

**Reasons for diabetes patients attending Bishop Lavis  
Community Health Centre  
being non-adherent to diabetes care**

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**Research Assignment in part fulfilment of the M Fam  
Med Degree**

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**DECLARATION:**

I declare that this research assignment is my own work, that it has not been submitted before for any degree or examination in any university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

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31 August 2011

**Abstract:**

*Background:* Adherence to diabetes care is an issue of concern at Bishop Lavis Community Health Centre (BLCHC) as it results in so many diabetes patients ending up with complications that could have been avoided.

*Aim:* To explore the reasons for people with diabetes in the Bishop Lavis area being non-adherent to diabetes care.

*Method:* A qualitative study was undertaken. Three focus groups were held and seven in-depth interviews were conducted. The framework method was used to analyze the data.

*Findings:* The main findings in this study was consistent with many of previous studies done on adherence, i.e. patient barriers, disease and drug regime barriers and doctor-patient relationship barriers.<sup>11</sup> However, in this poverty-stricken area these participants also face other constraints that influence their compliance behaviour. These include 1.over-burdened public healthcare facilities, 2.insufficient education, 3.poor support structures, 4.infrastructure which is not wheelchair-friendly, 5.unsafe communities, 6.low income and unemployment.

*Conclusion:* Non-adherence is a topic that has been widely researched over the last couple of years and it appears that the reasons are mostly consistent. However, in poverty-stricken areas it seems as if over-burdened public health services and social problems are the main reasons that need to be addressed. It is thus with great anticipation that we await the NHI plan of the government that will be rolled out as from 2012 to see whether it will better the health care services to the poor.

## **Introduction, motivation and literature review:**

Diabetes Mellitus is rapidly emerging as a major public health problem. Diabetes is one of the major non-communicable diseases (NCDs) in South Africa. The others include cardiovascular diseases, cancers, chronic respiratory diseases and mental illness.<sup>1</sup> Unhealthy lifestyle (sedentary lifestyle, accompanied by poor eating habits and the resultant rise in obesity) is an important contributor to the rising prevalence. Type 2 diabetes accounts for well over 90% of diabetes in Sub-Saharan Africa.<sup>2</sup>

Most of these type 2 diabetics in South Africa are treated at a primary care level by general practitioners in the public and private sector. Both non-pharmacological and pharmacological interventions can help to ensure that glycaemic targets are achieved and maintained. Non-pharmacological interventions such as weight loss through calorie-restricted diets, regular physical exercise and stopping or reducing smoking play a vital role in all forms of diabetes.

Non-adherence is a problem found all around the world. Various research studies have been conducted on reasons for non-adherence to diabetes care, but the main objective in each of these studies differs.

Puder and Keller et al<sup>3</sup> looked at both patient and doctor factors that contribute to non-adherence and poor diabetes care. This study was conducted in Switzerland. They found that physician compliance with treatment guidelines is relatively poor. One reason for the lack of compliance with the guidelines might be lack of knowledge of, or belief in, more recent guidelines, as most of them are based on relatively new data possibly unknown to the physician. Providers' beliefs and attitudes influence adherence. Patient barriers to good management are non-acceptance and absence of symptoms, divergent cultural concepts, chronicity of the disease, specific expectations and beliefs, comorbid conditions and psychiatric disease.

Mshelia et al<sup>4</sup> conducted a study in Nigeria on patients with diabetes type 2 to demonstrate how diabetes management objectives can be achieved in a resource-poor environment by increasing patient-physician contact time and health education. The study compared a group of patients with diabetes type 2 who was recruited and managed in the metabolic research unit (MRU), where health education was emphasised for a period of 5 years with a group of

patients with diabetes type 2 who was recruited and managed in the medical outpatient department (MOPD), where there was patient congestion. There was a marked reduction of morbidity in the MRU group compared to the MOPD group after the 5 year period.

Grant et al<sup>5</sup> tested the hypothesis that adherence decreases with increased number of medicine prescribed. This study was conducted at Massachusetts General Hospital in Boston, USA. 128 patients with type 2 diabetes who receive primary care at Massachusetts General Hospital Revere Healthcare Centre, a Community Health Centre serving a working class community, were recruited from the hospital register. They were interviewed telephonically to determine self-reported adherence to diabetes-related management. Patients reported very high adherence. They were also under fairly good metabolic control. The study found that a higher number of prescribed medicines was not associated with poorer medicine adherence. However, they found that those with poor overall adherence had problems with one specific medication resulting in not taking that specific medication.

