

Cultural Challenges in Providing Self-management Education Support to Patients with Type 2 Diabetes in Saudi Arabia

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Abstract: This exploratory qualitative study was conducted to examine the perceptions of nurses, health educators, and dietitians regarding care for patients with type 2 diabetes. The healthcare team in the Diabetes Centre highlighted several cultural challenges that influenced diabetes management, including misconceptions, sedentary lifestyle, female needs, and food habits.

Keywords: Type 2 diabetes, Care Management, Culture, Saudi Arabia.

1. INTRODUCTION

In recent years, there has been a marked increase in the incidence of diabetes mellitus in developed and developing countries, including in Saudi Arabia. The World Health Organization has ranked Saudi Arabia as the second highest incidence of diabetes among other Middle Eastern countries and seventh globally (Robert et al., 2017). Several studies claim that the prevalence of diabetes mellitus in Saudi Arabia is as high as 30%, indicating that a sedentary lifestyle, nutritional issues, and food consumption have a direct relationship with the onset of disease that must be appropriately managed through continuous monitoring (Milibari et al., 2020).

According to researchers, unique cultural barriers in Saudi Arabia hinder the ability of professionals to provide self-management education to patients with diabetes (Alzubaidi et al., 2015). Saudi Arabian lifestyle is commonly associated with a lack of exercise, reliance on high-calorie foods, and high consumption of fat and sugar (Al Slamah et al., 2020). Therefore, experts claim that the country must create tailor-made self-management education programs based on cultural, social, and economic features to support patients with type 2 diabetes (T2D; Al Slamah et al., 2020).

A crucial cultural issue that hinders the administration of self-management education support to patients with T2D is that a majority of health professionals (around 80%) are from a different cultural background (Abouammoh et al., 2016). Having such a significant proportion of international doctors, nurses face challenges in providing culturally sensitive and behavioural advice. It has also been proven that excellent communication with doctors improves self-management and glycaemic control among patients in Saudi Arabia (Abouammoh et al., 2016). Thus, self-management education should consider both health professionals and patients to provide relevant culturally acceptable support to adequately address T2D.

Cultural differences may influence the effectiveness of DSME for patients. Shiri et al. (2016) argued that some cultures have various practices that may hinder the delivery of relevant information and knowledge to enable effective self-care. For example, Muslim women are expected to strictly adhere to a range of cultural practices; nurses and other healthcare providers who are not Muslim may have little understanding of how these practices may hinder the effective delivery of necessary information and knowledge to patients (Norouzinia et al, 2016). In some cultures, female patients cannot be treated by male doctors or people who are outside their culture, which may mean that information about self-care activities

will not be delivered effectively. This will inhibit a patient's ability to take care of themselves, which can lead to further disease complications (Norouzinia et al, 2016).

Therefore, this study was conducted to examine the cultural challenges in providing self-management education support to patients with T2D in Saudi Arabia. It is evident that the education provided by professionals related to disease self-management is significant and has positive effects on patients' health and well-being. Therefore, the cultural backgrounds of patients and perceptions of their health, behaviour, and habits should be considered by healthcare providers to create tailor-made self-management support programs and enhance patient adherence to effective self-care management.

2. METHOD

This study included face-to-face semi-structured interviews with nurses and clinical educators from the King Fahad Medical City (KFMC) and Specialised Diabetes and Endocrine Centre (SDEC). Using open-ended questions allowed the participants to express their perceptions using their own words and provided opportunities for the participants to introduce aspects of the topic that might not be discussed if the researcher had opted to use close-ended questions (Irvine, Drew & Sainsbury, 2013). The use of open-ended questions was also recommended to allow participants to respond to the questions with as much or as little detail as they felt comfortable with (Cachia & Millward, 2011). Aside from this, the use of a semi-structured interview guide helped the researcher ensure that all aspects of the topic relevant to the study were discussed during the interview and all information needed to address the research questions was collected (Doody & Noonan, 2013).

Recruitment

The researcher recruited participants by inviting nurses and clinical educators who indicate their willingness to participate in this study were asked to tick the option for interview and provide contact details to the researcher. The researcher contacted the nurses and clinical educators using the details provided to schedule an appointment for an individual interview. The initial plan was to recruit 10 interview participants, but this was increased to 13 participants to reach data saturation. The interviews were held at a private office in the hospital, which was reserved by the researcher for this purpose.

