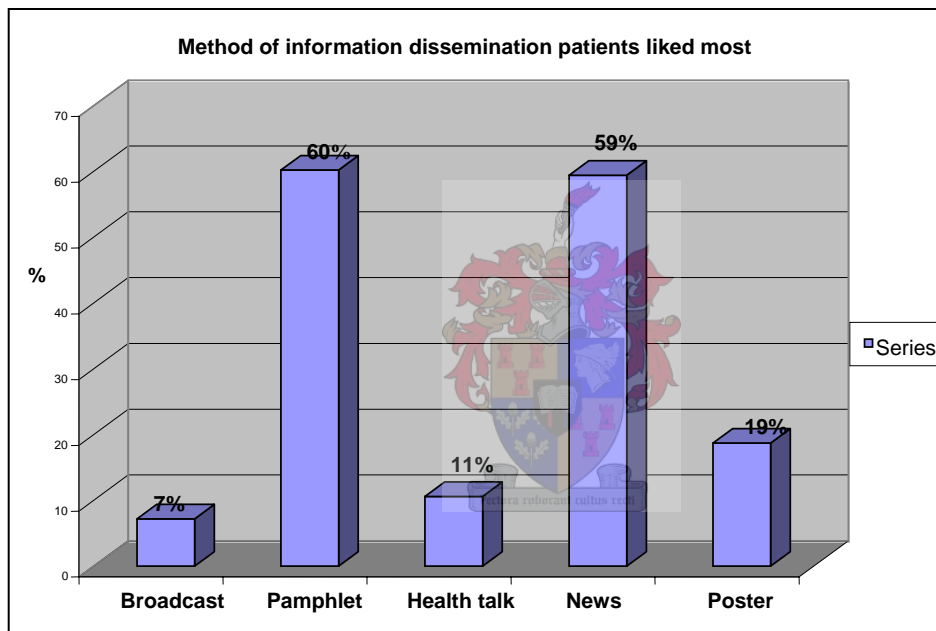


Fig. 4.1 Respondents' choices of method of disseminating information

3.2 The site of the broadcast channel

In this section, respondents were asked to comment on their experiences after they had viewed the HCBM. They were asked whether they were visiting the facility for the first time. Only 26% of the respondents said they were visiting the facility for the first time. Viewers were then asked to give their opinions on the broadcast and their responses varied. A relative high percentage (53%) said the HCBM was informative; a lesser percentage (32%) was of the view that the broadcast was supportive; while 25% indicated that it was good. Figure 4.2 below clearly illustrates the opinions of the respondents.

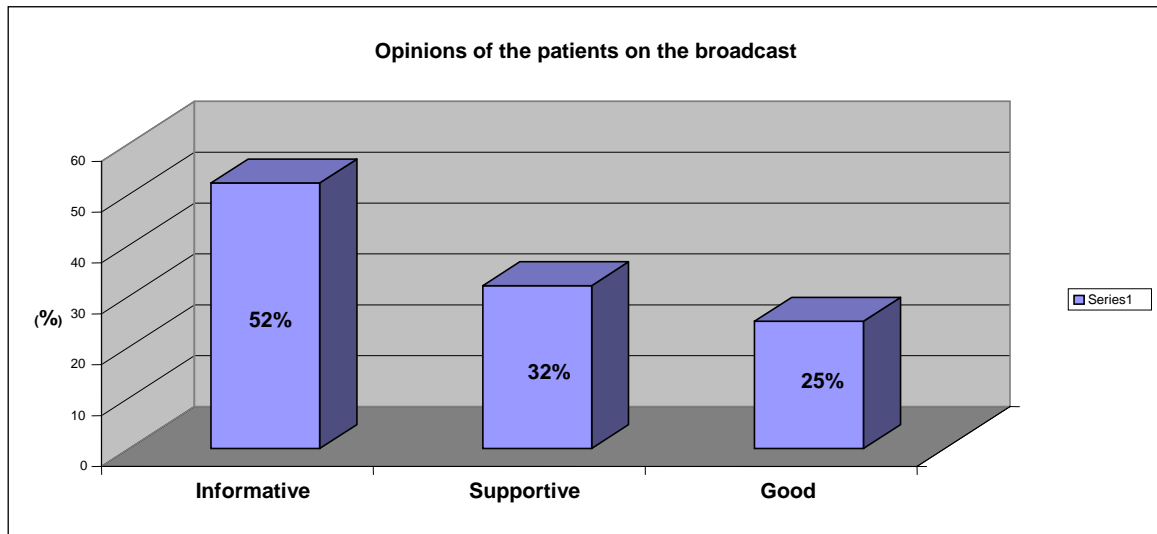


Fig. 4.2 Relative opinions of the patients on the broadcast channel

From Figure 4.2 it seems that, although there were fewer patients who visited the facilities for the first time, (52%) were of the opinion that the broadcast (HCBM) was informative. This latter comment was important, as the broadcast is used as an information and communication strategy to inform viewers of health issues, particularly HIV/AIDS and relate infections.

Another question was asking respondents to comment on what was on the television screen at the time of the interview. Respondent mentioned a number of messages that they viewed on the screen. (1). At least 33% said they viewed a message on the help line. Very few (3%) managed to view supportive messages. While 23% mentioned that they viewed messages on Soul City, which is one of the drama series (see Chapter 1) and 32% mentioned that they watched messages on health education.

Respondents were asked whether the television monitor was switched on at the time they arrived at the clinic. Only 34% said the television monitor was on at the time they arrived at the clinic. The question was asked as a means of checking if the broadcast was switched on before the patients arrived at the health facility. The broadcast was supposed to be switched on every morning from Monday to Friday. Patients had to mention what they had learned from the broadcast messages that they watched and listened to at the facility from the time they arrived.

Respondents who had viewed the HCBM were asked details on the date and the time they were watching television. Patients were asked to mention the messages, which they heard from the broadcast, and these were the messages they had to share with their families. The messages were identified as a change of lifestyle (20%); supportive messages (35%); message on protection (38%) and knowing your status (HIV/AIDS) 25%.

Respondents were asked to give their views on two areas, the visibility and audibility of the HCBM (television broadcast). The respondents commented that the HCBM was clear (60%), while 30% added that it was very clear. A small number said the HCBM was neither clear (8%) nor visible (2%).

Respondents were asked to state if the sound of the broadcast was clear. A large number (86%) agreed that it was audible. Respondents were asked to rate the sound quality of the broadcast messages. Some respondents said the messages were clear (35%). There was a decrease in terms those respondents who regarded the sound as being very clear (14%). A further decrease was reported by the respondents who said the sound was not clear (4%). Regarding the respondents' understanding of the messages, 44% said these were easily understood.

3.3 Broadcast content

The question in this section focused on different topics of the HCBM that viewers had listened to the time they were at the health centre. The questions were specifically focused on the day of the interview "today". Respondents were asked to state if they did hear any supportive messages since their arrival at the health centre "today". The majority (73%) of them stated that they did hear supportive messages from the broadcast. These messages are identified in table 4.2 below.

Table 4.2 Respondents' knowledge of different topics of the broadcast messages

BROADCAST MESSAGES	YES	NO
SUPPORTIVE MESSAGE	% (N)	% (N)
Living positively	11 (7)	89 (57)
Support	83 (53)	17 (11)
Informative	8 (5)	92 (59)
FACTS AND TREATMENT		
HIV/AIDS symptoms and treatment	72 (81)	28 (81)
Being HIV positive does not mean you have AIDS	81 (91)	20 (22)

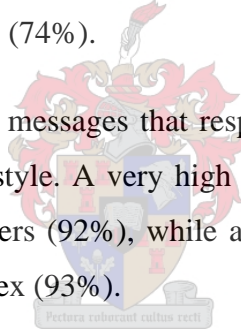
Does the broadcast mention the difference between HIV and AIDS?	80 (90)	20 (23)
Does the broadcast mention symptoms and treatment of HIV/AIDS?	70 (80)	30 (34)
TREATMENT OF SEXUAL INFECTIONS		
Untreated STDs increase the chances of contracting the HIV/AIDS virus	71 (74)	29 (30)
Do voluntary counselling and testing (VCT) before pregnancy	63 (65)	37 (38)
SAFE SEX		
You can avoid getting HIV	86 (86)	14 (14)
Use condom	94 (88)	6 (6)
Abstain from sex	60 (56)	40 (38)
Become faithful	40 (38)	60 (56)
Wear gloves	13 (12)	87 (82)
Delay sex	20 (19)	80 (74)
You still need to use a condom even if you have one partner	71 (75)	29 (30)
Sex in exchange of money or material things puts you at risk of getting the HIV virus	40 (38)	60 (56)
Delay your first sexual experience	75 (77)	25 (26)
Choose safer sex	91 (92)	9 (9)
It is your right to say no to unsafe sex	92 (95)	8 (8)
It is your right not to take part in any sexual activity	88 (90)	12 (12)
Abstinence is normal	74 (73)	26 (26)
Using a condom does not take away the pleasure from sex	73 (74)	28 (28)
LIVING POSITIVELY		
A person with HIV can live a full and active life	90 (94)	11 (11)
You have a responsibility not to infect others	92 (94)	8 (8)
You can help manage HIV/AIDS by making lifestyle changes	92 (96)	6 (6)
There can be benefits in disclosing for people living with HIV/AIDS	81 (80)	19 (20)
Good nutrition is important for people living with HIV/AIDS	90 (93)	10 (10)
It is your right to say no to sex	93 (96)	93 (96)
VOLUNTARY COUNSELLING AND TESTING (VCT)		
VCT is easily available and free	72 (75)	30 (29)
It is a responsible thing to get VCT before trying to fall pregnant	68 (69)	32 (33)
DOMESTIC VIOLENCE		
Since arriving here, have you heard about domestic violence?	43 (43)	57 (59)
ABUSE OF WOMEN AND CHILDREN		
Medication to use 72 hours after being raped is available to prevent getting the HIV virus	38 (37)	62 (61)
WORKPLACE		
Messages on HIV in the workplace	52 (52)	48 (48)
First message: support HIV patients	58 (28)	42 (20)
Second message: Take precautions	23 (11)	77 (37)
Third message: Do not dismiss or discriminate against people living with HIV/AIDS	23 (11)	77 (37)
Employers do not have to know your HIV status	68 (42)	32 (20)
Being HIV positive is not a reason to be dismissed from work	81 (50)	20 (12)

Facts and treatment: Most (72%) respondents did hear that HIV/AIDS symptoms could be treated and that being HIV positive did not mean that the person had AIDS (81%). Another group of patients stated that they heard about the difference between HIV and AIDS (80%) and they also heard about symptoms and treatment of HIV/AIDS (70%).