El-Kebbi et al<sup>6</sup> identified potential barriers (habitual, economic, social, conceptual factors) to dietary adherence in their study conducted in 1996. This study was conducted at the Grady Memorial Hospital Diabetes Unit on urban African Americans with diabetes. The Facility provides care to diabetes patients who are socio-economically disadvantaged and mostly black patients. A convenience sample of 45 patients with type 2 diabetes was recruited for group interviews. All patients received diabetes education classes before, that included diabetes in general, self-monitoring of blood glucose, foot care and dietary advice by a registered dietician. The patients were asked about difficulties they experienced in following recommended meal plans. Barriers identified were that most participants missed sugar-containing food items, they felt that they could not afford to buy low-sugar or low-fat foods in addition to other food items necessary for the rest of their families, they found it time-consuming to cook two different meals and they found the food exchange system difficult to understand and the reading of food labels time-consuming and frustrating.

Aldana et al<sup>7</sup> conducted a study to determine the behavioural and clinical impact of a therapeutic lifestyle modification intervention on a group of community volunteers. The intervention group attended a 40-hour educational course delivered during a 4-week period. Participants learned the importance of making better lifestyle choices and how to make improvements in nutrition and physical activity. Changes in nutrition, physical activity

behaviour, and several disease risk factors were assessed at baseline and after a six months period. Intervention participants showed significant 6-month improvement in all nutrition and physical activity measures except calories from protein and whole-grain servings and all clinical measures except blood glucose, total cholesterol, triglycerides, and high density C-reactive protein. The control group experienced small but significant improvements in systolic and diastolic blood pressure and high-density lipoproteins. They concluded that this therapeutic-modification program can significantly improve nutrition and physical activity behaviour and can reduce many of the risk factors associated with common chronic diseases. This study was conducted in the United States.<sup>7</sup>

Non-communicable diseases are closely related to global social and economic development. The rapidly increasing burden of these diseases is affecting poor and disadvantaged populations disproportionately, contributing to widening health gaps between and within countries.<sup>8</sup>

Bishop Lavis Community Health Centre (BLCHC) is a public care facility on the Cape Flats. It mainly serves the community of Bishop Lavis which is one of the impoverished communities in the Cape Metropole. The Population is estimated to be 45 000.<sup>9</sup> The inhabitants are predominantly coloured (96%) and Afrikaans is the predominant language (90%).<sup>9</sup> The people of Bishop Lavis encounter multiple social problems like unemployment, crime and gangsterism, unsafe communities, domestic violence, alcohol and drug abuse. More than 50% of the employed people in Bishop Lavis earn less than R1,600.00/month.<sup>9</sup>

One of the services provided at BLCHC is the chronic care of patients with diabetes. Part of the goals of BLCHC is to empower patients to take on a bigger role in their own health through group education about diabetes and if time allows counselling on a one on one basis. The health education team consist of a dietician, physiotherapist, health educator, nursing staff and doctors. Despite these efforts, a large number of poorly controlled diabetes patients as well as regular defaulters prevail. Many of these patients also present with complications of diabetes such as ischaemic heart disease, strokes, renal impairment, loss of vision, peripheral vascular disease resulting in amputations of legs and even death.

Due to the perceived problem of poor adherence to diabetes care at BLCHC, a study was conducted to explore the experience of people with diabetes in the impoverished Bishop

Lavis area to enable the researcher to have a better understanding of possible reasons for non-adherence to diabetes care in this specific South African context.

**Aim:**

To explore the reasons for people with diabetes in the Bishop Lavis area being non-adherent to diabetes care.

**Objectives:**

To explore patient understanding of diabetes

To explore how patients perceive the diabetes team care

To explore patients' understanding of counselling on lifestyle changes and diabetes care

To explore how patients perceive the feasibility of advice given by health care workers in their socio-economic circumstances

To determine patients' attitude towards change

To obtain a deeper understanding of how counselling received is internalized by patients with diabetes

To explore patients' thoughts on why they are non-adherent

**Methodology:**

The researcher has decided on a qualitative research method to explore and gain understanding into the attitude, beliefs, values and reasoning of diabetes patients by means of in-depth interviews and focus group interviews to determine why they are non-adherent.

Participants eligible for inclusion in the study were diabetes patients attending the diabetes club who have uncontrolled diabetes (random hgt>12mmol/l, for the purpose of the study) and

- Who admit to not been taking their medication as prescribed by healthcare worker

- Or admit to not been following a low-fat and sugar-free diet
- Or defaulted follow-up on one or more occasions in the year prior to the study
- Or who have a waist circumference >88cm for females and >102 for males

*Focus group interviews (FGI):*

Focus groups were chosen as it gives the reflection of the study population's own thoughts, beliefs, perceptions, feelings and values. It is a quick way to collect data from several people simultaneously, holistic and relatively inexpensive.

Three focus groups were held with diabetes patients on different dates.

The first group consisted of both females and males, the second group consisted of females only and the third group consisted of males only.

