

Exploring T2DM Patients Motivation in Diabetic Self-Care: A Qualitative Study

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Abstract

Motivation refers to the larger mental processes that guide individual behaviours. Self-care behaviours are crucial in aiding disease adaptation by improving treatment adherence, disease control, quality of life, and self-perceived health status. Diabetic patients have been shown to have fewer concerns about their health. Thus, this study aimed to explore the motivating factors of diabetes self-care (DSC) among people with Type 2 Diabetes Mellitus (T2DM). A qualitative approach was adopted to explore and better understand the motivation behind self-care among diabetic patients. In-depth interviews (IDI) were conducted with 21 patients from two government healthcare facilities in Selangor, namely Hospital Tengku Ampuan Rahimah, Klang and the Meru Health Clinic from November to December 2019.

All the qualitative data were managed using the NVivo software and thematically analysed. In general, this study identified two major types of motivation: self-motivation and social-motivation. Under self-motivation, there were six significant sub-themes, i.e. perceived better health condition having received DM exposure, perceived importance of diet and medication, self or personal experience, fear of diabetes complications, perceived importance of lifestyle modification, and positive thinking. In addition, the results revealed five significant sub-themes in terms of social-motivation: family support, community support, others' experiences, financial support, and employer support. Our findings demonstrated the importance of various motivating factors in providing self-care support to diabetic patients. A well-planned diabetes management programme should incorporate motivational support to encourage patients to better manage their conditions.

Keywords: Motivation, People with Type 2 Diabetes Mellitus, Self-care Behaviour.

1.0 Introduction

Diabetes Mellitus (DM) is a serious, chronic disease that occurs when the pancreas does not produce sufficient insulin (a hormone that regulates glucose in the blood) or when the body cannot effectively use the insulin produced [23]. It is an endocrine disorder characterised by abnormal fluctuations of blood glucose levels that requires continuous medical care, patient education, self-management, and regular access to a comprehensive support system [2]. DM is causing worldwide concern due to its high disease burden, comorbidities, the negative impact on quality of life (QOL), as well as the direct and indirect costs incurred on the health system.

Worldwide, there are approximately 381.8 million DM patients and this figure is expected to increase to 591.9 million by 2035 [6]. Furthermore, the cost of managing DM and its complications is estimated to account for nearly 10% of all healthcare expenditures [10]. In Malaysia, the National Health and Morbidity Survey (NHMS) reported that the prevalence of DM in Malaysia has risen from 11.2% in 2011 to 18.3% (3.9 million people) in 2019, making it one of the most common noncommunicable diseases (NCD) in the country [17]. The prevention of diabetic complications is critical for improving the QOL of people living with DM. A disease self-care programme is an important foundation to empower patients to effectively manage their health-related behaviours, such as blood glucose monitoring, management of hyperglycaemic or hypoglycaemic symptoms, diet modification, and exercise management. However, most diabetic patients struggle to manage and sustain long-term behavioural changes. Notably, motivation is defined as the driving force behind the desire to change one's behaviour. Social-motivation is driven by other people, material items, consequences, or advantages whereas self-motivation is driven by one's own needs, values, and feelings [14]. In view of that, this study aimed to investigate the motivating factors of self-care among diabetic patients in Selangor, Malaysia. Our goals were to identify what motivates diabetic patients to follow the recommended self-care practices.

2.0 Objective

The aim of this study was to explore the motivating factors of diabetes self-care (DSC) among people with Type 2 Diabetes Mellitus (T2DM) to understand what would motivate them better self-care.

3.0 Materials and method

3.1 Study Design and Setting

This qualitative study was conducted to explore the motivation for DSC among Type 2 diabetic (T2DM) patients. A qualitative study was used to gain a deeper understanding of different phenomena from the perspectives of informants as well as to relate their understandings to their experiences and views [18]. An in-depth interview (IDI) was carried out with informants sampled via purposive sampling. The purposive sampling method is highly effective if there are a very limited number of individuals who can serve as the principal data sources for certain research designs and objectives. This method requires the use of personal judgement in selecting the most appropriate respondents to answer the research questions and achieve the research objectives [8].

Semi-structured qualitative interviews were conducted with 21 diabetic patients from two health facilities in Selangor, namely Hospital Tengku Ampuan Rahimah, Klang and the Meru Health Clinic from November to December 2019. These two centres were selected based on the Report on Diabetic Patient Information. IDIs with the T2DM patients were conducted in closed rooms after receiving verbal and written consent. One researcher acted as a moderator while the other one as a note taker. The semi-structured interviews were conducted using the interview guide that was developed and pre-tested to facilitate the interview process. To obtain maximum data from informants, the researcher mainly used open-ended questions and question probes.