Treatment of sexual infections: A relative high percentage of 71 % of the patients heard that untreated sexually transmitted diseases increased chances of contracting the HIV/AIDS virus, while 63% also heard that they could get VCT before becoming pregnant.

Safer sex: A large number of patients (86%) heard that they could avoid getting the HIV and some of the ways to do so included using a condom (94%) or abstaining from sex (60%). Another messages that was heard by very few viewers (20%), stated that one should be faithful (to your partner) and should delay sex. Other respondents also heard messages that said using a condom was a sign that the person cared and it was not a mistrust (71%), while others reported that they heard about delaying the first sexual experience (75%) and they also heard that abstinence was normal (74%).

Living positively: Some of the messages that respondents did hear related to, people with HIV/AIDS living a positive lifestyle. A very high number of patients heard that people are responsible for not infecting others (92%), while another similar size of a group heard that “people had a right to say no to sex (93%).



Voluntary counselling and testing (VCT): Respondents were asked whether they heard messages on VCT, and some of the messages they heard were that VCT was available for free (72%) and that it was a responsible thing to get VCT before trying to get pregnant (68%). Patients were aware of the VCT services and that it was their responsibility to use the service. This is because the variation on the two responses was as small as 4%.

Domestic violence: Less than fifty percent (43%) of women heard about domestic violence. They agreed that they did hear about the message regarding abuse of women and children.

Workplace: About half the people (52%) heard messages that related to HIV in the workplace, and the messages were about support for HIV patients (58%) while other messages were about taking precautions and not being dismissed or discriminated against (23%).

4. Production and mode of service delivery

Respondents were requested to give their opinions regarding the ability of the broadcast (HCBM) to put across messages to listeners. A high percentage of 89% of the respondents said they did hear that the broadcast attracted attention. Another high response (94%) was found when patients indicated that the broadcast conveyed the intended messages. Respondents also gave a relative rating of the community presenter of 86%, while the broadcast as entertaining received a rating of 79%. The table below presents the questions and the responses of the respondents regarding service delivery.

Table 4.3: Relative responses of the respondents on the production and mode of service delivery

BROADCAST MESSAGES	YES	NO
Questions on service delivery	% (N)	% (N)
Broadcast attracting your attention?	89 (95)	11(12)
Broadcast conveying the intended messages?	94 (101)	6 (6)
Broadcast entertaining?	79 (84)	21 (22)
Did you like the community presenter?	86 (85)	14 (14)

Figure 4.3 below gives reasons for patients who liked the community presenter (86%). The findings of Figure 4.3 show that a proportion of 40% of respondents stated that the community presenter was audible, compared to 38% who said the presenter was informative. Fewer (22%) of the respondents reported that the presenter spoke well.

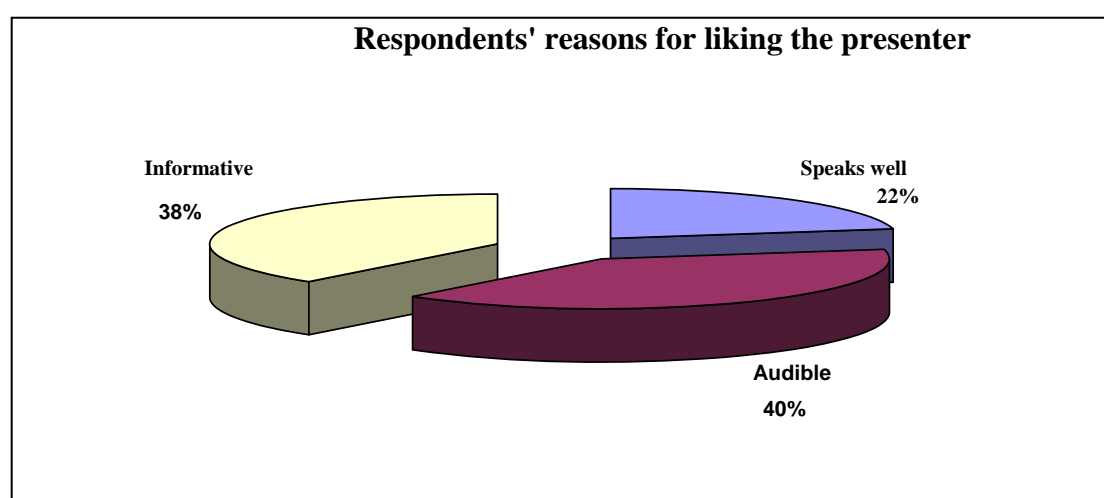


Fig. 4.3 Relative responses of the respondents liking for the presenter

Respondents who did not like the community presenter as the mode of service delivery, had to give reasons for their responses. The responded indicated that the presenter was boring (56%) and that the presenter was not multilingual (33%).

On the question whether the broadcast was able to change attitudes of the people in relation to changing risk behaviour, 76% of the respondents agreed that the broadcast had the ability to change people’s attitudes with regard to changing risk behaviour. Those who did not know were as low as 6%, and those who said they did not know whether it could change the people’s attitudes and risk behaviour, were also less than twenty percent (19%).

Respondents were asked to comment on the method of delivering messages through the broadcast. The following question was posed: “Since arriving here, have you watched the broadcast in terms of the (i) presenter, (ii) the group discussion (iii) the health talk (iv) health news and (v) the drama? The following chart is a presentation of the responses of the patients on the latter questions.

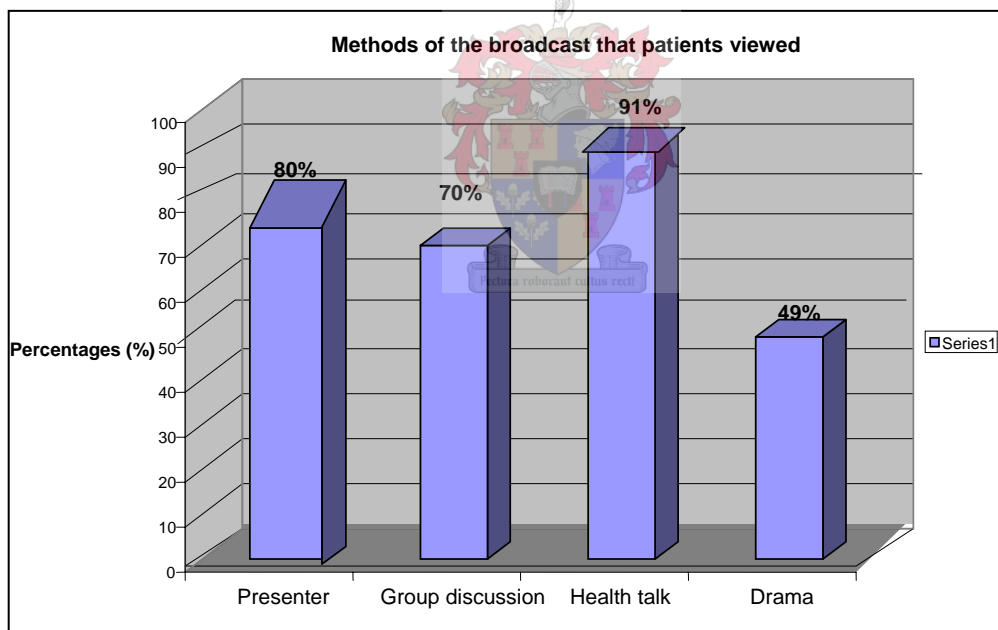


Fig. 4.4 Relative responses of the patients on the methods of delivering messages

A large number of patients reported that at the time they arrived at the health facility, the method of delivering messages that they viewed most was the health talk (91%). This was followed by the presenter with 80%. Patients who viewed group discussions were seventy percent. The drama was not viewed much (49%).

Another question focused on the views of the patients regarding the background music of the broadcast. Patients had to indicate whether the background music was (i) good (ii) irritating or (iii) bad. The majority of respondents said the music was good (90%), while ratings on irritating and bad only accounted for only 10%.

Patients were then requested to give reasons for their responses when they rated the background music. Most patients mentioned that they found the background music to be good because it was interesting to them (68%). Others said the background music communicated messages (22%).

The responses on the background colour of the HCBM, 50% agreed that it was good, while others stated that it was clear (47%).

The question, which asked patients to state the modes of information delivery they preferred most, were answered as follows: the most preferred modes of information delivery were first the health talk, which was rated high (66%) and the discussion was just above fifty percent (53%). The reasons for these two choices regarding modes of information delivery were that these modes were informative and they shared advice and ideas.

5. Target audience

The question posed to the viewers was, “Please give your opinion on various target audiences that HCBM is aiming at”. The findings revealed that most respondents were of the opinion that the HCBM was targeting everybody (82%). There were a few who thought the HCBM was targeting the youth (17%). Very small proportions of respondents were of the opinion that the HCBM targeted the HCWs (3%) or parents (2%). The figure below (4.5) is an illustration of the responses that were analysed from the data obtained from the patients.

