

# Views of patients on a group diabetes education programme using motivational interviewing in South African primary care: a qualitative study

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## Abstract

**Objectives:** This study was a qualitative assessment of a diabetes group education programme presented in community health centres of the Cape Town Metro District. The programme offered four sessions of group education and was delivered by trained health promoters using a guiding style derived from motivational interviewing. The aim of the study was to evaluate the programme by exploring the experiences of the patients who attended.

**Design:** This was qualitative research that utilised in-depth interviews. Thirteen patients who had attended the educational programme, and who each came from a different health centre in the intervention arm of a larger randomised controlled trial, were purposively selected. The interviews were audiotaped, transcribed and then analysed using the framework approach.

**Setting and subjects:** Patients with type 2 diabetes from community health centres in the Cape Town Metro District.

**Results:** Patients gained useful new knowledge about diabetes and reported a change in their behaviour, especially with regard to diet, physical activity, medication and foot care. The educational material was experienced positively and enhanced recall and understanding. Health promoters were competent, utilised useful communication skills and structured the material well. There were organisational and infrastructural problems, especially with regard to space within which the groups could meet, and communication of the timing and location of the sessions.

**Conclusion:** This study supports wider implementation of this programme, following consideration of recommendations resulting from patient feedback.

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## Introduction

Diabetes makes a significant contribution to the burden of disease in South Africa and is one of the most common encountered conditions in primary care.<sup>1,2</sup> South Africa has self-reported prevalence rates of 2.4% in men and 3.7% in women, but a combined rate as high as 33% has been reported in one Cape Town community.<sup>3,4</sup>

Health centres in the public sector are responsible for the health care of most people living with diabetes as only 16% of the population are insured.<sup>5</sup> Although the technical quality of care for diabetes in the public sector has improved in recent years, only 30-50% of people with diabetes have good glycaemic control and complications are still common.<sup>6,7</sup> Effective diabetes education that leads to behaviour change and better self-care is one of the areas that needs improvement.<sup>8</sup> Nurses may lack both knowledge of diabetes and skills in behaviour

change counselling, and repeated ineffective counselling can reduce their motivation.<sup>9</sup> Health workers in Cape Town have called for a structured diabetes education programme that works with groups of patients and is delivered by health promotion officers.<sup>8</sup> Health promotion officers are mid-level health workers employed from local communities to assist with health education.

Optimal patient self-care is dependent on patients' knowledge of diabetes, which is often poor.<sup>10</sup> However, patients may have knowledge of the recommended behaviour and may still not follow it. Patients' understanding of and agreement with the rationale for change and their motivation also play an important role.<sup>11</sup> The importance of and confidence in one's ability to change have been described as dimensions of motivation or readiness to change.<sup>12</sup> Regular counselling using a patient-centred approach with evidence-based information is more likely to be effective.<sup>13,14</sup> Motivational interviewing, which helps

people to make difficult decisions about behaviour change, has been proposed as an effective approach to counselling people with diabetes, especially when they are ambivalent about change.<sup>12</sup>

Motivational interviewing enhanced behaviour change in 74% of 72 trials in which it was evaluated.<sup>15</sup> Group motivational interviewing showed promise in three trials, while a review of group diabetes education delivered by health professionals also demonstrated a significant effect.<sup>15,16</sup> Motivational interviewing can be successfully delivered by people from a wide variety of educational backgrounds.<sup>15</sup>

It is clear that there is a need for a structured and sustainable diabetes education programme in the Western Cape. No studies in our context have been published on the use of group diabetes education or group motivational interviewing by mid-level health workers, and whether or not this can be effective. This study is a component of a randomised controlled trial that evaluated the effectiveness of a group diabetes education programme delivered by health promoters using motivational interviewing in community health centres in Cape Town. This study reports on a qualitative exploration of patients' experience of the diabetes education.

## Method

### Study design

Qualitative in-depth interviews were conducted with patients who had attended the educational programme.

### Setting

This study was part of a larger pragmatic cluster randomised controlled trial that evaluated the effectiveness of the group diabetes education programme delivered by healthcare professionals, using a guiding (motivational interviewing) style, in community health centres in Cape Town. The study proposal is fully described elsewhere.<sup>17</sup>

Patients in the intervention groups were offered a structured educational programme of four group sessions over a period of a year. The sessions focused on understanding diabetes, understanding medication, living a healthy lifestyle and preventing complications. Sessions were supported by resource materials to enable group activities and discussion, as well as patient education materials to take home. Sessions were presented by trained health promoters to groups of 10-15 patients. Health promoters attended a full four-day training workshop before the start of the educational programme, and a further two-day training session halfway through the programme. Health promoters were trained in their knowledge of diabetes, as well as the motivational interviewing style of communication. The control group received the usual care, which consisted of ad hoc counselling from doctors or nurses and brief talks to patients in the waiting room.