Focus groups were held on diabetic club days. The diabetes club operates 2 days per week (Wednesdays and Fridays). Approximately 75 patients are seen per club day. Patients are screened by a clinical nurse practitioner and a nursing assistant. All patients with uncontrolled diabetes ( random hgt > 12mmol/l- a guideline used at the facility to differentiate who should be seen by a doctor and who can be seen by a clinical nurse practitioner), those who defaulted treatment and patients with medical complaints are referred to a medical officer who is allocated to assist with the club patients.

The researcher invited eligible participants (males and females) attending the club on 14 April 2010 to participate in the first focus group. 8 patients (6 females and 2 males were willing to take part in the focus group. On the second occasion, only female patients eligible for the study were invited. 8 female respondents took part. On the third occasion men who were eligible participants were invited. 6 male patients took part.

Table 1: Focus group interview 1

Participant	Age	Gender	Income
1	55	Female	Unemployed
2	45	Female	Unemployed
3	61	Female	Unemployed
4	54	Female	Disability Grant
5	57	Female	R2,900.00/month
6	75	Female	Unemployed
7	37	Male	Pension grant
8	48	Male	Unemployed

Table 2: Focus group interview 2

Participant	Age	Gender	Income
1	60	Female	Unemployed
2	55	Female	Unemployed
3	74	Female	Pension grant
4	61	Female	Pension grant
5	57	Female	Disability grant
6	75	Female	Pension grant
7	58	Female	Unemployed
8	48	Female	Unemployed

Table 3: Focus group interview 3

Participant	Age	Gender	Income
1	62	Male	Pension grant
2	49	Male	Unemployed
3	59	Male	Unemployed
4	33	Male	R4,500.00/month
5	56	Male	Disability grant
6	46	Male	Disability grant

The reason for conducting the different gender focus groups is because of the dynamics in a focus group. Factors like age, gender and rank have been found to have a big influence on the outcome of the focus groups in terms of the openness of the participants to air their views. In this study gender might well play a role as this is still a patriarchal community and females might not have the candour to talk in front of the males about exercise and the males might not want to talk about the diet that is prepared by their wives in front of the females for example.

The patient participation was voluntary and they gave written informed consent.

The first FGI was conducted as a pilot FGI for practice and learning and to test the chosen method and questions.

The initial explanatory question in all three FGI's was: "What do you know about diabetes?" The author had prepared a discussion guideline (Annexure A) from the objectives (see above) that gave structure to the discussion. The group was allowed to interact with each other and probed to talk about their feelings and thoughts. They were not interrupted while they stayed on the different topics the author wished to cover. The FGI's were recorded and the recorded material was transcribed.

#### *In-depth interviews:*

Focus group interviews may prevent individuals to open up completely or be spontaneous with the possibility of losing valuable information. For this reason the author conducted in-depth interviews as well.

A convenience sample of 7 patients was interviewed by the author. The author prepared an interview guide (Annexure B) using the above objectives. However, the participants were allowed to talk in their own way and the interview guide was merely a way to explore the issues in the objectives.

The participants were club members as well as patients from casualty who were eligible for the study. Patient participation was voluntary and they gave written informed consent. All the interviews were recorded and the recorded material was transcribed.

Table 4: In-depth interviews

Participants	Age	Gender	Income
1	48	Female	Disability grant
2	56	Female	Unemployed
3	55	Male	Unemployed
4	63	Female	Pension grant
5	27	Male	Unemployed
6	61	Female	Pension grant
7	55	Male	Disability grant

*Analysis:*

The five stages of data analysis in the framework method were followed.<sup>10</sup>

- 1) Familiarisation- the author immersed herself in the data by listening to the audiotapes and reading through the transcripts.
- 2) Identifying a thematic framework- the author sifted and sorted material. Key themes were identified from the objectives, as well as new themes that were raised by participants during FGI's and in-depth interviews.
- 3) Indexing- the thematic framework was applied systematically to all the data in its textual form.
- 4) Charting- data were rearranged according to the different key themes and charts were formed for each key theme.

- 5) Mapping and interpretation- the charts of the different key themes were used to define concepts and to find association between themes and to make sense of the participant's experience.

*Ethical consideration:*

Consent was obtained from all participants. The participants were informed about the purpose of the study and of the outcomes expected from the study in simple terms. Only participants who understood the information were recruited. Participation was voluntary and they were assured that refusal would not influence the future doctor-patient relationship. Both verbal and written consent were obtained for each participant.

Participants were assured of the anonymity of the interviews as well as the privacy and confidentiality of the information collected. In this particular study the interviewer was also one of the healthcare workers that takes care of the diabetic patients, therefore participants were also assured that none of the information revealed during the interview would influence future doctor-patient relationship. Likewise the recorded material would only be accessible to the author and the person doing the transcribing and that data would not be used for other than this study.