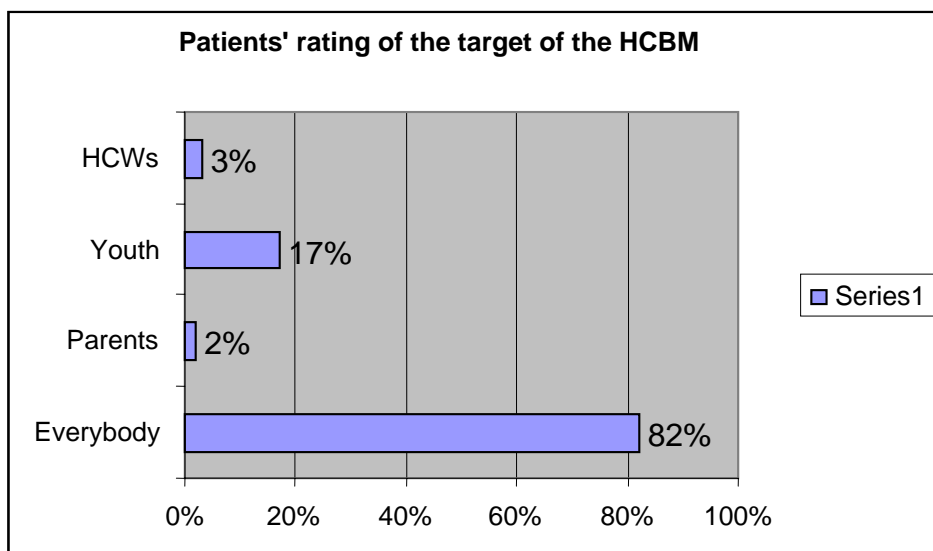


Fig. 4.5 Relative responses of the patients' opinions to rate the target of the HCBM

6. Language and culture

Respondents were asked to respond to questions regarding the use of language and cultural aspects, in relation to what they had listened to in the broadcast (HCBM).

The first question asked whether the language that was used in the broadcast was easy for patients to understand. Almost all the patients (92%) agreed that the language of the HCBM was easy to understand. On the question whether there were those who viewed the language of the HCBM as difficult to understand, only (11%) reported that the HCBM was difficult to understand.

The other question that the patients had to respond to was whether the language (of the HCBM) was sensitive to cultural concerns of the patients. There was a wide variation regarding this response. Only 13% of the patients agreed that the language (of the HCBM) was sensitive to the cultural concerns of the patients, compared to the majority (87%) who did not regard the language (of the HCBM) to be sensitive to cultural concerns of the patients.

Those respondents who indicated that the language of the HCBM was not sensitive to cultural concerns were asked to give reasons for their responses. Less than thirty percent (27%) of the respondents said the language was a cultural insult to them, while 27% said the language was an embarrassment to them.

Focusing on the community, respondents were asked whether the language was sensitive to cultural issues that they (patients) would like to raise about the HCBM production and

messages. Again, 87% of the patients were of the opinion that the language of the HCBM was not as sensitive to the cultural issues of the community. This shows that the majority of patients want to be communicated in their own language.

7. Patients' concerns

Patients as viewers of the HCBM were asked to give their concerns about the broadcast. Findings included the following:

- most patients were concerned that the HCBM was not available in the remote rural areas;
- patients also wanted the HCBM to concentrate more on women and children; and
- the HCBM was not available in prisons.

8. Patients' recommendations

Patients were asked to give recommendations on the HCBM in terms of how to improve it. Their main concern was that it must be made available for people in the rural areas.



3. Demographic characteristics of health workers

The results that are presented comprise the analysis of 49 health professional workers (HCWs) who participated in the study. These consisted of blacks (82%), whites (4%) and coloureds (14%). These HCWs viewed the health channel broadcast multimedia (HCBM) at the selected facilities. Respondents included an additional column of the other, which were lay workers, such as counsellors, the facilitator, a nutritionist and the health educator.

Age: The demographic data presents a higher percentage of HCWs between the ages of 34–38 years (25%) and 39–43 years (25%), who participated in the study, followed by the older group of 49 years and above (23%). The HCWs in the younger age group of 23–33 years who were interviewed were less than twenty percent. It may be that the older groups of HCWs were those who have been in the nursing profession all along. Table 4.4 displays the demographic characteristics of the HCWs.

Table 4.4 Background demographic characteristics of the health professional workers showing frequency distribution and relative percentage

BACKGROUND VARIABLE	%	(N)
AGE IN YEARS		
23–27	6	3
28–33	10	5
34–38	25	12
39–43	25	12
44–48	12	6
49 and above	23	11
TOTAL	100	49
GENDER		
Male	10	5
Female	90	44
TOTAL	100	49
EDUCATION		
Registered nurse	59	29
Enrolled nursing	10	5
Enrolled nurse assistance	8	4
Other	23	11
TOTAL	100	49
RESIDENCE		
Township	46	22
Urban	25	12
Rural	29	15
TOTAL	100	49
LANGUAGE SPOKEN		
Afrikaans	25	12
English	39	19
IsiZulu	31	15
SePedi	8	4
SeSotho	14	7
SeTswana	23	11
XiTsonga	2	1
IsiXhosa	25	12

Definition of abbreviations: N = 49 (the number of frequency or respondents); HPW = health professional workers; HCBM = health channel broadcast multimedia

Gender: Female HCWs gave rise to a relatively higher percentage (90%) when compared with the male group of HCWs who were only 10%. The small percentage of males who are HCWs reflects that males are least attracted to the profession. This may be the result of the old assumption that the nursing profession used to be regarded a suitable for females only.

Residence: The largest proportions of HCWs were from the township area (46%). The National Department of Health did aim at installing the HCBM largely in the townships and rural areas. At the moment, there is only 29% of the HCBM installed in the rural areas. This is almost equivalent to the 25% HCBM installed in the urban areas, which were not the target areas.

Language: The languages that are recorded in Table 4.4 are only based on the data that was collected during the interviews. While there were only 49 HCWs who participated in the study, the number of HCWs who registered in the section on the language spoken, was as high as 81. This also depended on the manner in which the question was asked, i.e. it did not restrict the HPW, as a result the professionals recording as many languages that they could speak to answer the question “What language do you speak?”

As many as 39% of the nurses spoke English, which is high above all other languages. This may be due to the history of the nursing profession curriculum that is written in English as was mentioned earlier. There were 25% of the HCWs who spoke Afrikaans. Among the other nine vernacular languages, isiZulu seemed to be spoken by most (31%) HCWs. There was twenty-five percent of the HCWs who spoke seTswana and twenty-three percent of them spoke isiXhosa and there were few (14%) who could speak seSotho.

Table 4.5 is important as it helps to clarify the distribution of HCWs by the level of profession per residential area. It further shows the availability of highly trained nurses in the areas, which could determine the answers to some of the questions, for example, those who participated in deciding where to display the television monitors in the facilities. Usually the registered nurses tend to have more decision making powers than the assistant nurses or enrolled nurses.

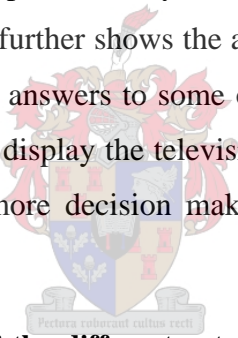


Table 4.5 Relative distribution of the different categories of the health professional workers rated by residential area

VARIABLES	REGISTERED	ENROLLED	ASSISTANT	OTHER
RESIDENCE	% (N)	% (N)	% (N)	% (N)
Township	45 (14)	50 (2)	50 (2)	46 (5)
Urban	38 (11)	0.0	0.0	9 (1)
Rural	17 (5)	50 (2)	50 (2)	46 (5)
TOTAL	100 (30)	100 (4)	100 (4)	100 (11)

Definition of the professional levels of nurses: highest level = registered nurse, junior levels = enrolled and assistant nurse, other = lay health workers such as counsellors, health educators and nutritionists.

The analysis of table 4.5 shows that there were more registered nurses in the townships than anywhere else (45%). In the urban area, registered were as high as 38%. The rural area had the least (17%) of this category of HCWs. The registered nurses are usually responsible for the management of health facilities, especially in the rural areas and to some extent in the

townships. These are the areas that have very few or no doctors available to be in charge of or managing the services in the facilities. The enrolled and assistant nurses are the sub-ordinates to the registered nurses.

3.2 Broadcast and the ViKo box (IP) coverage

3.2.1 ViKo box or IP platform/box

The ViKo box or the Internet protocol platform is used as the data storage for the pdf files, archives and web programmes which the HCWs could access Online Broadcast. The IP box was developed for the use of the HCWs only. More than 80% of the nurses have viewed the broadcast, which was mainly intended for patients and members of the community. The majority of the HCWs (93%) had knowledge of the IP box and it was specifically intended for HCWs to access this, as explained in Chapter 1. Only 28% have not used the IP box. Some of the reasons that HCWs reported were, the IP box was difficult to use, while 16% found the pdf files not easy to read. There were many (74%) who had access to the archives. Less than fifty percent (41%) had used the web programme and 69% found it useful.

Table 4.6 Relative responses of HCWs on their knowledge of the IP box

MESSAGES	YES	NO
QUESTION ON THE IP BOX	% (N)	% (N)
HPW viewed the broadcast	86 (42)	14 (7)
HPW viewed the IP box	89 (41)	11 (5)
HPW have knowledge of the IP box	93 (41)	7 (3)
pdf files easy to read	84 (27)	16 (5)
HCWs have used the IP box	73 (29)	28 (11)
HCWs have difficulties to use the IP box	53 (17)	47 (15)
Access to the archives easy	74 (29)	26 (9)
Use of the web programme	41 (19)	59 (27)
Web-programme useful to you	69 (27)	31 (12)
Knowledge of the call-centre	72 (33)	28 (13)
Have used the call-centre	16 (7)	84 (37)

Definition of abbreviation: IP box = Internet Protocol platform/box

reasons for not viewing the broadcast: Of the nurses who did not view the broadcast 33% said they were working, 17% said it was not interesting, 17% said they had problems and 17% said the installation of the broadcast was done late.

Reasons for not viewing the IP box: Only 11% said they did not view the IP box. These HCWs reported that they were busy at work, some were not trained (to use the IP box) and others said they lacked computer skills. Lack of training can be a limitation, especially for HCWs who were going to use information technology (IT) like the HCBM for the first time (Information Society Technology, 2004).

How often have you (HCWs) viewed the broadcast? The figure 4.6 below illustrates the amount of time that HCWs spend on viewing the broadcast content.