On the day of the scheduled interview, the researcher opened the session by reviewing the policies and procedures identified in the informed consent form. The researcher reiterated that the interviews were audio recorded. After reviewing the informed consent form, the researcher asked the asked who wish to participate in the interview to sign the form, including a waiver for the recording of the interview and the subsequent transcript. Once the informed consent form was signed, the researcher began the interview. After each interview, the researcher transcribed the recording and sent a copy of the transcript to the participants for their review and approval. This step was undertaken to enhance the validity and reliability of the study results (Ali & Yusof, 2011). Once all the transcripts had been approved, the researcher began the qualitative data analysis procedures.

Inclusion Criteria

To be eligible for this study, nurses had to meet the following inclusion criteria: (1) 21–60 years of age, (2) a nurse at the KFMC and SDEC, (3) working at the SDEC Diabetes Centre for at least one year and (4) able to read and write in Arabic or English.

Exclusion Criteria

Based on the inclusion criteria described above for this study, nurses who met the following descriptions were excluded from participating in this study: (1) less than 20 or more than 60 years of age, (2) employed in KFMC, but not in the SDEC Diabetes Centre, (3) worked for less than one year in the SDEC Diabetes Centre and (4) cannot read and write in Arabic or English.

3. DATA ANALYSIS

The qualitative data was analysed using content analysis. It is one of the most widely used analytical tools due to its flexibility in identifying codes deductively (top-down, theory driven) or inductively (bottom-up, data driven), depending on the topic and the nature of the interviews (Leech & Onwuegbuzie, 2011).

The specific procedures used were in accordance with Thomas's (2006) guidelines. First, the raw data were prepared in text form and all transcripts were formatted consistently (data cleaning). Then, each transcript was read several times to ensure familiarity with the data and highlight recurring codes and emerging themes in the text. Both general (or meta) categories (based on the research questions), and more specific categories were created (in vivo coding, based on the raw data). These specific categories differed as little as possible from the participants' own words; given the large amount of data, NVivo was used here to aid in this analytical process. Next, overlapping codes were assessed to ensure that they could be categorised under similar themes, and uncoded texts were evaluated to ensure that they were not relevant to the research questions.

4. RESULT

Overview of the Participants

Thirteen members of a multidisciplinary team operating the Diabetes Centre took part in this interview. Eight of the participants were nurses, four worked as health educators and one worked as a dietician. Five of the participants were from KSA, two were from India and six were from the Philippines. The majority of participants had more than 11 years of employment experience, while three had less than 2 years of experience. With regard to experience working specifically with type 2 diabetes (T2D) patients, none of the participants had more than 12 years experiences; nine had less than 2 years; and four had 2–6 years of experience in this field.

All the participants in this study held a bachelor's degree in their discipline (nursing, health education or clinical dietician) obtained from a local university in their country of origin. None of the participants had any postgraduate training. The degree of professional training varied between participants, depending on their availability and internal management criteria for each employee. Those who specialised in nursing had much more experience in their field than those from other disciplines; they also completed several training courses on supporting patients with T2D.

Participants Response.

In the interview, participants were asked to discuss the culture challenges they face while providing self-management education support to patients with T2D, a large portion of the interviews was dedicated to this topic, and participants were encouraged to discuss their perceptions in depth. Due to the richness of their responses, their narratives (and associated subthemes). These are summarised in Table 1.

Table 1

Themes	Subthemes	Response theme
Cultural challenges	Misconceptions	Lack of knowledge Over-reliance on traditional herbs without medical consultation
	Sedentary lifestyle	Social occasions and parties Lifestyle modification
	Women's needs	Women's companions and transportation Lack of gyms designated for women
	Food habits	<i>Kabsa</i> High number of restaurants and smartphone apps Weather is not conducive to outdoor physical activities

Misconceptions

Misconception are considered as a major obstacle to patients' self-management behaviour. For example, Sofia (CE) felt that some of the female patients she sees feel pressured to comply with their perceived perceptions of attractiveness by becoming 'fatter':

Honestly, some women come to me and say they want to get fatter because their culture believes that women should be obese. This is a type of *tribe* here. So they come and ask me to increase their insulin dose. I was *shocked* when one woman told me that based on their culture, a girl before the wedding should be obese to be sexy (Sofia, CE).