The rights, safety and well-being of the participants were of utmost importance. Focus group interviews and in-depth interviews were done on the patient's club day and some cases where a patient was admitted in casualty. That ensured that the participants did not have to stay out of work or make special arrangements to come back to the clinic.

Ethical approval was obtained from the Committee for Human Research at Stellenbosch University.

**Findings:**

The reasons for non-adherence and poorly controlled diabetes that emerged were:

*1. Poor knowledge*

*a) Suboptimal Understanding of Diabetes Mellitus:*

Most of the participants did not really know exactly what Diabetes Mellitus is:

*Male participant: " Ek ken nie."*

One respondent gave it a good try:

*Woman participant: " Um. Diabetes. Dit is wanneer um – soos ek dit verstaan en soos ek dit gehoor het hierso by die daghospitaal is wanneer jou pankreas... nie meer... werk nie. Jou pankreas produseer te min insulien, of glad nie insulien nie. Die insulien uh wat geproduseer word deur die pankreas, um, breek die suikers op in energie, en uh, omdat die pankreas nie meer die insulien produseer nie, gaar die suikers wat ons inneem gaar op, word in die niere gestoor dit word oorgeplaas in die bloed en, as gevolg daarvan, kry ons suikersiekte.*

Most respondents knew that certain food causes their blood sugar level to rise and that a lack of exercise can contribute to the problem:

*Woman participant: "Ek sal maar sê jy moet reg eet. Dis een van jou – dieët speel 'n baie groot rol as jy 'n diabeet is of as jy 'n diabeet gediagnoseer is. En minder bekommernis ( less stres) sal ek sê, en uh baie oefen, dit is ook baie 'n belangrike faktor maar die hoof van dit van die diabetes is, is die dieët. Jou dieët moet reg wees. "*

*Woman participant: " Gesond eet en oefeninge doen."*

A few participants said that they think they have inherited it as some of their relatives also suffer from DM.

*Male participant: " My moeder het hom, my nefie het hom, my pa, uncle het hom en so..."*

Some participants knew that DM can affect certain organs like the kidneys, eyes; causing kidney failure, blindness, amputations, etc.

*Woman participant: " Want as jy nie kyk daarna nie dan gaan dit al hoër en dit sit jou in die gevaar".*

*Woman participant: "En dit kan nog ander organe (effect)."*

*Woman participant: "Dit kan die ander organe aantast."*

*Male participant: "Jy kan... blind word"*

*Woman participant: "...jou oë..."*

*Male participant: "Jy kan jou bene ver- verloor, jou arms en so."*

*Woman participant: "Jou niere kan aangetas word."*

*b) Insufficient education and counselling:*

Most of the participants found the counselling and education offered by students and nursing staff adequate, however they would prefer to have individual counselling sessions.

Some participants felt that the group counselling session does not reach all the patients as it is usually given in the mornings and those who have appointments for club later in the day miss out. Different topics are covered and sometimes it happens that you hear more of the one and none of the other.

Some participants felt that they would like to be seen by a doctor more often for counselling.

*Male participant: " Maar, ek wil ook byvoeg om te sê ons mense moet opgevoed word. Ons mense is onopgevoed. Dis die probleem. En die mense wat einlik kom... kom na die daghospitaal is baie – is ongeletterde mense. En dis dis die toestand wat ons mense in verkeer vandag... ongeletterde mense wat kom met die siekte. Sommige van hulle is so traag-my-nie-agtig hulle is nie ge-worried oor hulleself nie."*

*2. Drug Treatment barriers:*

Most of the participants knew that DM is a non-curable disease and needs lifelong treatment.

Most of the participants did not know what the name of their medication is, but they knew how it looks like.

Most participants knew how many tablets they should take and when, but do not know the importance of regular intake.

One participant said that his wife puts out his medication and was not sure which tablet is for which illness.

Many participants are aware of side effects caused by the drugs.

One participant said he is working shifts which interfere with his treatment regime.

*Woman participant: “Die een ding van dit is omdat ek skofte gewerk het, het ek nie gereeld my medikasie geneem nie want my ure – wanneer ek moet drink dan moet ek slaap. En wanneer ek opstaan dan is dit al seker twee, drie pilletjies wat ek moes geneem het met die gevolg is dat myne nie gereeld ge-control is nie”.*

### *3. Lifestyle adjustment barriers (dietary barriers and lack of exercise):*

#### *a) Dietary barriers*

Most of the participants had heard of a diabetic diet and had a consultation with a dietician in the past, however only a few respondents adhere to a healthy diet and healthy methods in preparing their food.

They found it especially tough when family members eat different meals as them. Female participants felt it very expensive and time-consuming to cook two meals at a time as the rest of the family refuse to eat “diabetic food”.

Many felt that they do not have the means to buy the types of food that is prescribed to them due to economic constraints.