Patients came from low socio-economic backgrounds and spoke Afrikaans, Xhosa or English. Health centres usually organised a specific day on which to see patients with diabetes in a "club". Clubs were originally introduced to deal with the large numbers of patients with diabetes, and to remove them from the general queue. Patients were evaluated by a nurse, and if necessary, seen by either a clinic nurse practitioner or a doctor. Group education was offered on the day that patients usually attended the club.

### Study population

Health promoters were contacted and asked for the names of patients who had attended three to four of the sessions at each health centre. One patient from each health centre was then randomly selected. The first patient to agree from each health centre was then interviewed.

### Data collection

Individual in-depth interviews were conducted in patients' homes. The interview guide first explored patients' experience of the educational programme with regard to communication style, session structure, information on diabetes, use of the educational material, group sessions and organisational aspects. The second part of the interview explored change in self-care activities, especially diet, medication, physical activity and foot care. Interviews were audiotaped and transcribed verbatim.

### Data analysis

Qualitative data analysis used the framework method<sup>18</sup> and was assisted by ATLAS.ti<sup>®</sup> software.

### Ethical considerations

Ethical approval was obtained from the Health Research Ethics Committee of Stellenbosch University (N09/10/260).

## Results

Patients from 13 health centres were interviewed. Four health centres were not included, either because patients could not be contacted, or because they were unable to speak English or Afrikaans. One male and 12 female patients were interviewed, and ages ranged from 41-68 years.

### Experiences of the educational programme

#### Information on diabetes

Patients were positive about the new information they had received:

"The information that we got was excellent. I feel that it was something really worthwhile sitting in. If everybody who is diabetic (and I mean there are a lot of diabetics around these days) can have what we have, I am sure that they will have a better, wider perspective of what they are going through". - Patient 1

They recalled specific information on how to adjust their diet, for example, by avoiding fats and oils, controlling portion sizes, avoiding sugary cool drinks and diluting fruit juices:

"If you eat vegetables, you can fill your whole hand. You can eat them in large amounts. Also, how you must eat your meat. White meat, for example, chicken and fish, is healthier than red meat. If you eat pork, you must cut the fat away. I now carry on with what I have learned". - Patient 2

Patients reported on learning when and how to take specific medication. In spite of receiving treatment, sometimes for many years, they had not received clear information about their medication before:

"The training sessions were very good for me. I could learn from them. I could use my pills right now. Because they didn't work was probably because I didn't use them correctly. Then I got to the sessions. Now, I understand what I have to drink." - Patient 3

"Not even the doctors told me this is how you take your tablets, and that is how you take it". - Patient 4

Patients recalled specific information about foot care:

"I found it quite interesting, because there are a few things that were explained that I didn't think about, like don't rub lotion between your toes, like cut your toe nails straight, and things like that ... the way to cut your toe nails...". - Patient 4

Although patients recalled receiving basic information on stress, smoking and alcohol use, they were not able to elaborate to the same extent.

### Organisation of the educational sessions

Some venues were problematic because the room was too small, sessions were interrupted, there was a lack of privacy, or no specific room was allocated. The inadequacies of the venues made some patients feel as if they were not really wanted at the facilities. Problems with space could also be because of poor planning and prioritisation of the space that was available:

"I found that the health worker got to the clinic and was scrambling and running around, and tried just to get a room to use for her own use, do you understand? It is a problem, and I think the head of the clinics, you know, when we were there, often saw it more as a liability". - Patient 5

Information about the date and time of sessions was communicated by means of a bulk text message or phone call from the health promoter. Patients' general experience was that there were problems with the system of communication with inadequate notification, no notification at all, or no notification of changes to the arrangements:

"Yes, like I said, the whole communication system was clearly not of the best. There were definite breakdown points. All the information didn't always get to me. I maybe got phone calls,

then the whole thing already happened, do you understand? And so on. There was definitely a communication breakdown. In the sense that I couldn't, I didn't get phone calls, or that I got them at the wrong times or with too short notice". - Patient 5

However, there were patients who felt that the system worked very well for them and that they had adequate notification to enable them to attend the sessions.