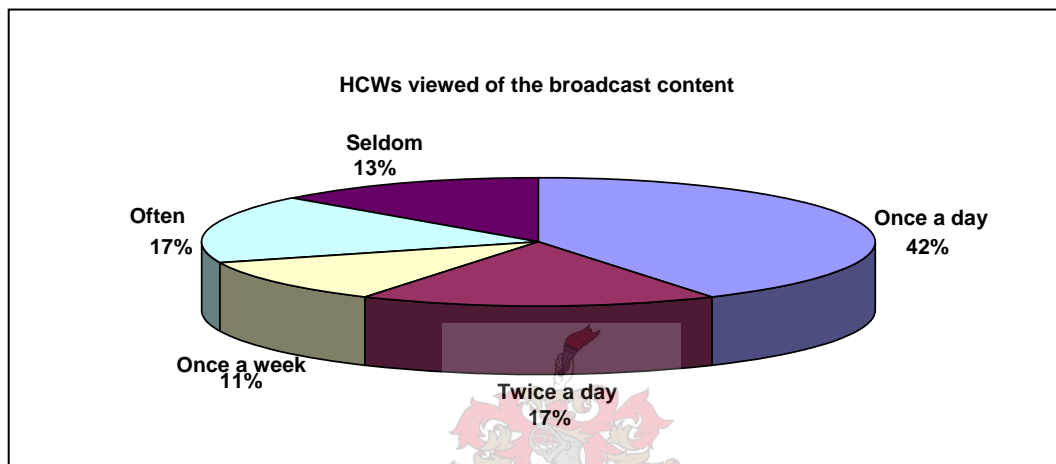


Fig. 4.6 Relative amount of time HCWs spent on viewing the broadcast content

At least 42% HCWs managed to view the broadcast programme once a day. Another group of HCWs (17%) viewed the broadcast content at least twice a day. A low percentage (13%) reported that they seldom viewed the broadcast. Some of the health care workers did spend time viewing the broadcast to become familiar with the broadcast content, which was specifically designed for the patients. It was necessary for the HCWs to have knowledge of the broadcast because it placed them in a better position of understanding the type of messages that the patients viewed. They would also be able to anticipate some of the questions that patients would ask during consultation.

How often have you (HPW) used the IP box? The majority of the HCWs knew about the IP box. Of those who knew, just over seventy percent (73%) stated that they have used it. The responses show that HCWs were aware of the IP box and some of them been exposed to the messages that are stored in the database. The figure below shows how often the HCWs have used the IP box.

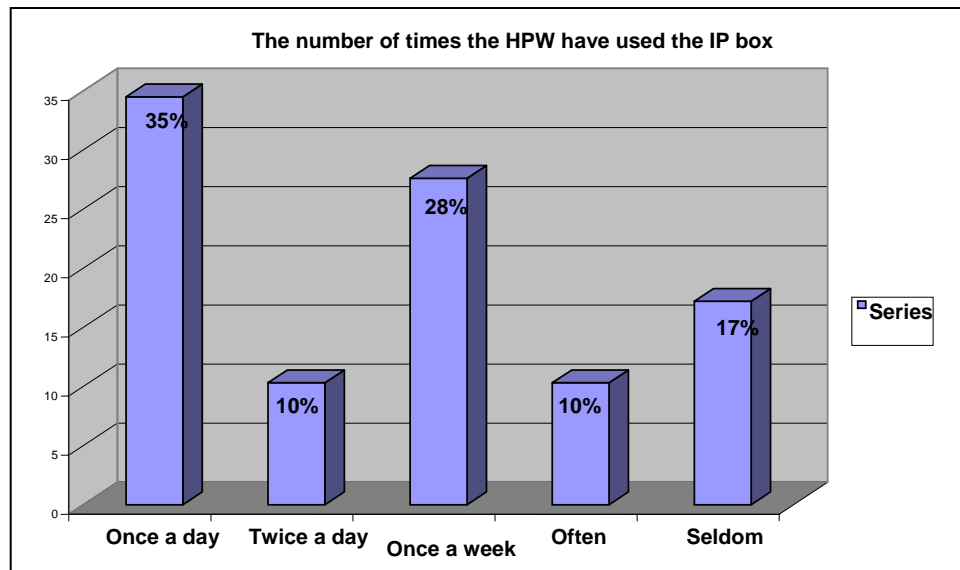


Fig. 4.7 Relative number of times that HCWs have used the IP box

Problems encountered when using the IP box: An average percent (50%) of the HCWs signified that they had problems to view the IP box. Some of the reasons outlined for the problems were: the needed for training in general by 79% and 14% said they did not have computer skills.

The call centre: Just over seventy percent (72%) agreed that they knew about the call centre, but only 16% reported ever using it. The centre is developed to address any concerns that the users are experiencing with IT systems and management staff can provide resolutions within a day or less (Health Management Technology, 1999).

HCWs are accessing topics of their choice in the language of their choice from the IP box: The majority (70%) of the HCWs said it was easy to access topics from the IP box, 23% said it was very easy and only 7% found it difficult. The difficulty may also be ascribed to the limited number of only five languages that were used in the IP box as stated in Chapter 1. It is vital that health programmes use relevant languages to make these meaningful (Airhihenbuwa, 1995).

3.3 Methods used to disseminate information in the HCBM

HCWs were asked whether they were happy with the broadcast schedule. The majority (89%) of the HCWs indicated that they were happy with the broadcast schedule. The rest were not happy because it started late and there was no timetable. The schedule was supposed to assist

them on how to organise their daily duties so that they were able to slot in the times to view the Online programme.

Table 4.7 Relative ratings of different aspects of the health channel programme

RATING OF THE ASPECTS	%	(N)
INFORMATION PRESENTER		
Good	22	10
Very good	28	13
Adding value	50	23
Educational value		
Good	13	6
Very good	40	21
Excellent	47	18
Visual appeal		
Good	22	10
Very good	22	10
Excellent	56	25
Interval music played		
Fair	14	6
Good	36	16
Very good	27	12
Excellent	23	10
Professional practice		
Fair	2	1
Good	16	7
Very good	40	17
Excellent	42	18
Readability		
Poor	2	1
Fair	5	2
Good	19	8
Very good	33	14
Excellent	41	17
Usability		
Good	26	11
Very good	26	11
Excellent	49	21

Information presenter: Fifty percent of the respondents said the presenter was adding value and twenty-eight percent said the presenter was very good.

Educational value: Less than fifty percent (47%) respondents thought that the HCBM was excellent as it added value in their profession. Another 40% thought it was good, while 87% agreed that it added educational value to their work. The ratings of the information presenter show that HCWs did spend time viewing and were familiar with the performance of the presenter.

Visual appeal: HCWs thought this was excellent (56%). HCWs rated it equally good and very good (22%). Having a clear interface to view Online articles may have encourages high access of information.

Interval music played: Only 36% thought this was good, and 23% mentioned that it was excellent. Music is useful to give the viewers a “break” from viewing the messages (see Chapter 1). Viewers can the break as the time for “informal” sharing of the viewed messages among each other.

Readability: At least 41% could easily read the messages on the screen, 33% stated that it was very easy to read, and only a very small percentage (2%) said it was poor. While less than fifty percent of HCWs reported that the messages were clear, it is important for management of the HCBM not to compromise the overall visibility so that viewers can read and interpret the messages on the screen correctly.

Usability: Forty nine percent of the HCWs said the HCBM was excellent and others agreed that it was very good and a few said it was good (26%). The percentages are not that high and this can also be related to problems using the IP box that HCWs highlighted earlier. Based on these concerns, it may be expected that not many are familiar with how they can go through the various stages of accessing messages from the IP box.

3.4 Methods of the HCBM preferred for use

Health professional were requested to choose the method of the broadcast that they preferred most. HCWs made their choices in aspects of the HCBM in Table 4.3.4 below.



Table 4.8 Respondents identifying preferred forms that they can use

METHODS	YES	NO
METHODS PREFERRED	% (N)	% (N)
Printed media	24 (11)	76 (35)
IP box	52 (24)	48 (22)
Television broadcast	48 (22)	52 (24)
REASONS FOR THE CHOICE OF EACH METHOD		
Used printed supplement	52 (23)	48 (21)
Print information useful	89 (25)	11 (3)
Happy with the broadcast schedule	89 (42)	11 (5)

Printed supplements: Just over fifty percent (52%) of the HCWs agreed that they have seen the printed supplement, and 89% said the supplement was useful. The printed supplement was useful because it had additional information to the broadcast programme.

3.5 Logistics and technical support

The HCWs were asked to comment on the positioning of the television monitor for proper viewing. The table below gives the responses to the question. Seventy three percent (73%) of the HCWs stated that the television monitor was correctly positioned. Figure 4.3.4 below is in response to the question of the assessment regarding the television monitor.

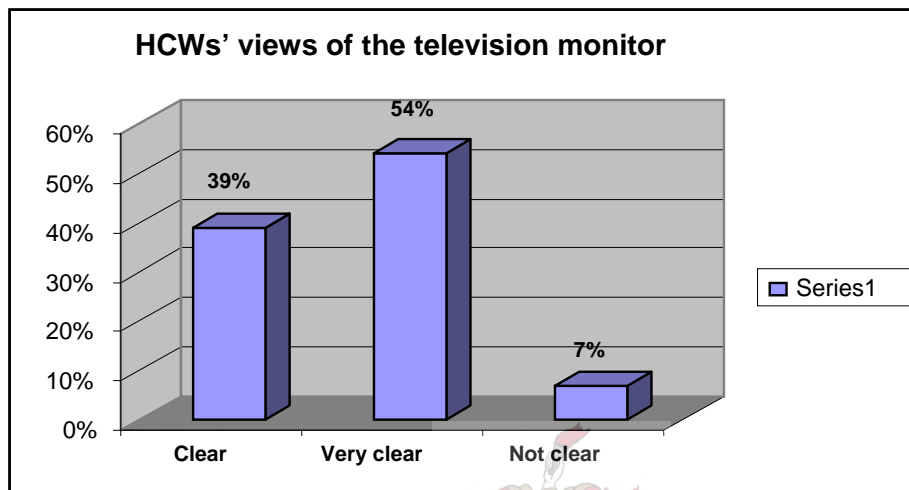


Fig. 4.8 Relative Ratings of HCWs' views of the television monitor

The figure above shows that 54% agreed that the view of the computer monitor was very clear; while 39% felt that it was clear and only 7% indicated that it was not clear. This means that most people were able to see clear from the screen.