*Female participant: “Jou dieët moet reg wees. Wat ook te verstane is is dat baie van ons – ons kan nie almal – ek is een van hulle ons kan nie almal byhou by die, die diabeetkose.”*

*Male participant: ” Nee jy kan – jy sal jou huis verloor en jou kar verloor om daai goeters te kan bekostig.”*

*Male participant: “Dis nie maklik om – en ek bedoel, as jy, Flora Margarine gaan koop jy gaan jou ore van jou kop af betaal.”*

One participant admitted that his wife prepares a healthy diet for him daily, but weekends he just eats anything.

Another participant admitted that weekends he does not care about his diet because of alcohol abuse over weekends.

An elderly participant said that she eats anything as she relies on her daughter who does not care about her healthy food.

A disabled participant, semi-blind, said his two daughters who are both intellectually disabled cares for him and have no idea what a healthy diet entails.

*Male participant: "U weet, beide my dogters is verstandelik stadig en maak maar kos op hulle manier. My vrou is mos dood."*

Another elderly participant said that together with her husband's pension grant they support unemployed, adult children and grandchildren and do not have the means to buy special food for diabetes. She often goes to bed without food.

*Female participant: "Die pension geld is maar min, my twee kinders woon by ons en hulle werk nie. Hulle kinders is nog op skool. Soms aande gaan ek sonder iets oor my lippe slaap..."*

Many of the male respondents admitted that they totally rely on their spouses for their meals which are not always healthy or healthily prepared.

#### *b) Lack of exercise*

Most of the participants knew the importance of exercise, however only some try to do some sort of physical exercise.

Some participants blamed the unsafe communities for not walking.

*Woman participant: "... maar, in die areas wat ons bly, is dit noodsaaklik om 'n partner te hê. Iemand wat saam met jou (oefen)..."*

*Woman participant: "Jy kan nie alleen loop nie."*

*Woman participant: "Jy kan nie alleen loop nie. Dit is 'n bietjie gevaarlik."*

*Woman participant: "Dis een van die hindernisse."*

Some participants felt the need for exercise clubs.

A participant, an amputee, admitted that he has no interest in any form of activity since he is wheelchair-bound.

*Male participant: "So ek, ek waag dit nie eens om te gaan stap nie want as ek val, en ek is daar stoksiel allening, mense het nie – deesdae, is daar nie meer daai, kom broer ek sal jou op help nie. Hulle stap eerder verby jou. As the climate changes, so has the public changed, and I cannot see myself lying on the floor or on the ground in the in the street, and people walk past me. It will break me down morally."*

One participant who lives in a block of flats finds the staircase too tiring, thus he does not leave his home for things he finds "unnecessary" like exercise.

Some participants blamed their co-morbidities as reason for not exercising.

*Male participant: "Um, my probleem is ek het begin draf. Toe begin my knieë vir my probleme te gee. En toe stres ek dat die hel draai toe dink ek hier gaan my bene, afgesny word. Because why, my bene het baie gepyn en toe dink ek weer, ek gaan nie nou draf nie. Ek sal maar krieket speel en 'n bietjie sokker speel en so maar draf? Nee, nie vir my nie."*

#### *4. Staff and clinic visit problems:*

Most of the participants knew the importance of regular attendance at the clinic and to collect their medication on time, however it still happens that they skip a visit sometimes.

Most of the participants are satisfied with the overall care they receive. They pointed out that some staff members go the extra mile despite staff shortages and long queues.

A few participants were not happy with the manner in which some of the nursing staff treats them. The Nursing staff is perceived as being harsh sometimes and embarrass patients in front of others.

*Male participant: "As die pasiënte nou net op, vir hulle opruk en iets sê, dan wil hulle die pasiënt attack. En dis nie reg nie. Maar wie's nou die pasiënte? Hou maar jou mond. Sit maar soos Jannie daarso of soos (Annie)..."*

Most of the participants felt that waiting time is too long.

*Male participant: "Die procedure – dit vat lank. Dis stipulations. Jy verstaan jy gaan van die een na die ander na die ander. Wat hulle kan, in een session, alles in een tyd gedoen het. Want as jy gaan weeg, dan kan jy geprick word, jy kan alles, word gedoen op een stadium. Dan gaan jy terug, die suster sien – as die suster nie tevrede voel met jou nie, jy gaan dokter toe. Maar nou moet jy nog sit daai tyd wat jy sit – en nou kom kry jy die suster moet gou daartoe geroep, geselskap hou met daai suster..."*

*Male participant: "Maar die pasiënte sit daar en wag..."*

Some of the elderly participants said they are dependent on relatives to accompany them to the clinic and sometimes it happens that those relatives cannot take off from work on that specific appointment date.

Some participants also blamed the elements of weather that keep them away from the clinic at times. During the winter months they have to leave their houses while it is still dark and find it risky in an unsafe community. There are no shelter outside the facility to protect them against cold and rainy days for those who show up early at the clinic.