Sofia (CE) felt that these perceptions may be problematic for health reasons, as they reinforce sedentary lifestyles among women in KSA. A lack of knowledge is another obstacle that adds pressure to the Diabetes Centre team. For instance, many patients feel unwilling to read and to educate themselves about diabetes, and they often evaluate their progress in health based on their mood: 'they don't use the blood sugar measuring devices—they judge their situation based on how they feel and treat themselves based on this feeling', rather than relying on more objective measures (Stephanie, CE).

Some patients feel a lot of shame regarding their health status, and are unwilling to share their feelings with their family members. This then further extends to their narratives with themselves: 'they believe that now they are suffering from diabetes, there's no need to burden themselves with such knowledge ... They don't know that such carelessness increases the disease's complications' (Sofia, CE). Sofia also said that many patients take traditional herbs or medications that have not been scientifically validated as beneficial for their condition. Rather than consulting their HCP, many patients rely on advice from their friends and family. She expressed a lot of frustration as this adversely affects the patient's progress:

This kind of thing makes me disappointed because they come to you and tell you this traditional herb is useful, that 'I tried it and it worked for me and I'm fine'... Which is *not* the case. In fact, it might cause harm for themselves, based on the research, *especially* when they have a complicated case of diabetes ... It's annoying! They think this condition is something similar to a headache, take two Panadols and they will be fine ... That, I think, is the main challenge especially with T2D, but also for Type 1. Honestly, if they are more educated and have a better understanding about their condition and the right way to deal with it... [it] saves our time (Sofia, CE).

Sedentary Lifestyle

Many participants felt that 'sedentary lifestyles' and 'laziness' pose major barriers to providing care for people with T2D. They felt that most patients are 'too lazy' to exercise. The most common response they receive when encouraging their patients to become more physically active is, 'I have no time'. Maya (CE) perceived KSA to have a leading culture of 'eating', even among less socioeconomically advantaged groups, who she said could still afford to eat in restaurants on a regular basis:

We first ask them to control their food consumption ... and to get familiar with food that could affect their health ... To stop drinking soft drinks and eating unhealthy food ... To be more active ... Patients are surrounded by *so many* bad things that they don't know about ... TV and junk food restaurants ... So they just sit in front of the TV for hours and order food ... That's *why* we have a high rate of diabetes ... People are too *lazy* to do anything ... *Honestly* ... Even people in the lower class are in a bad situation because they can still *afford* this kind of food! (Maya, CE).

Another reason the local community is considered to have a sedentary lifestyle is because some people have hired domestic help, such as housemaids, nannies and drivers, to help with their daily tasks. One participant commented:

For girls nowadays, the first thing they want or ask for when they get married is to have a maid because they are so used to having a maid when living in their parents' house ... So they do not have to do anything, not even get a cup of *water* ... They ask the maids for it. So they do not need to make any physical effort at all (Sofia, CE).

Finally, parties and social occasions also present their own obstacles as many people feel hesitant to ask for healthier food options for fear of offending their hosts. This represents a major obstacle for patients who do put a lot of effort into managing their diets, as they may feel pressured to consume food that is unhealthy for them. Stephanie (CE), for instance, commented on many of her patients' large families, and reflected on a common scenario in KSA: attending all your family members' weddings. She scoffed, and asked, 'do you really need to eat at *all* these parties?!'.