Security of the television monitor

A very high 98% of the HCWs indicated that the television monitor was properly secured. It was also observed during fieldwork that the monitors had thick bars of corrugated iron around as security measures.

The question on whether HCWs gave input on the implementation of the HCBM, the following responses was analysed. Some of the HCWs (60%) said they did not regard themselves as having any input on the implementation of the HCBM in the facility. HCWs were concerned about not having participated in the process because they were involved with community services, while others were busy consulting patients.

Regarding the question on problems encountered by the HCWs while operating the television, it appeared that none of the HCWs responded to it. The reason for this may be that they were not responsible for operating the broadcast, as this was the duty of the facilitator, as mentioned in Chapter 3.

3.6 Broadcast content

HCWs were asked to mention any key educational messages they identified from the broadcast. They identified thirty one educational messages. The following four messages were the ones they could easily remember: (i) disease (62%), (ii) treatment and support (46%), (iii) protection (43%).

The following response required the HCWs to mention four topics that were covered by the key messages (relating to the above responses). Only three topics were mentioned, namely (i) HIV/AIDS (63%), (ii) other diseases (44%), and (iii) prevention and support (70%).

HCWs were asked to mention sources of information they were using other than the HCBM. The responses were: (i) health care raising material (71%), (ii) workshops (50%), (iii) media (35%), and (iv) other sources (not identified) (12%). Health professionals seemed to have gained information elsewhere apart from the messages they viewed from the IP box. It may be that these were the health care workers who experienced problems when using the IP box and who were finding other means to gain new information and therefore knowledge regarding health.

Each health care professional was asked the following questions: (i) Is the information on the pdf easy to read? (ii) Have you (the health professional) accessed the information in the ViKo box? (iii) Was it easy for you to access the archives? The figure below illustrates the responses.

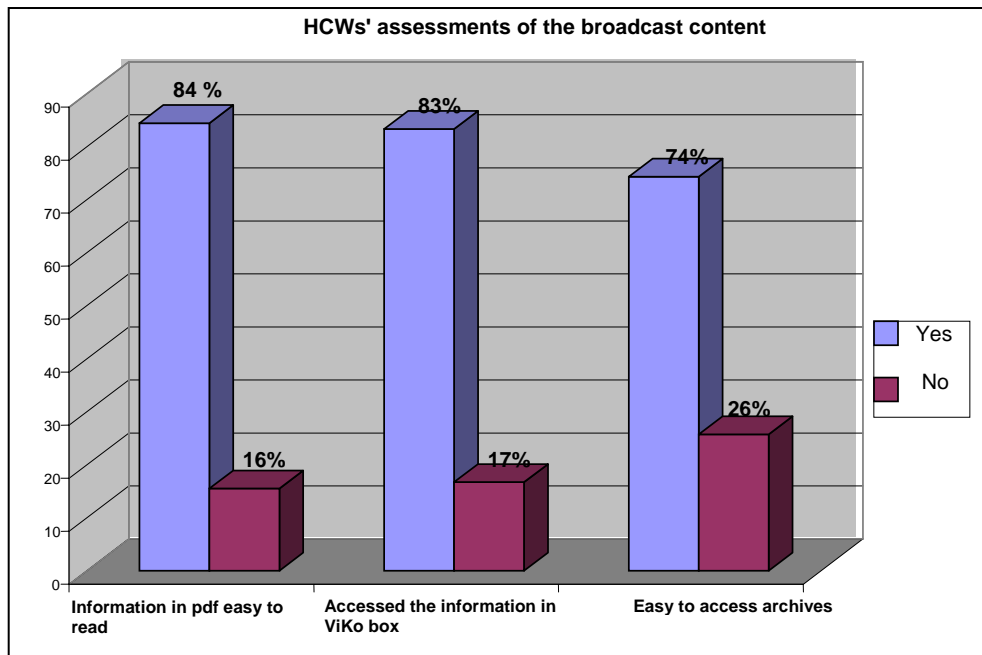


Fig. 4.9 The relative responses of the HCWs respondents on the broadcast content

The responses in Figure 4.9 show that 84% of HCWs have found the information in the pdf easy to read, while another 83% of them did access the ViKo box, and 74% mentioned that the archives were easy to access.

The reasons for not participating in the aforementioned activities indicated the following: (i) 64% said they did not have any training, and (ii) 36% said they did not have time. The lack of time for the HCWs to view the broadcast content could be associated with limited staffs which is common in public health facilities.

3.7 Facilitation of the health channel

On the question that asked the HCWs whether they have watched the process of the facilitator, 78% agreed that they have watched the facilitator. HCWs rated the facilitator as (i) good (33%), (ii) very good (31%) and excellent (36%). Of the HCWs, 77% found the facilitation process helpful. Some of the reasons for those who seemed not to have found the process of facilitation helpful, were (i) facilitator was boring (14%), (ii) have no time to watch (19%), and (iii) 76% found the process useful.

The HCWs were requested to respond to the following question: Which one of the groups listed do you think the broadcast information was targeting? The question was critical for this group as the broadcast programme aimed at empowering them in their clinical work on how to deal with matters of communicable disease like HIV/AIDS and the related infections.

These were the common health problems that have led to the development of the HCBM. The table below is intended to show the responses of the HCWs.

Table 4.9 Ratings of the HCWs on the group that the broadcast information was targeting

MESSAGE	YES	NO
TARGET GROUP OF THE HCBM	% (N)	% (N)
Is it targeted at HCWs?	77 (20)	23 (6)
Is it targeted at the patients?	96 (23)	4 (1)
Is it targeted at the general public?	79 (22)	21 (6)
Is it targeted at the youth?	92 (23)	8 (2)
Is it targeted at other?	60 (3)	40 (2)

Table 4.9 shows that 96% support the notion that the broadcast programme targeted patients. This was true; the broadcast was designed for patients. A high percentage (92%) believed that the youth were the recipients of the broadcast programme. The basis of this may be that the content is mainly focused on HIV/AIDS and this is highly associated with the young people who are in the childbearing age group. The third highest rating relates to the general public. HCWs seem to know who are the targets of the HCBM and not just the “other” but specific groups of viewers such as the patients, the youth.

3.8 Mode of delivery

Respondents were asked to give their opinion of how various broadcasts of the channel are delivered. The following table 4.10 is a scale that the HCWs used to rate the HCBM as a mode of service delivery.

Table 4.10 HCWs’ rating of the mode of service delivery of the HCBM

MESSAGES	VERY POOR	GOOD	VERY GOOD	EXCELLENT
MODE OF SERVICE DELIVERY	% (N)	% (N)	% (N)	% (N)
Ability to convey information	4 (2)	44 (20)	20 (9)	33 (15)
Ability to attract attention	2 (1)	33 (15)	35 (16)	30 (14)
Ability to address health problems	4 (2)	24 (11)	24 (11)	48 (22)
Ability to address local problems	18 (8)	21 (9)	32 (14)	30 (13)
Ability to address provincial problems	12 (5)	28 (12)	30 (13)	30 (13)
Ability to address national problems	14 (6)	28 (12)	30 (13)	28 (12)

With regard to rating the conveyed information, HCWs said it was (44%) and even excellent (33%). The HCBM regarded the ability to attract attention as very good (35%), good (35%) while some (30%) said it was excellent. HCWs mentioned that the HCBM has the ability to address health problems excellently (48%) while some regarded it a very good (24%) mode of service delivery. The HCBM was very good (32%) in addressing local problems, while some (30%) mentioned that it was an excellent mode of service delivery. The ability of the HCBM to address problems at provincial level was seen as being very good and excellent (30%). Lastly, the HCBM was rated at the national level as being very good (30%), and it was also rated a good and excellent mode of service delivery (28%). HCWs rated each question in this section below fifty percent. .

HCWs were asked to rate the most popular mode of information delivery in the HCBM. The first question asked them to rate the three modes of information delivery according to their choice. The table below shows the level of rating by the HCWs

Table 4.11 HCWs’ relative rating of the mode of information delivery of their choice

INFORMATION MODE	BEST	BETTER	LEAST
	% (N)	% (N)	% (N)
Presenter (factual)	82 (32)	13 (5)	5 (2)
Documentary footage	58 (21)	36 (13)	6 (2)
Graphics	39 (13)	49 (16)	12 (4)
Animation	32 (10)	45 (14)	23 (7)

Table 4.11 shows that HCWs rated the presenter as the best mode of information delivery (82%). They also mentioned that the documentary footage was the best mode (58%) while 36% said it was a better mode of information delivery. Regarding the graphics, HCWs (49%) said it was a better mode information delivery, while some (39%) rated it their best mode of information delivery. HCWs rated the animation as a better mode (45%), some viewed it as the best (32%) and there were those who said it was their least choice of information delivery (23%). Graphics and animation were not favoured much by most HCWs. It may be that HCWs were not familiar with these forms of presentation.

Some of the reasons for the choices that the HCWs made on the modes of information delivery were: it presented well (42%), it provides knowledge (39%), and it is reality (13%).

The following table 4.12 displays the HCWs' rating of the modes of information delivery that they think are suitable for the patients.

Table 4.12 HCWs rating of the mode of information delivery suitable for patients

MODE OF INFORMATION DELIVERY	YES	NO
	% (N)	% (N)
Presenter	50 (23)	50 (23)
Drama	78 (36)	22 (10)
Health talk	74 (34)	26 (12)
Health report	33 (15)	68 (31)
Documentary	30 (14)	70 (32)
Public service announcements	20 (9)	80 (37)

There was a break even point with rating the presenter as the mode of information delivery suitable for patients, as 50% said it was suitable and 50% said it was not suitable. The majority of HCWs rated the drama highly at 78% and the health talk also high with 74% in agreement that it was a suitable mode of information delivery for patients. Large numbers of respondents with 70% and 80%) said the documentary and public service announcements were not suitable modes of information delivery for patients.