*Male participant: "An another thing... I feel I should just bring to the attention. When you stand in this queue in the morning, and wait for the doors to open, I know the facility doesn't give you that coverage on a rainy day and and or, or windy day..."*

##### *5. Poor support structures (family, community and financially):*

Most of the participants felt that they have some support of other family members.

*Male participant: "Ek het 'n vrou wat sommer al, as as die porridge neergesit is dan het sy haar sakkie waar sy haar pille uithaal. Sy't so so 'n ronde, amper so 'n pierinkie, maar dis 'n klein dingetjie. Hy word daar neergesit en jou pille gaan daarin en jy gaan jou pille drink meneer want ek kom nou met die water ook. Nee daai auntie van my is baie streng wanneer dit kom na my, medikasie toe. Baie streng!"*

They found it especially tough when family members eat different meals as them.

Elderly patients felt that their carers do not show any interest in their well-being.

A wheelchair-bound participant felt that there is a lack of wheelchair-friendly infrastructure in the community.

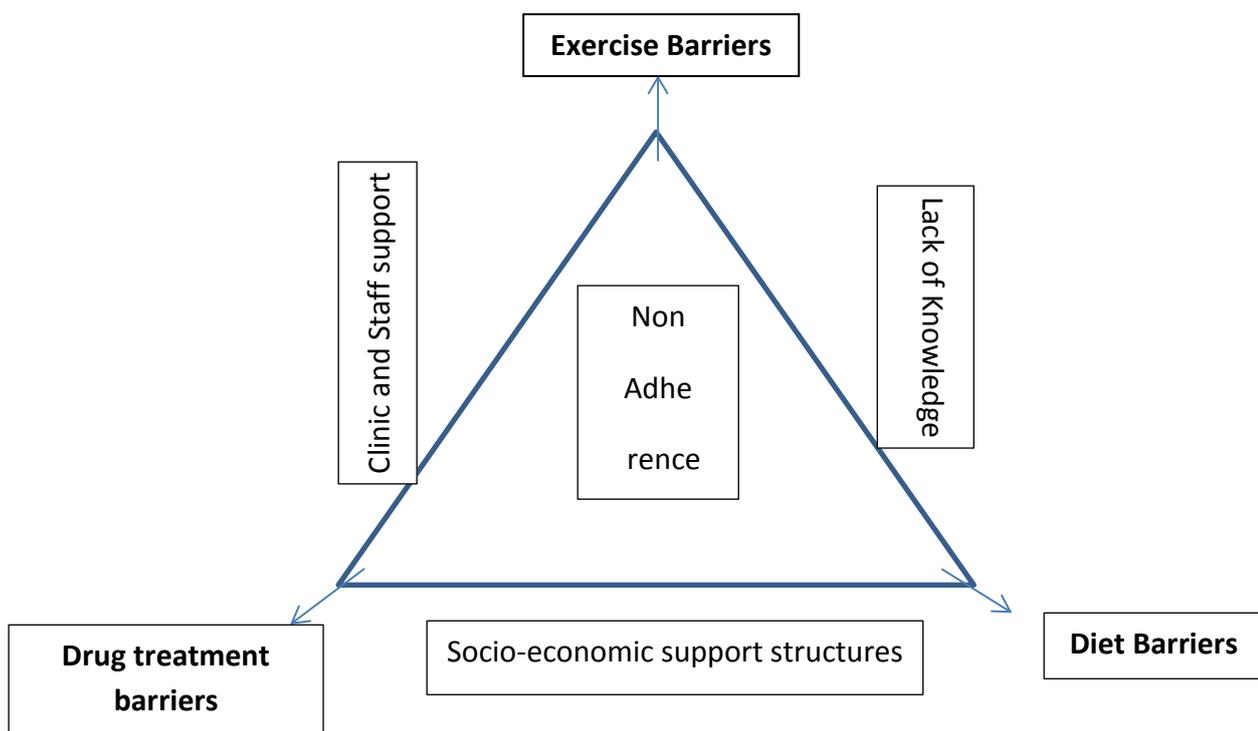
Male participant: “And if you look at many a places even government places, it is not wheelchair friendly, and it is not uh uh, friendly for people who walk with crutches”.

Male participant:” Kyk fasiliteite kan verbeter ‘n bietjie. Veral as ‘n mens kyk na die latrine. Uh um, dis nie so... uh uh, met die mense met af beentjies en krom arms nie. Dis nie so lekker... die gerief is nie daar vir dit nie.”

Some participants felt the need for a diabetes support group in the community.

The perceived detrimental financial impact of diabetes care on the patients has been illustrated under previous headings as well as the problem with safety in the community.

