

Connecting Communities: from the Librarian to the Dietician to the Patient

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Abstract:

Diabetes mellitus is a chronic disease that affects millions of people globally. Increased involvement of patients with type 2 diabetes, in the management and prevention of this disease is essential. Type 2 diabetes is a lifestyle disease that can be prevented and managed by following a particular eating plan, exercising correctly and by the correct administration of medication. With relevant knowledge, lifestyle changes and information, type 2 diabetic patients can improve and manage their condition effectively. This paper reflects on the study done on type 2 diabetic patients who attend the weekly dietary sessions at the Diabetic Clinic at a State Hospital in Durban, South Africa. Most of the patients that are served at the clinic are from economically disadvantaged communities. The paper provides an overview on how the Medical Librarian provides the Dietician with information required, the Dietician in turn re-packages this information and this is provided to the patients in the form of pamphlets, diet sheets and posters. The paper provides an overview of the results of the study, indicating the factors that influenced the patients need to seek out information from the Dietician and whether or not they found the pamphlets and hand-outs provided by the Dietician to be useful. This paper further reflects on the health literacy of the patient, whereby the patient is able to obtain, process and understand basic diabetic health information and is able to make appropriate health decisions and follow instructions for treatment. Recommendations are proposed for further developments and improvements of the diabetic information services at the State Hospital.

Keywords: Information needs and type 2 diabetic patients, Information seeking and type 2 diabetic patients, diabetic dietary education, Type 2 diabetes, Type 2 diabetic patients.

Introduction: background and setting

Diabetes mellitus, often simply referred to as diabetes, is a chronic disease associated with abnormally high levels of glucose (sugar) in the blood. It occurs when the pancreas is unable to produce sufficient insulin, or “when the body cannot effectively use the insulin it produces” (World Health Organisation, 2015). High blood sugar (hyperglycaemia) is found in people who have diabetes. Poor food and activity choices, ill health or skipping and not administering the correct dosage of glucose lowering medication are some of the factors that

contribute to hyperglycaemia. Uncontrolled diabetes over time can be detrimental to the body's systems, such as the heart, blood vessels, eyes, kidneys, and nerves (World Health Organisation, 2015).

The focus of this study was on type 2 diabetes. Type 2 diabetes “results from the body's ineffective use of insulin”. Ninety percent of people with diabetes worldwide have type 2 diabetes, and it is largely because of excess body weight and the lack of physical activity. While this type of diabetes is typically found in adults (40 years and over), it is increasingly occurring in children (World Health Organisation, 2015). With type 2 diabetes, recent statistics show that more than 400 million people worldwide have diabetes (International Diabetes Federation, 2015). In 2004, an estimated 3.4 million people died from the consequences of the disease and the World Health Organisation (WHO) projects that diabetes deaths will double before the year 2030. In South Africa, the International Diabetes Federation Africa (IDF Africa) estimates that there are currently 2.28 million cases of diabetes (International Diabetes Federation Africa, 2015).

Type 2 diabetes is a major public health problem in both developed and developing countries (World Health Organisation, 2015). While the focus is geared towards the clinical treatment and management of the disease, there is a need for patients to share increased responsibility for managing their health and diabetes. With relevant knowledge, lifestyle changes and information, type 2 diabetic patients can improve and manage their condition effectively. Hence information provision is especially salient for the management of diabetes (Peel et al. 2004).

The setting for this study was Addington Hospital, a public sector hospital, situated on South Beach, Durban, KwaZulu-Natal, South Africa. Addington is a 571 bedded and 2200 staffed district and regional hospital that serves a multicultural community from the greater Durban area. Most of the patients at Addington are from economically disadvantaged communities.

The Research Approach

Methods

A large part of this study focused on a qualitative methodological approach, with some elements of a quantitative methodology. According to Babbie and Mouton (2001) qualitative research is conducted in a natural setting with a focus on the process rather than on the outcome. It involves in-depth descriptions and understandings of actions and events. The research process is often inductive in its approach, resulting in the generation of new hypotheses and theories. The qualitative aspect of the study was conducted by semi-structured interviews with the adult type 2 diabetic patients in a face-to-face setting. Telephonic interviews using the same semi-structured interview questions were conducted on patients who were dispersed over a vast geographical area or were not available for the face-to-face interview.

Quantitative studies measure phenomena using numbers in conjunction with statistical procedures to process data and summarise results (Terre Blanche and Durrheim, 1999). Quantitative research includes the use of statistical analysis (Neuman, 2006). The quantitative approach enabled the researcher to accurately describe the patients' needs and seeking patterns. A self-administered questionnaire which consisted mainly of limited closed or pre-coded questions, with some open-ended questions, were designed to obtain information on the patients' information needs from the perspective of the dietician. Further, the

questionnaire aimed to establish the role the dietician plays in providing information to the diabetic patients.