3.9 Language and culture

This section focuses mainly on languages that are used in the HCBM and cultural issues. HCWs were asked to comment on whether the content of the HCBM was culturally appropriate for the community that they (HCWs) were serving.

Table 4.13 HCWs' rating of the content of the HCBM in terms of cultural appropriateness for the community

Cultural rating of the HCBM	% (N)
Most of the topics	43 (20)
Some of the topics	34 (16)
Few of the topics	9 (4)
All the topics	13 (6)
None of the topics	2 (1)

HCWs commented that the HCBM content was culturally appropriate for the community that they were serving on most topics. This was as high as 43%, while some (34%) said some topics were appropriate. These ratings were below the average (50%) and that was cause for concern. The reason might be that health promotion programmes, like the HCBM, should be linked to the culture of the target.

HCWs were to consider the language and the community that they were serving, in relation to the languages in the HCBM. They rated the cultural appropriateness of the languages as shown in Table 4.14 below.

Table 4.14 HCWs' rating of the cultural appropriateness of the HCBM languages

RATINGS OF LANGUAGES	YES	NO
	% (N)	% (N)
Appropriate	64 (30)	36 (17)
Not appropriate	21 (10)	79 (37)
Culturally appropriate	23 (11)	77 (36)
Culturally inappropriate	6 (3)	94 (44)

Table 4.14 shows that 64% of the HCWs agreed that the languages of the HCBM were appropriate for the community they were serving. HCWs rated the HCBM language as follows: (i) appropriate (64%), (ii) not appropriate (21%), (iii) culturally appropriate (23%), most of the HCWs (94%) disagreed, indicating that the language was not culturally inappropriate. HCWs failed to give the reasons for these latter responses.

HCWs had to rate the language that was used in the HCBM based on their opinions. Their ratings of their agreements as HCWs were reported as follows: clear (64%), simple (49%), understandable (55%), difficult (6%) and not clear (4%). (This is discussed in Chapter 5).

HCWs were requested to indicate which language they easily understood, based on the list of languages that were provided in the information of the HCBM. Figure 4.10 that follows displays a clear picture of the ratings of the HCWs.

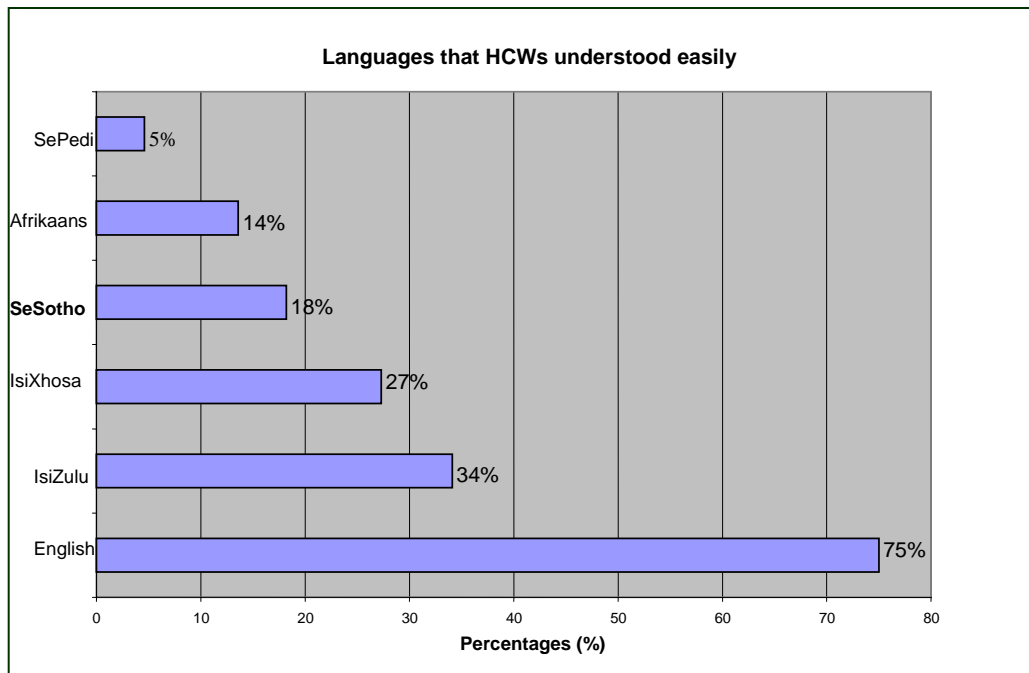


Fig. 4.10 HPW rating of the languages that were easily understood in the information of the broadcast

In Figure 4.10, English (75%) was the language that HCWs easily understood from the information of the broadcast. This was followed by isiZulu (34%) and isiXhosa (27%). Most HCWs who participated in the interviews speak English, isiZulu and isiXhosa predominantly. However, even other languages that were presented in the broadcast were reasonably rated according to the assessment of the HCWs.

HCWs were asked to rate the information that was provided in the indigenous languages (in the HCBM) in the following areas: usefulness (51%), relevance (29%), uninteresting (3%), difficult to understand (9%) and basic (9%).

HCWs were also requested to give their views on whether they agreed or disagreed that the content of the health professional education and instruction in South Africa should be in English. The HCWs responded as follows: those who agreed that it should be in English (61%), those who disagreed (13%), those who strongly agreed that it should be in English (17%), those who strongly disagreed (7%) and those who said they do not know (2%).

Some of the reasons that the HCWs gave for their responses were: they did not understand English (33%), which contradicts the literature that indicates that HCWs have been educated in English. However, this may be recommended for further research. HCWs were using indigenous languages (22%), they avoided interpretation (6%) and they wanted to be (easily)

understood (22%). All these reasons can be seen as methods used by some HCWs mainly to accommodate the patients.

The HCWs who spoke Afrikaans and isiXhosa were asked whether they would prefer the original sound of South African language instead of having the language dubbed. HCWs who responded (95%), said that they preferred the original South African sound. The reason was that the dubbed language is not a true reflection on the original one. There were those who said it did not matter because the meaning of the content was the same.

3.10. Sense of ownership of the health channel broadcast

Health care professionals gave responses to a number of questions that related to an individual professional and also to all of them. HCWs were asked whether the HCBM was important to them. All the HCWs agreed that the HCBM was important to them. The next question asked whether the HCBM was important to the individual professional. Again, all the individual HCWs independently responded that the HCBM was important to them. HCWs were then asked to give their opinions on whether they (HCWs) had a sense of responsibility to the HCBM. The majority of HCWs (98%) agreed that they did have a sense of responsibility to the HCBM. Each HPW was asked whether she or he had any sense of responsibility toward the HCBM. All the HCWs individually responded that they do have a sense of responsibility toward the HCBM. However, none of them gave reasons for their responses.

HCWs were asked to state the aspects of HCBM they liked best. The following areas were mentioned: support group discussion (25%), other programmes (19%), ViKo box (28%), broadcast (16%), printed matter (3%), and some (9.4%) who said they liked all aspects. The ViKo box was rated highest of all the aspects of the HCBM. This links with the view that the ViKo box was particularly designed for HCWs.

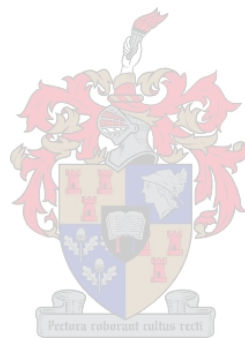
HCWs were also asked to rate the aspects of the HCBM that they liked least. They reported the following: the print supplement (27%), the broadcast (20%) and Soul City (7%). Again, the printed supplement was rated higher than Soul City because the drama is viewed by the patients. The low rating reflects their poor exposure to it as compared to the printed supplement that is for their use. When HCWs were asked whether they thought it was possible for them to make a contribution to the HCBM, all the respondents agreed that they could make a contribution to the HCBM.

HCWs were asked whether they were informed before the HCBM was implemented. A high number of 62% admitted that they were informed. Again the HCWs were asked whether they were informed after the HCBM was implemented. Most HCWs indicated that they were informed about the HCBM only after it was implemented (89%).

HCWs made the following recommendations:

Some of the recommendations that the HCWs made were: extension of the viewing time (29%), more programme topics (11%), the HCBM should reach more people (11%), the HCBM should be in other languages (11%);

Uncertainties of the HCWs were indicated as follows: need for training (50%), HCWs be included in the broadcast programmes (13%), and knowledge regarding the ViKo box (13%).



CHAPTER 5 - DISCUSSION AND CONCLUSION

1. Introduction

The main task of this chapter is to discuss the findings and the emerging issues in this study, which was conducted to assess the successes of the functioning of the Health Channel Broadcast Multimedia (HCBM), information and communication technology (ICT) application that operates in public health care facilities in seven provinces. This discussion intends to identify possible connections between the present results of the study and the relevant literature as presented in Chapter 2 and elsewhere in this report. The literature consists of the experiences and knowledge of various authors on two topics, namely communication models and the information dissemination strategy.

The first section of the discussion focuses briefly on identifying the disparity that has been noted within the demographic characteristics. The focus is also on the planning and control of management among partners; the discussion of the findings of health care workers; the main discussion is on the ViKo box, or IP box since it is the core of the HCBM for the HCWs. The findings of patients are discussed in general and the recommendations follow.

2. Recurring disparities in the nursing profession

The results display the distribution of health care workers that is skewed towards large proportions of nurses who are females against a very small group of male nurses. Such results are not surprising as the nursing profession has always been associated with females. It is commonly known that registered nurses have been playing a pivotal role in facilities that lack doctors, especially in the rural and township areas as compared to urban areas where there are a relatively large number of doctors practicing. These nurses play the management role of the facility and see to the smooth running of the services, among other things. The absence of male nurses in the rural areas and the townships does not seem to be an issue because the registered nurses seem to be comfortable in their role of managing the facility. To introduce information technology, such as the HCBM, in the areas may create a change in the gender differences. Previous studies conducted in this area have shown that city life is one of the “pull factors” that draw workers from different walks of life. This seemed to have attracted people to look for more convenient working conditions in places where ICT is implemented.