Figure 1: Illustration of main findings



The findings are illustrated in figure 1. The three corners of the triangle are comprised by the traditional main three cornerstones which diabetes management rest on (diet, exercise and drug treatment) and the barriers associated with this. The sides of the triangle are comprised

of the support that is needed to enhance adherence to diabetes care as identified by the study participants, namely clinic and staff support, socio-economic support and knowledge.

## **Discussion:**

### *Summary of main findings:*

The main findings in this study was consistent with many of previous studies done on adherence, i.e. patient barriers, disease and drug regime barriers and doctor-patient relationship barriers.<sup>11</sup> However, in this poverty-stricken area these participants also face other constraints that influence their compliance behaviour. These include over-burdened public healthcare facilities, insufficient education and suboptimal knowledge and beliefs, poor support structures, infrastructure which is not wheelchair-friendly, unsafe communities and low income which is a risk for food insecurity.

### *The study in relation to existing literature:*

These findings are obviously not unique to Bishop Lavis Community. Public healthcare facilities in South Africa are over-burdened which leads to overworked staff members, staff shortages, drug supply shortages, long waiting times for patients at facilities which create the perception that patients do not receive good quality service in the public setting. Unfortunately the majority of the population relies on the public health system.

Primary health care is the foundation of the health care system.<sup>12</sup> Currently primary health care is not well programmed to deliver preventative or treatment services for NCDs and South Africa has some way to go to provide integrated primary health care.<sup>1</sup> The general shortage of healthcare professionals impacts across all aspects of health care.<sup>1</sup>Health care professionals at primary care level should be taught the necessary skills to comprehensively deal with NCDs as well as the necessary communication skills.

Healthcare policies should be implemented to support vulnerable populations in chronic disease prevention and treatment as well as improve public healthcare services as a whole. It was therefore encouraging to hear that Government has acknowledged that the current healthcare system needs reform, especially the re-engineering of Primary Health Care. Huge

disparities exist between the public and private health sector with regard to the accessibility, funding and delivery of health services.” “The majority of the population rely on the public sector.” The National Health Insurance will be phased in from 2012 after ongoing debate for many years. Implementation will be phased in over 14 years and rolled out for start in 2012 in the seriously under-served areas where people have difficulty accessing health care,” The ANC’s health sub-committee chairman, Zweli Mkhize said at the ruling party’s national general council in Durban on 21 September 2010.<sup>13</sup> The aim of the NHI is to provide South Africans with affordable universal health coverage from 2012. The Green Paper has been approved by the Cabinet and was released on 12 August 2011 for comment. The South African Summit on the Prevention and Control of Non-Communicable Diseases took place in Gauteng from 12-13 September 2011. The right of all South Africans to enjoy the highest attainable standards of physical and mental health was recognized. It was also acknowledged that this cannot be achieved without measures and services at national, provincial and district levels to prevent and control non-communicable diseases. This is very encouraging.

The diabetic must pursue a distinct way of living, i.e. changing eating habits, go on a diet, create a healthy lifestyle and stick to it.<sup>14</sup> Patients may know the necessity of being on a diet, but the majority do not have an understanding of what this entails<sup>14</sup>. Providing patients with this type of information is critical in diabetes care. Over-burdened public healthcare facilities leaves little time for individual education and counselling of the diabetes patient and for all other chronic diseases for this matter.

People living in poverty, female head of households, single parents, people living with many siblings, landless people, migrants and immigrants are at risk and most vulnerable of food insecurity.<sup>15</sup> Food insecurity is associated with hypoglycaemia and impaired self-management in diabetes patients.<sup>16</sup> It is noted with grave concern the vicious cycle whereby NCDs and their risk factors worsen poverty, while poverty contributes to rising rates of non-communicable diseases.<sup>17</sup>

Social support especially those of the aged and disabled needs attention. According to a review study of strategies and intervention for improvement of medication non-adherence among older people they found that social support can affect medication non-adherence in older adults. Older people who received help at home with activities of daily living and their

treatment regime from a spouse or female relative were significantly more likely to adhere to medication than those who did not have such in-home support.<sup>18</sup>

According to a study done by Otero-Sabogal et al<sup>19</sup>, physician-community health worker (CHW) partnering can support self-management in primary care. This study found that physician-CHW partnership had a positive impact on patient self-management skills and clinical outcomes. Both patients and physician had a higher satisfaction with overall care. With appropriate training CHW can become part of the primary healthcare team to improve the quality of care.<sup>19</sup> Training of home-based carers could be implemented to assist patients out in the community (especially the aged and disabled) to improve self-management. This also provides an opportunity to create jobs for the unemployed.