Participants

The research population consisted of 75 participants. A list of the patient population was obtained from Patient Administration and Records Department at Addington Hospital. Included in the research were 74 adult patients with type 2 diabetes of which 69 patients responded and one dietician. Given the size of the population the entire population was studied. The study was limited to adult type 2 diabetic patients who were legally 18 years and older. These patients were out patients (not hospitalised) at Addington Hospital.

Age category	Frequency (N=69)	Percentage (%)
50-59 years	28	40.6
60-69 years	19	27.5
40-49 years	14	20.3
30-39 years	5	7.2
70 years and over	3	4.3
Total	69	100

Figure 1: Age of respondents

Race category	Frequency (N=69)	Percentage (%)
Indian	31	44.9
African	21	30.4
Coloured	9	13
White	8	11.6
Total	69	100

Figure 2: Race Category of Respondents

South Africans continue to see themselves in the racial categories of the apartheid era. This is because these categories have become the basis for post-apartheid ‘redress’ (Seekings, 2008). Figure 2 illustrates the breakdown of the race categories in the study.

Language	Frequency (N=69)	Percentage (%)
English	50	72.5
Zulu	19	27.5
Total	69	100

Figure 3: First language category of respondents

South Africa has eleven official languages. The study was conducted in Durban, KwaZulu-Natal and the official languages in this region are English and Zulu. The study was conducted in English and only two of the sixty nine patients arranged for someone to interpret for them. One of the patients communicated through sign language (Naidoo 2011).

The Addington Hospital Ethics Committee, The KwaZulu-Natal Department of Health: Health Research Committee and the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee had approved the study. Every effort was made to ensure that participants were informed about the study and participant confidentiality was protected.

The Connecting Thread

The health system in South Africa is unique in many respects because its development and structure has been influenced by a unique political ideology of racial separation. Before South Africa's democracy, the majority of South Africans did not have equal access to health information systems. All South Africans now have access to health information through the government websites, government hospitals and specific health associations. Diabetic patients at Addington Hospital have access to the Diabetic Clinic, a diabetic medical specialist, trained diabetic nurses and a diabetic dietician.

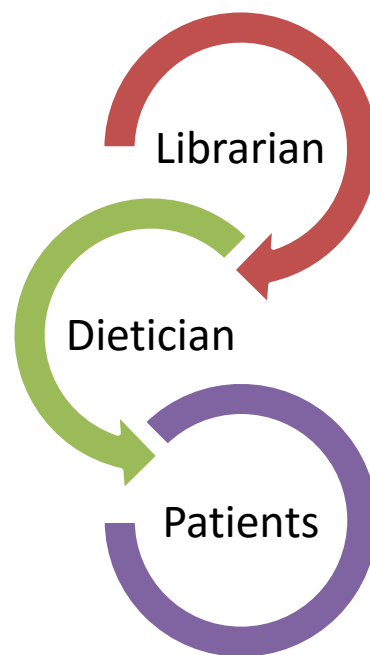


Figure 4: Connecting Communities

The Medical Librarian

The Addington Hospital Medical Library is situated at the hospital. The library staff comprises of a principal librarian and a general assistant. The use of the medical library at the hospital is specifically for the medical and nursing personnel, nursing students and other categories of staff at the hospital. The patients do not have access to the hospital's medical library. One of the roles of the principal librarian is to provide all medical personnel with

relevant and up-to-date information when requested in support of patient care, research and in-service training.

The library has a reasonable collection of journals in the print format and a growing collection of subscription databases and e-journals. The diabetic dietician regularly requests information from the librarian and she utilises much of the resources that are available at the Library. In most instances the librarian conducts the searches on Medline via PubMed, UpToDate and Google Scholar and provides the dietician with the relevant information. Items that are not available at the library are requested through the Inter-library Loans System by the principal librarian.

The Diabetic Dietician

The dietician uses the information obtained from the librarian and together with other dieticians and healthcare professionals is responsible for the re-packaging of pertinent health related information for applicable target groups in relevant formats. According to Alan Bunch (1984) repackaging encompasses two essential concepts which are re-processing and packaging. The process entails selecting the appropriate materials, “re-processing the information in a form that can be readily understood, packaging information and arranging all these materials in a way that is appropriate to the user” (Bunch, 1984).

The diabetic dieticians at Addington Hospital hold a weekly session at the Diabetic Clinic, which is about forty five minutes long. The patients only need to attend the session once, as it is very comprehensive. The talk by the dieticians starts off by explaining what diabetes is and they then discuss the South African Food Based Dietary Guidelines, which are modified to suit diabetic patients. They also use posters with pictures of the various food groups and a plate model demonstrating how much each food group should be on a plate. They provide the patients with diet sheets which were developed by the Department of Health (Nutrition Department), which are available in both the English and Zulu languages. Occasionally they invite the interns to participate in their talks and the interns hand out their own pamphlets which they have developed (Nuns, 2011).