This may suggest that ICT may be one of the tools that could draw health professionals to rural areas, particularly doctors.

It is crucial that the National Department of Health (NDOH) pursues the current programme of using the HCBM as a communication strategy to disseminate health information that can make the health care industry attractive across gender lines and to other medical care services such as doctors. Government should continue to focus on areas that lack such resources as was initially indicated in Chapter 1, as the rural and townships are the main targeted area where the HCBM would be installed. Currently, the findings reflect that the focus is more on townships and less on the rural areas. One reason to have the HCBM implemented more in township than the rural area, is related to the lack of a relevant infrastructure, which includes roads for accessibility to reach even the remote rural areas. The availability of infrastructure would facilitate the implementation of IT like the HCBM in the rural.

The following discussion relates to Chapter 1, namely how the NDOH continued to engage with other stakeholders from different organisations up to the stage where the HCBM was developed

3. Programme management through planning and control processes

Some of the key issues that can be noted in the introductory chapter were that the NDOH continued to seek a communication strategy that could disseminate health information in the rural and township areas where there was such a need. The department also wanted to use the multimedia in order to reach larger numbers of viewers at the same time. The first multimedia that was developed was the Telehealth Channel by Sentech. This was the concept that an organisation known as Sentech introduced to the NDOH. The NDOH then contracted Sentech to implement the Telehealth Channel in the selected sites, which were mainly in rural areas, as mentioned in Chapter 1. It was not long after the implementation of this that NDOH continued to look for better multimedia strategy. This ongoing search for a better communication multimedia strategy shows that NDOH was not satisfied with Telehealth Channel. Another organisation called Mindset also introduced its multimedia concept to NDOH, namely the Health Channel, which comprises HCBM. The NDOH, Sentech and Mindset form partners in the form of a public and private partnership (PPP), as mentioned in Chapter 1.

What seems to be an issue here, is that at no point has it been mentioned how the NDOH and the other partners conducted their planning before the multimedia was accepted. It appears that the NDOH had an existing plan that it wanted to match with a multimedia application from any organisation that could come forth with such a communication strategy. In most cases, it is suggested that a document for the programme of action should be developed prior to engaging in any activities of the programme. This has also been cited in the literature by Burch and Strater (1974). The literature suggests that planning is a process that should be conducted by all managers who are involved in the management of the programme.

When planning takes place between management, they engage in interactive communication and information sharing which happens at an interpersonal level as mentioned in the literature. Piotrow & Rimon (1997) give a broader description of the planning processes, as a stage when management partners interact face-to-face, where they brainstorm and exchange ideas and provide constructive feedback to each other on the topic. The information that is contained in this study helps to guide management on the criteria they should meet in order to achieve the goals of the programme and to pursue its actions.

It appears that to develop a programme of action document the way it is described above, involves that managers of a programme should adopt a collaborative management style and discuss their plans, including the actions that they are pursuing. Collaborative management is an interactive process that can help managers to come to an agreement on how to go about to develop such a programme. At the same time, authors like Swanepoel & De Beer (1996) have warned that communication is not a simple process, especially not when there are many partners involved as is the case with the current management partners. The latter authors further state that the process can become complex and difficult to maintain. Despite the challenges, they argue that communication should continue because “it is life and blood of any development and if it seizes then development cannot happen” (Swanepoel & De Beer, 1996). In the case of the collaborative management adopted by the NDOH, Mindset and Sentech in the implementation of the HCBM, one can express the view that it worked well, as implementation was a matter of intense communication between these organisations and the broadcast continued to be implemented. This can reflect that collaborative management has a possibility to work and can be adopted by other organisations running joint programmes.

The discussion will focus on the findings of the HCWs.

4 Developing access to information and communication technology

In Chapter 1, the HCBM is described as a multimedia application that is uniquely designed. It comprises an Online Broadcast with an Internet Platform/box (IP) and a storage device known as the ViKo box. It also has a Live Broadcast that operates on demand. HCBM was installed in the rural and township areas where information dissemination on health has been very limited as indicated earlier and in Chapter 1. HCBM was introduced to the NDOH a while after the department had gone through efforts of looking for a suitable communication and information dissemination strategy like HCBM that can operate in the target areas. The question is why it took so long for the organisation to respond to government on making available such a multimedia application. Some questions that can come to mind include whether there were no organisations that could develop such multimedia applications or whether none of the organisations was interest in conducting such a programme.

Some authors (Corner, 1995; Delanty, 1999; Murphy, 1994) state that the development of multimedia structures involves huge financial costs. It is therefore understandable why it took long for government to find an appropriate partner like Mindset. The authors suggest that the formation of a partnership can help to share the resources and to distribute some of the rare skills among partners.

The issue of financial costs may have an effect on the running of the programme, as can be identified in the development of HCBM. For instance, when HCBM was still at an early stage of functioning, two (isiXhosa and Afrikaans) of the five languages (English, Afrikaans, isiXhosa, isiZulu and seSotho) were dubbed. The programme continued to operate like that for some time. It was only subsequent to successful fundraising that management partners were able to upgrade the two languages so that they are not dubbed. To use dubbed languages did have a negative effect on the viewers of HCBM. For instance, the results showed that ninety-five percent of the HCWs indicated that they preferred the original language above dubbing. According to the report by Molefi and Kachieng'a (2004), HCWs understood dubbing as reducing the quality of the language. But, since funding can be a problem, it may be necessary for management of the programme to broaden the collaborations even on financial terms. The section below will discuss the findings on the involvement of HCWs in operating the IP box

5. HPW enthusiasm and determination to seek information using IP platform/box

According to the results, it seemed that HCWs continued to have interest in the HCBM Online programme despite the language limitation described in Chapter 4. The majority of HCWs knew about the Internet protocol platform and they also have accessed and even used the data. In Chapter 1, the IP platform or box is described as a special programme that operates Online. The Online programme is designed especially for HCWs in order to develop their clinic work further. What makes the Online programme exceptional is the fact that the IP platform contains data in pdf files, web-programmes and archives. Data is stored in the database storage known as the ViKo box. HCWs were the only ones who had access to the stored data, which was encrypted as a measure of security. The literature emphasises that authentication is ensured to prevent vulnerability of information to unauthorised users.

It appeared as though HCWs did not have difficulties to engage actively in accessing data from the IP box that was computer-based. Other reasons that may have enabled HCWs to engage easily with the system, can be attributed to the characteristics of the computer that are user-friendly as indicated in Chapter 2. It allows the user to make changes in the document as he or she pleases, but the quality of the data is not affected. Some of the aspects highlighted by Coiera (1997) are that the user is able to retrieve and disseminate information, the database has ample space and it is easy to scroll up and down on the screen and view messages. The ViKo Box has adopted these features; hence it was easy for HCWs to use it.

6. Necessity of training in the information technology environment

While it seems easy to operate a computer, as Coiera (1997) also indicates, there were however, some HCWs who mentioned that they could not participate in using the IP box because they did not have computer skills. Molefi and Kachieng'a (2004) have noticed that in some health facilities HCWs were having difficulties to hold the mouse and to operate the keyboard freely. Having users with such problems can be linked to management who may not have done the assessment of skills of users of the system before introducing it to the users. Rodriguez and Ferrante (1996) are also of the opinion that training is crucial, especially if duties were done by using the conventional method before; in this case dissemination of information using hard copies rather than ICTs. These latter authors suggest that the training manager, if available, can assist those who do need training. Another suggestion they are

proposing is to implement a simple automated system for users. In essence, lack of training of any kind is a barrier to participation in a programme or project (IAPA, 2002). In the case of the ViKo box, there was no training manager residing in the health facilities, which made training of the HCWs difficult.

The views of the latter authors are important and are in line with the training of the HCWs regarding the programme. The management of HCBM tasked a facilitator to train all the HCWs to use the Online Broadcast. The training that was provided by the facilitator and the computer skills are two different types of training although they are both computer-based. One could interpret the training that was conducted by the facilitator as being more technical relating to the use of the IP box, while training on the computer that HCWs are mentioning, is more practical. It would appear as though both skills are vital in order to enable the user to be competent in using the web and the ViKo box. When such skills are lacking, people may feel excluded from learning. This feeling of not being part of the group will be discussed in the section below.

7. Limited exposure to information as a form of isolation

The results show that the HCWs who were able to access and use the information of the data they retrieved from the IP box were highly involved in doing so. Some mentioned that they used the IP box daily twice a day. It seems as though HCWs were gaining enthusiasm to use the IP box. When they were asked to rate the IP box, the HCWs who were active in using the IP box mentioned that the information was excellent because it added value to their professional practice and it also added educational value to their work. With such comments, it is understandable why the HCWs consistently accessed HCBM Online. Other benefits that these active HCWs got from accessing the information from the data that was stored in the IP box, were that they were able to rate the ability that HCBM has as a mode of delivery. For example, they knew the information was addressing health problems and that at provincial level. This group of active HCWs may have been the ones who made recommendations on HCBM based on their knowledge of the ability that HCBM has.

The concern is about HCWs who did not manage to practice and also enjoy the benefits of accessing the IP box messages and who also did not know about the kind of information that they could get. Their lack of participation to use the IP box was a concern because all HCWs were supposed to use the information they could access from the Online Broadcast.

The issue here is that government introduced HCBM with the aim of educating and improving the knowledge of HCWs on HIV/AIDS. It was also to prepare them to participate in the rollout of antiretroviral treatment (ARV) nationally. What becomes clear from the findings is that these were the HCWs who were not participating in the Online Broadcast programme of the IP box. This raised concern in the sense that those who were involved with using the messages of the IP were continuing to gain more of the stored data that the NDOH want them to familiarise with, while others were not going anywhere. This basically meant that there were different levels of HCWs in a facility, namely those who participated in using the IP box and those who were not and this may lead to gaps in the implementation of ARVs.