3.2 Interview Process

The informants were selected based on their eligibility, i.e. aged 18 years and above, diagnosed with diabetes for more than three years, and able to communicate and understand Malay or English language. Their participation in the interview was confirmed and arranged by the staff nurse at the respective clinics.

Each interview lasted 40-60 minutes. The interviewer started with a brief introduction of the study objective before asking the informants to provide written informed consent. All interviews were digitally recorded with the permission of informants.

3.3 Analysis

The audio recordings of all the interview sessions were transcribed verbatim. By recording the interviews, the researcher had access to a higher level of precise data that would otherwise not be obtained from the field notes alone. However, the field notes were useful to record any non-verbal communication that can be valuable for data interpretation. The transcribed data were analysed with a thematic approach in stages, namely 1) gaining familiarity with the data; 2) generating initial codes; 3) searching for themes; 4) reviewing the themes; 5) defining and naming the themes; and lastly 6) producing the report. The analysis process began by listening to the recordings and reading the transcribed content line by line to identify and extract the data according to the codes relevant to the study objective. Then, all the similar codes were applied to all transcripts to identify the resulting theme and subthemes. These themes might be identifiable from the literature review while new themes could arise spontaneously from the informants during the interviews.

3.4 Ethical Consideration

Ethical approval was obtained from the Medical Research and Ethics Committee of the Ministry of Health (MREC) (NMRR ID: 19-62-46635). The approval for undertaking the study was also obtained at the state, hospital, and clinic levels. The informants were informed of the anticipated benefits of this work. They were also reassured of their confidentiality and anonymity. Furthermore, they were allowed to withdraw at any point in time. Further verbal permission was also taken from each informant for the audio recording of the interviews. After verifying their willingness to participate, the informants returned the completed informed consent form to the researcher.

In addition, all audio recordings were stored on a secured and password-protected server that was only accessible by the principal investigator. Confidentiality was maintained by assigning a study ID number to the transcripts.

4.0 Results

4.1 Participants

A total of 21 IDIs were conducted with nine female and 12 male diabetic patients. All informants had been diagnosed with DM for more than three years and were undergoing treatment at the two health facilities. The average age of the informants was 56 years. More than one-third (38%) were Malay and the majority of them were non-smokers.

4.2 Major Themes

Two major themes emerged from this study, namely a) self-motivation and b) social-motivation. Table 2 outlines the themes and sub-themes.

Table 1: Themes and Sub-themes

Theme	Sub-theme
a) Self-	Perceived better health condition if received early exposure to DM

motivation	Perceived importance of diet and medication in DM
	Self-experience/ personal experience
	Fear of DM Complication
	Perceived importance of lifestyle modification in DM Diet Physical activity Compliance with medication regimen SMBG Positive Thinking
b)Social-motivation	Family Member Wife/ Spouse Children Sibling Community Friends Neighbour
	Health Care Provider (HCP) support Individual counselling on Diabetes Self-Care (DSC) Foot care Diet Moral support
	Other’s experience
	Financial support

4.3 Theme 1: Self-Motivation

4.3.1 Perceived better health condition if received an exposure of DM

As DM is a chronic disease that requires lifelong self-care, the informants felt the importance of having adequate knowledge about DM. One informant said that if he had the right knowledge about DM and its adverse effects earlier, it could have helped him to take the appropriate actions to prevent the disease.

“I always think, if I am told... this knowledge... maybe 20 years earlier... maybe my diabetic condition is not as serious or maybe I will get it... later in my life. (I2M59)”.

4.3.2 Perceived importance of diet and medication in DM

Some of the informants had a good knowledge of the perceived importance of a healthy diet and medication intake. They understood these as the necessary components in daily life to maintain good QOL and delay the onset of the complications of diabetes.

“There are no other ways (to overcome diabetes). I think it's because we depended on medicine and modified our diet. Other than that... we don't know. (I8F39)”

4.3.3 Self-experience/ personal experience

Several of the informants explained that their experiences in having high blood glucose readings and hypoglycaemic symptoms made them more alert of their conditions and also motivated them to better manage their DM.

“When I ate sweet food, the highest blood glucose reading is 10. I’m scared and afraid to eat sweet food

again... (I9F48)”

“I’m staying alone. Anything can happen to me, especially when I have hypo(glycaemia), I’m very scared. I sweat and I have no one to ask for help... (I1F57)”

4.3.4 Fear of diabetes complications

The majority of the informants were aware of the complications of diabetes and this motivated them to comply with modifications in behaviours and medication routines to avoid amputation or other complications.

“... I saw on Youtube... people who don’t see a doctor or take medications can have their fingers and legs cut (amputated)... I think that’s worse.... At that time, I know it is time for me to take care of my diabetes. If I did not take care of my diabetes, it might be my leg that is cut off ... that will be worse. (I10M46)”

“You have to be really careful because you don’t want your diabetes to become more serious..... When you are hurt, the wounds get rotten... You don’t want to be like that right?... It must be controlled. (I12F50)”

4.3.5 Perceived importance of lifestyle modification in DSC

The majority of the informants also stated that although medication compliance is important, lifestyle modification is also very important, especially diet and physical activity. Practicing a good way of life and understanding the disease condition can contribute to a better QOL for diabetic patients.