Because of the large number of type 2 diabetic patients attending the clinic, group talks are hosted for these patients. At the end of the talk the patients are given an opportunity to ask questions. The present diabetic dietician is currently working on a flip chart to use for the clinic (Nuns, 2011).

The Patients and the results of the study

The patients at Addington Hospital are from economically disadvantaged communities, and they are unable to afford medical aid or medical insurance. Many do not have access to the internet, hence they rely heavily on the health information provided by the dietician and the Department of Health. The survey results revealed that the largest number (44.9%) of respondents with type 2 diabetes were from the Indian community, followed by the African community with 30.4% respondents. Historically, diabetes was quite prevalent amongst the Indian communities in the greater Durban area, however, the statistics obtained in the study indicated that there is also a high prevalence of diabetes amongst the African communities in Durban. The results obtained from this study, are useful with regard to the dietary information provided by the dieticians. Both communities have different traditional foods that they incorporate into their daily meal plans. The first language of the majority of the

respondents was English, whilst 27.5% of the respondents indicated that their first language was Zulu. The patients did not indicate any other first language. The information in the handouts are available in both English and Zulu which are the languages spoken by the majority of the patients in KwaZulu-Natal. One respondent, who indicated she was fluent in both English and Zulu, revealed that her first language was actually sign language. This respondent had a hearing impairment and her caretaker was present at the time of the interview. The caretaker translated the questions into sign language and indicated that she was also responsible for taking the patient to the Diabetic Clinic as there wasn't anyone at the clinic who could communicate in sign language.

The responses to the types of information provided by the dietician in the questionnaire is similar to that provided by the patients in the interviews. The dietician provided diet and nutrition talks to the patients at the group sessions which are held at the Diabetic Clinic. These talks included information on what diabetes is, the role of good nutrition and the different food groups the patients should incorporate into their diets. The dietician uses the South African Food Based Dietary Guidelines which was developed by the Department of Health (DOH). The dietician also provided the patients with a hand-out on her talk.

When asked if they found the information to be useful, 76.8% of the patients indicated they found the hand-out on food portions to be useful. Around 52.8% of the patients interviewed indicated they understood and benefited from the information in the handouts, especially on how to examine their feet, exercise and incorporate the correct foods into their diet. The study also revealed that the DOH pamphlet on South African dietary guidelines for diabetics was geared towards the dietician who then modified the information into a form easily understood by the patients. Only three (4.3%) of the respondents indicated that they did not benefit from the talks. Their reasons were that they have been diabetics for many years and have a history of diabetes in their family, hence they were already well informed about diabetes.

KwaZulu-Natal Department of Health (KZNDOH) also provides the patients with a variety of pamphlets on diabetes. Pertinent diabetes and health related information was re-packaged by the KZNDOH into a relevant and understandable format. The pamphlets are colourful and are available on a variety of diabetes related issues which includes information on: "What is diabetes?"; "Diabetes self-care"; "Basic eating and nutrition information" and "Medication: Insulin and Oral". The patients indicated the pamphlets are usually targeted towards newly diagnosed patients, with a hope to educate them about what diabetes is and the common complications. One patient indicated that while he found the information to be useful, he also noticed that the information had not been updated since he was first diagnosed several years ago.

One interesting general comment from 43 (62.3%) of the 69 respondents is that they cannot afford most of the recommended food for diabetics suggested by the dieticians. One respondent indicated that food in the supermarkets that is recommended for diabetics are almost twice the price of the regular products