Bonfadelli (1987) explains that users who consistently search for information are motivated people and these people participate in the information search indefinitely. His understanding is that motivated information seekers widen the gap between the information-rich and information-poor. The HCWs mentioned that the messages that they viewed from the IP box added to their knowledge as reported in Chapter 4. On account of the latter statement, it is understandable that HCWs continued to search for more messages. Brown and Yule (1983) see the structure of information in two categories, namely new information, which is what the person did not know, and the given information, which is what they already know. This can further be understood on the basis that while HCWs continued to access the data from the IP box, some of the information was not all new to them. Again this is acceptable because the messages were based on HIV/AIDS, which is what they were familiar with in their daily clinical practice.

What can be concluded, is that when people have the opportunity to gain information that will enable them to improve their knowledge, they continue to use the opportunity to fulfil the information need.

8 Discussion of the findings regarding patients

Patients saw a broadcast programme that was totally different from that of the health care workers, which is the Live Broadcast of HCBM as mentioned in Chapter 1. It is known as Live Broadcast because it is broadcast live. The Live Broadcast of HCBM was designed so that viewers were kept entertained by viewing drama series like Soul City, public service announcements and documentaries. This form of educating by using a multimedia such as HCBM has also been supported by many authors (Compton & Galaway, 1989; Gudeta, 2004;

Murphy, 1994; Piotrow & Rimon, 1997). The authors state that multimedia: benefits the audience especially on topics regarding health, it influences change in behaviour and promotes healthy lifestyles, and it is recognised for effective communication regarding HIV/AIDS. It seems that the Live Broadcast is relevant for patients who may be infected, while others may be affected by HIV/AIDS. Since HCBM is an audio-visual application instead of the Online Broadcast that is used by HCWs, patients mentioned a variety of messages to which they listened on the Live Broadcast, which were HIV/AIDS-related. Some indicated that they would relate the information to their families. From the findings it can be stated that the messages that viewers listened to on HCBM also benefited the larger community.

8.1 Experiences of viewers of the characteristics of the broadcast

Viewing

The findings reveal that patients were happy with the broadcast as they reflected that it was clear and the sound was audible. There were some patients who differed from these views as they did not hear or could not see images on the screen so clearly. Earlier in the document it was mentioned that one of the objectives of the department when using multimedia applications for patients, was to reach a larger audience. In order to accomplish this objective, the HCBM was placed in a waiting room or any area where there were many patients. In addition, the identified area or room had to be an area where patients were able to wait fairly long so that they were able to listen to as many messages as possible.

What was observed in some of the health facilities is that the television monitor was placed in a position that was high enough for viewers at the back of the waiting room to be able to see. Borchers et al., (1993) commented in focusing on the developer of the multimedia application, that the developer should know the size of the audience that is targeted and should use the appropriate channel and its positioning. This seems to have been taken care of. For instance, in facilities where there were bigger waiting rooms, the television set was also larger than those that were placed in smaller rooms. All these measures were meant to improve both viewing of and listening to the messages.

While management managed to make viewing of the broadcast as meaningful as possible, there were other issues that needed attention in order to enhance the reception of the viewers of the messages. In addition, security measures were taken in all facilities and television sets

had thick corrugated iron bars around it for security. This however, in some situations, caused an obstruction to viewers who mentioned that they did not have a clear view because of the iron bars. This problem of using bars seemed not to have an impact on the viewing of some patients.

Another problem which was observed is that in some of the waiting rooms with the bigger television, the benches were arranged in a back to back style and they were fixed. This restrained the viewing of the patients as some of the viewers were facing in a different direction. It is unfortunate that the problem of such a setup cannot be easily fixed as it certainly reduces the access of health information to the viewers.

Audibility

The inappropriate sitting conditions and the size of the waiting room had a direct impact on the viewers. According to observations made, was noticed in the waiting room with the back-to-back benches, that those viewers who were facing in the opposite direction, started their own conversations. The same was experienced in bigger waiting rooms, where viewers at the back were busy chatting. What happened in the facility was that viewers who wanted to listen to the broadcast messages but who could not hear because there was a lot of noise would ask one of the staff to increase the volume. Swanepoel and De Beer (1996) state that, noise is a barrier to communication, it plays a negative role when messages are transmitted during interaction. Harris (2002) describe viewers with negative experiences as mentioned above as feeling disturbed, excluded, isolated and unneeded. The descriptions that are given by the author tend to fit in with the situation of patients in some facilities. The patients find themselves in situations that cause them to make choices that are uncomfortable and inconvenient. The issue is that if a viewer is in a position where the environment plays a negative role, despite the opportunities that are made available to her or him, such opportunities may be missed. This suggests that the environment for the HCBM should be conducive to better viewing and should be less noisy for effectiveness.

Language and culture

Another thorny issue is that of languages that are used in HCBM. The results of the demographic characteristics give a broader picture of the kind of patient audience that were viewing the Live Broadcast programme in terms of languages that they speak. Some of the languages were not catered for in the broadcast with high percentages of viewers complaining

about the absence of their languages, such as seTswana and sePedi (Chapter 4). Viewers who did not speak the language of the presenter meant that the viewers did not understand the content of the messages of the broadcast. When viewers were asked to comment on the method of information dissemination, the results showed that some viewers found the broadcast informative, while others said it was good. A high percentage said the broadcast was a difficult method to disseminate information. It can be stated that viewers who had negative experiences of HCBM may have result as a lack of understanding as regards what was communicated in the messages. It means they were struggling to make sense of the content of the message because it was in a language that the viewers did not speak. This can also be linked to the viewers' rating of the presenter as boring. This was the result of not being able to make meaning of information that the presenter was sharing with them.

Some authors (Airhihenbuwa, 1995; Thiong'O, 1986) view the issues of language from a socio-cultural perspective. Their understanding is that every health promotion programme should be in the language of the recipients. They state that the developer should consider the needs of the target and if the programme is not communicated in the language of the target people, then it will not meet their needs. The other view is that, in some African countries people are more exposed to listening than to reading because reading has not been encouraged. The findings in Chapter 4 show that there was a very low proportion of viewers (7%) from the lower education level (Grade 0–6) compared to all the other higher grades. Most of the viewers who were interviewed came from the townships. The discussion that follows focuses on interaction and communication among viewers of the Live Broadcast programme.

Interpersonal and group discussions: forms of communication

There were other forms of mass media that were available in the facilities, such as pamphlets and posters on the walls. The majority of viewers favoured the pamphlets when compared to the broadcast. This is despite the fact that the pamphlets are written in English most of the time. However, it does appear that patients who were interviewed, spoke mainly English (Chapter 4). This is contradictory, because most of the viewers were from the townships and the community people speak mostly the African languages. On that note it can be accepted that these people are in a position to read the material that is written in English. However, this is an issue that would need more investigation in future. This is important because it would

help management and other organisations who want to become involved in such programmes to know how to address the language diversity of a target group.

Another method that is mentioned in the literature that addresses the monologue type of communication is to engage viewers in an interactive form of communication, which is a two-way process (Piotrow & Rimon, 1997). The monologue can be identified where a viewer is feeling isolated because the HCBM is an impersonal form of a multimedia. This is owing to the fact that one can only view and listen to the programme but cannot involve in an interactive process with the presenter. Management of the HCBM have introduced a facilitation process, which contains dialogue and it has a facilitator who directs the discussion (Compton & Galaway, 1989).

The authors further state that the facilitator should be sensitive to the feelings of the group members and should maintain confidentiality. This is fundamental, considering that some people may share personal information relating to their health and also topics relating to HIV/AIDS, which is sensitive and some people may not be ready to discuss it in detail. Culturally, some societies do not openly discuss issues of sex, especially not with children, and HIV/AIDS is a sexually transmitted disease in most cases (Orr and Patient, 2004). The facilitator has counselling skills and would know how to communicate with people who are in distress. The facilitator is also knowledgeable about the topics of the broadcast and this makes it possible for her or him to interact with diverse group members who may ask questions on the messages of the broadcast.

The group discussion should function at a level that will make everybody become a participant, including the facilitator (Rogers, 1992). On the basis of this form of communication and through sharing of information among group members, it can be stated that the divisions that members felt before because of some experiences, may disappear. It is more so because it is expected that participants have the opportunity to express themselves freely in the presence of the facilitator as she or he is there to make sure that people do not find themselves in awkward situations.

9. Conclusion

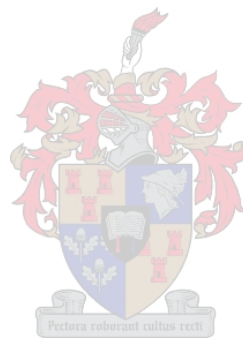
The discussion on the findings shows that the HCBM management has developed and designed a programme that has the potential to grow and expand to other areas. This is in view of the comments of the users who have shown great enthusiasm on the information that they get from the broadcast programme. The management style of planning and managing HCBM has contributed to some of the successes in the implementation of the programme. Management, for example, has prepared for situations that require skilled personnel, although there are areas that still need attention.

10. Recommendations

The recommendations on the findings are fundamental for management, because they are based on the assessment of the viewers regarding the general aspects of the HCBM. Some recommendations need to be pursued by management; others are for future investigation. These include the following:

- Management should continue to implement HCBM as was planned for both the rural areas and the township areas that were targeted. The current findings show that rural areas are lagging behind in terms of implementation of the HCBM. It is also assumed that by committing to the objectives of the plan, this could draw doctors who are attracted by using IT systems in their health environment.
- The method of using steel bars to secure the television monitors can be improved in such a way that these will not obscure the view of the audience.
- Management should negotiate with managers of the Department of Health and address the issue of having back-to-back benches at some of the facilities. This is necessary, since the benches may have been convenient at the time health education was conducted by a health educator who could be moving around. However, with the HCBM broadcast system, it has a fixed position and the back-to-back form of arrangement is no longer applicable.
- Training of all types is important for participants in particular computer literacy. Managers should conduct pre-assessment of staff to be able to know the level of knowledge individual staff members have for that specific training (basic or intermediate).

- The issue of languages is contentious and needs further research. This is because there seemed to be many people who have registered as English-speaking, however, it is known in the townships that people use their home language and it would have been expected that such languages would be higher on the demographic characteristics. Investigation is important for management, this is more so seeing that the programme still has to include other outstanding local languages.



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