Safety is a real issue in South Africa and more so on the Cape flats. The community of Bishop Lavis, like the rest of the Cape Flats is plagued with unemployment, gangsterism and drug abuse. Gang wars, drug-related crimes, robberies and street muggings are common occurrences. This makes it very unsafe for people to walk around and even leave their houses early hours of the mornings to be early in queues at clinic. The attendance of patients at Bishop Lavis Community Health Clinic is affected and it also prevents them from exercising by means of walking. Drug abuse also interferes with adherence to treatment. Measures, e.g. visible policing, neighbourhood watch, etc. should be explored and implemented to improve the safety of the poor in these areas.

It is obvious that a lot more need to be done to assist patients in poverty-stricken areas to assist them with improving their adherence and care of their illnesses and therefore improve the outcome of the disease. Understanding their conditions and problems can improve patient behaviour regarding compliance.

#### *Strengths and limitations:*

The researcher is part of the diabetes health care at the clinic and knows many of the participants and their background. It could be that her prior knowledge, experience and beliefs could have impacted on the results of the study. However, the researcher tried with this in mind to be as objective and neutral as possible.

Execution of interviews did not happen as planned. Due to time constraints participants were collected from the club on days suitable for the researcher to conduct a focus group or in-depth interviews. Patients were reluctant to participate as it meant extra time spend at the clinic. Though less in-depth interviews were conducted as planned initially, the same themes started to emerge in the interviews. This non random sampling could have lead to bias.

The different data sources (focus group interviews, in-depth interviews, tape recordings, transcriptions, researcher's notes taken during interviews) were triangulated to increase the validity of the results.

*Implication for further research:*

The researcher conducted research on a topic that has been widely researched before. The study lacks information of the younger diabetes patient and further research would be interesting to explore how the young diabetes patient in poverty-stricken areas perceive diabetes care in the public sector.

The researcher noticed that no patient spoke about their own motivation or taking responsibility themselves and this might be interesting for follow up research.

It would also be interesting to assess patient adherence and disease outcome after Implementation of the NHI which aims to improve access and quality of healthcare in the public sector.

**Conclusion:**

Non-adherence is a topic that has been widely researched over the last couple of years and it appears that the reasons found in this study are mostly consistent with current research. However, in poverty-stricken areas it seems as if over-burdened public health services and social problems are the main reasons that need to be addressed. It is thus with great anticipation that we await the NHI plan of the government that will be rolled out as from 2012 to see whether it will better the health care services to the poor. Emerging from this research, it is also clear that there are a couple of improvements one could suggest at the clinic, for example:

1. Training in communication skills to improve the attitude of healthcare workers towards patients.
2. Staff partnering with NGO's and CHW to assist with education of communities and health care.
3. Involving the social worker more often to address socio-economic problems.
4. Improve health information strategies-health education should be given not only to the patients, but should be spread to the community at large. People should be informed about good health practices to prevent chronic diseases and to emphasise the importance of taking responsibility of your own health. Education tools such as radio talks, articles in community newspapers, talks at schools, church gatherings and sporting events could be used.
5. Dietary advice should emphasise the importance of a low-fat, low-sugar diet on a daily basis and inform patients on cheaper ways to reach this goal. The idea that diabetic food is "special" should be discouraged. The harmful effect of alcohol and drugs should be incorporated in the dietary advice.
6. Starting a support group.
7. Emphasise the importance of exercise and address factors that make exercising more safe- walking groups can be organised and people should be informed about existing exercise clubs in the community. The physiotherapist and occupational therapist can assist and advise people in wheelchairs how to get some exercise. A wheelchair-friendly environment should be established in the community. Improving the safety of the community at large should be addressed by SAPS, e.g. visible policing, and by implementing of neighbourhood watch services.
8. Staff that goes the extra mile should be acknowledged and must receive some form of incentive.
9. Addressing waiting time - address staff shortages, improve booking register, address hiccups in clubs that cause unnecessary delays and consider home delivery of chronic medication to curb congestion at pharmacy.

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## **Annexure A:**

Interview guide for in-depth interviews:

1. Can you tell me what you think diabetes is?
2. How do you feel about the importance of diabetes treatment?
3. How do you feel about a diabetic diet?
4. What are your thoughts on actually managing to do the things that you are told to do at the CHC, e.g. to eat certain foods?
5. Could you tell me your experience on why diabetes patients might not always follow a diabetic diet?
6. Tell me your experience on the importance of exercise for diabetes patients?
7. Tell me your thoughts on reasons for diabetes patients not doing exercise?
8. Have you missed an appointment date in the past year? If so, what were the reasons?
9. Do you take your medicine regularly and as prescribed? If not, what are the reasons?
10. How do you feel about the care you receive at the clinic? Staff? Education and counselling? Medication?
11. How do you feel about changing your lifestyle or habits? How is the support structure at home?

## **Annexure B:**

Outline for focus group discussion:

Understanding of diabetes

Importance of diabetes care

Diabetic diet

Exercise

Clinic visits and medication

Education and counselling

Staff

Lifestyle changes

Support structures (home, community)