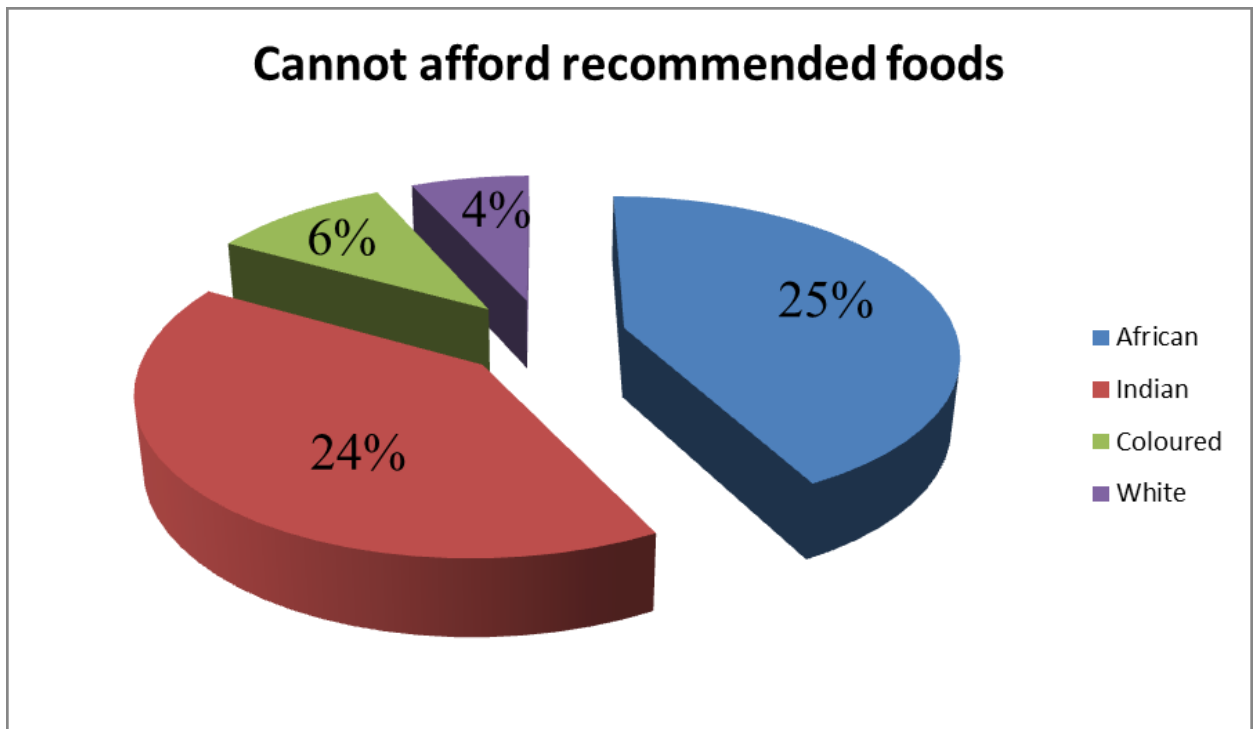


Figure 5: Cross-tabulation of race in relation to respondents who cannot afford the recommended foods

The results from the cross-tabulation of race groups in relation to the patients, who indicated they cannot afford the recommended foods, revealed that 25% and 24% of the African and Indian communities respectively could not afford the recommended food. The statistics from this study reveal that these communities have a high prevalence of diabetes and by not being able to afford the recommended diabetic food may directly affect the management and control of their diabetes.

Health literacy of the patients

According to Weiss (2007) health literacy is the “ability to obtain, process, and understand basic health information and services needed to make appropriate health decisions and follow instructions for treatment”.

Holstrom and Rosenqvist (2005) study disclosed that despite intensive education and support, misunderstandings about both the illness and treatment amongst type 2 diabetics seemed to be common. Five themes emerged from Holstrom and Rosenqvist (2005) study. The fourth theme revealed that there were several misunderstandings about diet and eating habits. Patients did not understand how the composition of a meal affected their blood glucose levels. While many patients were well informed that it is advantageous for obese people with diabetes to lose weight, one overweight person was so afraid of getting hypoglycaemia (low blood sugar levels), he refused to reduce his food intake. One woman was surprised about her high sugar levels after she had eaten four sandwiches, and was unaware that the carbohydrates in the bread raise blood sugar levels. The fifth theme revealed that while the patients were aware that physical exercise was good for their well-being, however they could not see the relationship between blood glucose levels, food intake and exercise (Holstrom and Rosenqvist, 2005).

The findings of this study at Addington Hospital contradicted that of Holstrom and Rosenqvist (2005) study with regard to their fourth and fifth themes on diet and physical exercise. The patients have an understanding on the consequences of diabetes. They have an understanding that good nutrition, exercise and administering the correct medications are important factors in managing their diabetes.

“You can teach me, but you can’t make me” (Funnell and Weiss, 2008). Knowing what is right does not necessarily translate into practicing what is right. Even though the patients understood the importance of incorporating the correct foods into their diet and being aware of the relationship between diet, exercise and maintaining good blood glucose levels, many of the patients joked about cheating as regards to correct eating habits and maintaining a healthy lifestyle.

Conclusion

Type 2 diabetic patients are encouraged to take responsibility for managing their medical condition. Diabetes involves a more significant amount of awareness with regard to diet, exercise, medication administration and the early recognition of plausible complications. Patient knowledge of type 2 diabetes and the consequences of the disease are important for the management of the disease. The results of the study revealed that the patients relied on the information provided by the dietician. The patients had the factual knowledge and information on how to effectively manage and control their diabetes, however whether or not they incorporated this information is questionable. One of the recommendations that were drawn from the conclusions of this study is that there is a need for the dieticians to suggest affordable foods that are geared towards the patients.

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