“I think medication is important... But if you ask me, I think lifestyle also... We need to take care of our lifestyles. Lifestyle is the kind of food we eat and the exercise, you know. If we don’t take care of all these things, no matter how much medicine... it won’t bring any benefits... (I2M59)”

“Look at the sugar level... InshaAllah, if it looks beautiful, the doctor will say to maintain it... he will encourage me to maintain it. (I4M55)”

4.3.6 Positive Thinking

Under the theme of self-motivation, some of the study informants also felt that positive thinking was vital in their lives despite having a chronic disease and feeling burdened by it. They spent more time reading positive books or tried to be more active and contributed to the community and mankind.

“Try to be happy and cheerful, and listen to nice sounds. I read a lot, I questioned a lot... Yes, to make yourself feel more active, and dynamic. Before I leave the world, I must make sure that I utilise my talent for the benefit of the whole of mankind. So that is the main aim... Positive thinking. You must feel that you are an asset in this world... (I3M6)”

4.4 Theme 2: social-motivation

4.4.1 Support from family members

According to the study findings, several informants stated that they needed to take proper care of themselves because they still had children. For the older informants, they were fortunate to receive assistance from their children for the DSC at home and fetching them to hospitals for follow-up appointments.

“One reason is that I still have a wife and children....so I need to take care of myself. (I10M46)”

“... Sometimes in the morning, my child sends me to my health appointment and picks me up in the evening. My children don’t allow me to drive anymore. (I17M64)”

“The doctor told me to come for dressing. He washed the wound and applied the dressing... then he said

you can do it yourself. I started to do it myself at home. My children helped me with dressing at home. (I17M64)”

Some informants stated that their spouses or siblings supervised their diet. One said that the entire family consumed low-glycaemic index rice with him. Their spouses and family members also reminded them of their medication schedules and foot care to avoid DM complications.

“...my wife, she helps me check my foot for any lesions... (I2M59)”

“...I don't want to trouble my brother... (I1F57)”

4.4.2 Support from Community (Friends and Neighbour)

Several informants stated that their friends were very supportive in terms of reminding them not to consume sweet or carbonated drinks, besides offering their help to the informants.

“My friends... until today, are quite angry if I touch the carbonated drinks, that will makethem angry... There are also friends who remind me to take less sugar... (I5M46)”

“...my neighbours are there to help me. They said, ‘Anything...call me’. (I1F57)”

4.4.3 Perceived importance of HCP Support

The majority of the informants stated that HCPs help them cope with DM through individual counselling for DSC. Meanwhile, several of them reported that health education sessions with HCPs helped them immensely in learning about healthy diet and foot care management at home. The informants also felt indebted to the moral support given by HCPs during health education activities as it motivated them to take care of themselves and live better life by managing DSC at home.

“He (HCP) told me "Uncle, don't eat like this, don't eat this" when he noticed the wound on my leg....(I4M55)”

“She (the health staff) helped a lot too, she told me to buy lotion from the pharmacy to apply near my feet... so that my feet won't dry out... (I12F50)”

“I met the staff and they helped me a lot. The doctors also helped a lot. Because I really have financial problems. Sometimes I go to clinic appointments on walking... and sometimes the doctor gave me money as taxi fare to go home. (I8F39)”

4.4.4 Other's Experience

Several of the informants stated that seeing other diabetic patients who developed complications because of poor medication complication and behaviour modification gave them some insights into better controlling and managing their conditions

“Look at the sick people, it's bad. Maybe they didn't take care of themselves or go to the clinic for a check... If you are sick like this, you really want to go to the clinic, take the medicine... (I17M64)”

“We can see from the experience of our friends that some people don't take medicine until they have to go to the hospital...he didn't take any medicine, the risk was quite high... (I12F50)”

4.4.5 Positive Communication / Interaction

The study found that several of our informants stated that the positive interaction via two-way communication with the doctors helped them to voice out their concerns. By discussing the matters with the doctors, both parties reached a mutual agreement in terms of DM treatment.