Patients indicated that the educational sessions did not cause any inconvenience with regard to their normal visits and the collection of medication:

"The thing is, when you arrived for your tablets, she would take your card and have the medication made up for you. There was no problem as they collected the tablets for you. The dates of the sessions corresponded with the dates you had to get medication". - Patient 6

Patients felt that more should be carried out to achieve commitment from the presenters and patients, and that sessions should start on time. Patients expressed the wish for more sessions, and for more people to take part in the sessions as attendance was often poor:

"That the people who get chosen pitch regularly, that they come at the right time. One can't come at quarter past eleven when it starts at eleven o'clock". - Patient 3

### Educational material

There was an overwhelmingly positive response to the use of the resource materials, such as the flipchart, from patients who reported that they helped them to recall and understand the information better, as well as making the sessions more interesting:

"Oh, the books she had were posters. I think it was a wonderful way to learn because we could see them. I think it was wonderful, all of them. It helps a lot because some people are not serious, and when they see the posters they begin to understand. If they don't see a visual aid, then they don't take it seriously. Then it means nothing. You know what I mean". - Patient 7

### Communication style

Patients generally experienced the communication style to be effective, caring and inclusive, and commented that it helped them to understand the information taught by the health promoter. Some felt that the communication could have been more lively:

"She made sure that she made you understand what she was trying to get across. She was very good. She worries when somebody is not there and she brings her point across. She makes sure that you understand what she's talking about." - Patient 4

"I think it is sufficient in terms of what is presented and so on, so yes. I only think that it needs to be presented in a more vigorous way". – Patient 5

### Experience of learning in groups

Patients were very positive about the group format. It allowed them to open up, share their experiences and learn from other members:

"It was good because in the group session, we could exchange experiences, what we were going through. Some people might say: 'Oh, I have been this and that, and that hasn't been right with me', then I can come and say: 'Well, I have been doing this and that and that is fine. Maybe you should try this', or whatever the case, and we could exchange ideas with one another. And it was good. Once we had gone through the pictures, and once she has discussed it with us, then we could just open up to one another". – Patient 1

### Session structure

The structure of the sessions was experienced as being organised and simple. This empowered everybody to take part and made the plan for each session clear. The recapping section at the beginning of each session helped patients to remember what they had been taught previously:

"It was a good structure, because she made sure that you didn't forget what you had learnt the previous time. She gave you a preview back on what you learned the previous time, and then she continued with what we were going to do today. So it was a good thing that". – Patient 4

### Competency of health promoters

Patients' general opinion was that the health promoters were competent and performed well during the sessions. Health promoters who were impressive were described as being able to get their information across and help the patients understand the information. They interacted well with the patients and were very knowledgeable about the topics that were discussed. They were even described as being friends to the patients:

She was a wonderful teacher, I can say she was a teacher. She cared about us. She told us not to use sugar and explained very well what we need to do. It's for our own benefit, not hers". – Patient 7

There were a few others who felt that the health promoters were not properly trained and did not adhere to the session material, but used the platform to air their own opinions.

### Changes in self-care activities

#### Diet

Patients reported specific changes, such as using low-fat milk, removing fat from meat, not frying foods anymore, eating brown rather than white bread, cutting down on cooldrinks and juice, eating less sweets and more vegetables. It was

clear that patients were well informed about a healthy diet, but understood that they had to balance that with the reality of limited financial resources:

"Like chicken stomachs, chicken livers; I have my diet sheet there. I look at it to see what I can eat and what I can't eat before I start cooking and I don't cook with fish oil anymore. If I buy butter, I buy the low-fat or the National Heart Foundation margarine. I can't always afford everything, but I buy what I can". – Patient 7

Following a diabetic diet was difficult, and even frustrating for some patients, even though they had reasonable knowledge. Patients also reported that when they were stressed, their diet suffered as a result.

#### Physical activity

There was a deliberate increase in the effort made to walk. Patients did not have the financial resources to join a gymnasium or club. Exercising in their communities was problematic in winter, when it was cold or wet, and also dangerous. Some patients reported that they suffered from medical conditions, such as arthritis, which limited their ability to exercise:

"But my experience is that I started walking after I got back from the sessions... They give you ideas about how to keep your sugar under control, and then I went walking in the evening, but because it is so dangerous, I cannot walk in the evenings anymore. But I walk to the shops and so on". – Patient 3

#### Medication

Patients learnt new information about the correct way in which to take their medication, but still admitted to deviating from their prescriptions. Patients reported that they changed dosages, adjusted timing and even skipped taking their medication without consulting healthcare workers. Some patients felt that making changes with regard to their medication would help other patients, but not themselves. A group of patients said that they had always taken their medication properly, even prior to the training:

"I was taking my medication, the insulin. Hey, I had to take 50 in the morning and 40 at night and I wasn't happy. And the tablets, tablets is *mos* not a problem. You just pop them in your mouth. That's fine, but after that, after everything that I've heard and learnt there, I decided to follow the rules. So I'm eating everything that's right. I try to eat everything that I should. I work, I take my readings every morning and every night, and I kept my readings very low." – Patient 8

"What I learned, I'm doing it the right way. I can do it the right or the wrong way, my sugar stays the same. The changing of tablets didn't work very much my way." – Patient 4

"I always took my medication regularly." – Patient 9

"They told me I should take my medication in the morning, but I take it at eleven o'clock. I take it when I eat, instead of a while before". – Patient 10

### Foot care

There was a significant change in the way in which patients managed their feet:

“Yes. I always washed my feet, but I’ve learnt how to really look after my feet now. Especially shoes, you mustn’t wear shoes that pinch you. You need to wear good comfortable shoes. You must keep your nails clean and short. You must be careful how you cut them to prevent ingrowing nails. So you must be very careful”. – Patient 6

### Other self-care activities

Patients also reported making changes with regard to smoking, drinking and dealing with stressors. Some of them cut down on the number of cigarettes they smoked daily in an attempt to stop smoking. No changes were reported with regard to the use of alcohol as patients reported that they either never consumed alcohol, or did so very sparingly when at social events. Stress mostly revolved around family problems, work and the diabetes itself. Patients had been made aware of the role of stress in managing their diabetes, and had embarked on different methods of dealing with the stress. Coping strategies included prayer, going for walks, listening to music, watching television and sharing their problems with someone else. They also reported that they shared what they had learnt with other people with diabetes in their community.

## Discussion

### Key findings

This educational programme was effective from the perspective of these patients. Patients gained and retained valuable knowledge, and the programme addressed their need for information. Patients were able to recall specific details about diet, physical activity, medication and foot care, and reported behaviour change in each of these areas. As also reported by Rygg et al, a significant group of patients perceived the gained knowledge to be the single biggest positive experience of the programme.<sup>19</sup> These positive findings on self-care activities are consistent with other studies that concluded that group-based self-management training can result in improved diabetes knowledge, fasting blood glucose levels, glycosylated haemoglobin, systolic blood pressure levels, body weight and medication requirements.<sup>16</sup> There were a few attempts to stop smoking, and alcohol consumption was reportedly already low. Patients reported different ways of dealing with stress, but it is unclear whether or not these changes were as a result of attending sessions or of their own initiative.

There was very positive feedback on the use of educational materials and the communication style. An overwhelming response testified to the competency of the health promoters. A strength of group versus individual education is the benefit of interaction among members, which may enhance commitment

to change.<sup>20</sup> Our patient feedback on group education was overwhelmingly positive, and also reported on the benefits of group interaction which allowed participants to assist, share with, and learn from, each other.

The lack of suitable space for group activities and difficulties with communication about dates and times were major barriers to the success of the programme. Poor attendance and sessions starting late were some of the negative experiences which patients recalled. Patients said that the programme did not interfere with their normal clinic visits and the collection of their medication.

## Strengths and limitations

Patients with poor attendance might have reported on different experiences of the programme and could have revealed their reasons for not attending. No Xhosa-speaking patients were interviewed. It is possible that they might have had a different perspective. The interviews were conducted and interpreted by one author with supervision from another, which could have increased the chance of his own assumptions, values and beliefs influencing the analysis. However, this author was independent of the larger study and conducted the interviews at the patients’ homes where they were more likely to be honest about their experiences.

## Recommendations

Patients felt strongly that the programme should continue. However, it was recommended that patients’ experience could be improved in the following ways:

- Health promoters need to improve communication with patients on session venues, dates and times.
- Facility managers need to develop a more suitable infrastructure for group education within health centres. Alternatively, group education should only be implemented at facilities with access to suitable space.
- Facility staff need to appreciate the importance of group patient education and to show greater commitment to assisting with the practical arrangements.
- Health promoters should ensure that the sessions start on time.
- The team who developed the educational programme should consider developing additional sessions.

The results of this study support further implementation of the educational programme. The experience of those who did not attend could be explored in a further study.

## Conclusion

Patients gained useful new knowledge about diabetes and reported a change in their behaviour, especially with regard to diet, physical activity, medication and foot care. The educational material was experienced positively and enhanced

recall and understanding. Health promoters were competent, utilised useful communication skills and structured the material well. There were organisational and infrastructural problems, especially with regard to space within which the groups could meet, as well as communication of the timing and the location of the sessions. This study supports wider implementation of this programme, following consideration of recommendations resulting from patient feedback.

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