“Once when my blood glucose reading was high, she (the doctor) wanted to give me insulin... but I told her I don't want insulin....So, I asked her for one more month. If it goes up again then it's ok. I will agree to take insulin. But it seems ok... Thank God ... the doctor... she respected my request. (I5M46)”

“The doctor said... if we have any questions...can ask the doctors... I can ask anything and discuss it with him. (I17M64)”

5.0 Discussion

This study explored the motivation of DSC among people with T2DM and its contributing factors. Understanding patients' motivation in DSC is essential because insight into the important factors that drive the betterment of health intervention activities is highly beneficial to HCPs and patients alike. The study findings indicated that self-motivation is a major factor that contributed to the motivation of diabetic patients. There are a few key components that contributed to self-motivation among the patients. The majority of patients believed that learning about DM and other diabetes-related topics would help them to modify their behaviours and to take the necessary steps to avoid the development of diabetes complications. Diabetes knowledge, including its causes and treatment, as well as the interactions of these factors are prerequisites for effective DSC [3].

Several studies revealed that patients with a more comprehensive understanding and excellent knowledge of DM displayed better attitudes and practices that led to improved adherence. Consequently, patients who were more compliant with self-care management demonstrated improved glycaemic control and better health outcomes [16, 21]. According to Hussain. et al. (2016), among diabetic patients and even the general population, there was a positive association between literacy with good knowledge and a positive attitude. In addition, their self-experience in managing diabetes motivated them to closely monitor their blood glucose level and prompted them to take immediate corrective actions so that they can avoid hypoglycaemia and maintain a good QOL.

On the other hand, the majority of the patients indicated that fear of diabetes complications was a main factor that motivated them to comply with behavioural modifications in their daily lives as recommended by HCPs. According to Abolghasemi & Sedaghat, (2015), most of the patients were concerned about chronic complications. Similarly, Kapur (2007), Gillibrand & Flynn (2001), and Heisler et al., (2003) also reported the fear of chronic complications from DM.

According to a recent study, people are more likely to strive toward goals they set for themselves when the desired behaviour is driven by self-motivation [4]. While incentives are not always necessary, the social environment can be a critical component in fostering competence and individual freedom, both of which are required for cultivating self-motivation [8]. In addition, the study discovered that the majority of informants valued lifestyle changes in DSC, particularly in the aspect of diet and physical activity. Together, these factors motivate the patients to have a higher level of self-confidence that propel them to successful behavioural changes for a better QOL.

Apart from that, most of the informants in this study also mentioned the need for optimistic thinking to prevent them from feeling burdened and demotivated. A person's ability to recover and heal, as well as their general health and well-being, are all strongly influenced by their ability to think positively [22]. Furthermore, research has demonstrated a strong link between attitude and healthy behaviour, in which a favourable attitude toward one's behaviour leads to a greater willingness to engage in that behaviour [12]. According to Albert Bandura's self-efficacy hypothesis, people who have strong self-belief in their abilities often perform their daily tasks consistently [13].

Managing a complex chronic disease requires many lifestyle changes, one of which is medication adherence [19]. Patients must be committed to lifelong behavioural changes to achieve optimal control of their disease and prevention of comorbidities and complications. The provision of more comprehensive knowledge from HCP, especially in terms of the challenges that they face, can better support patients in self-management of their conditions [15].

Our findings provide useful recommendations for HCPs to improve diabetes control, besides encouraging

them to provide more social support for diabetic patients. Future research can be improved by exploring different types of DSC measures.

6.0 Limitation

As this was a qualitative study using a purposive sampling approach, its results cannot be generalised to the entire Malaysian population. However, we hope that this study will serve as an important guide in providing easily accessible information about the psychosocial aspect and motivation of DSC among diabetic patients.

7.0 Conclusion

Motivating factors are what drive the underlying desire of individuals to alter their behaviour. DSC can be emotionally and physically draining as it requires a lifelong commitment to medication adherence and lifestyle changes. Understanding the factors that contribute to the motivating factors for diabetic patients to perform behavioural changes can help the HCPs to plan and implement the most suitable interventions for the patients. This is vital for the patients to voluntarily modify their lifestyles for a better QOL. Focusing on factors that improve patients' motivation is critical because it influences their behaviours toward better DSC. Social support can influence patients' motivation to self-care and subsequently influence the management and outcome of DM. Social support is critical in helping patients to cope with DM and comply with the interventions and treatments. Therefore, it is the responsibility of all relevant parties, including the patient, family, and friends, to overcome the lack of motivation and adhere to the prescribed treatment. HCPs must possess the necessary interpersonal skills to motivate patients to comply with treatment. We hope that the findings from this study can be used to assist policymakers and HCPs in planning and implementing behavioural change interventions to improve the service quality in fulfilling the needs of diabetic patients.

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Competing interests

The authors declare no competing interests.

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Credit authorship contribution statement

Kassim R is the main author who wrote the first draft and compiled the written sections of this manuscript. Aimanan SNM, Amirudin N, and Krishnan M interpreted part of the analysis and interpretation of the themes and subthemes, co-wrote sections of the manuscript and Ithnain N was responsible for the refinement, and revision of the final draft of the manuscript. Through our combined efforts, we were able to delve into the complexities of our research subject, examine its nuances, and provide useful interpretations of the findings.

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