Women's Needs

Patients' physical and social environments were also mentioned as being particularly challenging for health management. For example, three participants felt that the lack of 'health clubs' (gymnasiums) specifically designated for women in KSA is a major issue for women who actually want to exercise. They also felt that the government of KSA needs to address

this issue. According to Michelle (CE), ‘the majority of men will tell you they sometimes go to the gym or to the walkway ... But women are disadvantaged in this area. There is a limited number of women’s gyms’. Due to the local culture, some women cannot walk on the public walking paths created by the state unless they have a male companion with them. According to Alyssa (RN) (and confirmed by two other participants), ‘[women and girls] cannot go out and exercise by themselves. They *have* to wait for a companion like a brother or husband, to accompany them’. Transport is another factor that poses challenges for women in KSA, as they are not allowed to drive. Two participants commented on this. Sofia (CE), for example, summarised a common concern among women in KSA:

Wearing the *abaya* and asking somebody to drive me [to the gym], it’s not that easy. My husband might be too busy to get me there ... The government could support the availability of gym facilities in an organisation, for example in a hospital or school, similar to when you go to a Western country, you would find a gym at the university (Sofia, CE).

Some participants commented that there are not enough health club facilities, and women often struggle to find an available companion and transport. They said that another major challenge is that the majority of their patients do not have enough room in their house to exercise as many live in small apartments: ‘the majority of women tell me that they have no way of getting to the gym, and not enough space in the house for exercise equipment’ (Michelle, CE).

Food Habits

The participants indicated that patients’ food habits are also a major challenge with regard to their self-management approach for patients with T2D. This includes the kind of food they eat, the significant number of restaurants and the influence of smartphone applications on their overall health. According to a number of the participants, dates, which contain large amounts of natural sugars, are regularly eaten by their patients as they are a popular food in KSA and neighbouring Arab countries. *Kabsa*, a famous national white rice-based dish, is also one of the most popular foods among people in KSA. Hannah (RN) felt that the majority of her patients, even when cooking food at home, often eat relatively unhealthy foods that are not compatible with the ideal diet for patients with T2D:

To be honest, it is difficult to implement such a thing [as healthy diets] because of customs and traditions ... To change your [way] of life [is a major challenge]. Like for patients who are used to eating five dates at a time or taking tea with sugar. How will you change this aspect? It is a big challenge for me. Anyhow, when I observe the patients, I talk to them about eating dates and *kabsa* ... [which] is very rich in carbohydrates. (Hannah, RN)

Additionally, health educators felt that the new home food delivery phone applications have a strong negative effect on people in KSA as they provide easy access to a variety of unhealthy foods delivered directly to their doorstep: ‘every day, we have new apps that make ordering food easier ... The *kids* are familiar with these ... In *one* click, they have their junk food ... They don’t even need to *read*; they can place orders using *pictures* in the apps’ (Maya, CE).

5. DISCUSSION

Cultural factors are often discussed as major obstacles to the self-management behaviour of patients. For example, participants in this study recognised that lack of knowledge among the citizens of Kingdom of Saudi Arabia (KSA) was a significant challenge that hindered self-management education support for people with T2D. Several studies have documented how knowledge influences the administration of self-management education support. Abahussain and ElZubier (2005) noted that Saudi Arabians face an increasing incidence rate of T2D as well as other health complications such as heart disease, stroke, kidney disease, and nervous system disease due to lack of knowledge regarding the causes and implications. This idea was supported by Mohieldein et al. (2011), who suggested that lack of knowledge on the causes and symptoms of T2D among the KSA population limits the potential to manage the condition before it progresses into a life-threatening condition.

In this regard, Al Shafae et al. (2008) recommended that health professionals and policymakers should be cautious when alerting the public on how to manage diabetes. Mohieldein et al. (2011) concluded that health professionals and policymakers should be heavily involved in providing knowledge to diabetic patients, their families, and the public.

This study also revealed an over-reliance on traditional herbs without medical consultation. Most participants said that a great number of Saudi Arabian families relied on traditional herbs as their first-line medication. In support of this, Hu et al. (2013) and Adejoh (2014), who studied diabetes in China and Nigeria, respectively, discovered that visits to herbal doctors

or ophthalmologists for diabetes treatment are preferred among residents in these countries to seek treatment instead of from health professionals.

Many participants felt that 'sedentary lifestyles' and sedentariness posed major barriers to providing care for patients with T2D in KSA. Another reason the local community is considered to have a sedentary lifestyle is that domestic help, such as housemaids, nannies, and drivers, are commonly hired to help with their daily tasks. This was also discussed by Al-Hazzaaw et al. (2011), who reported a high prevalence of sedentary behaviours and physical inactivity among Saudi Arabian adolescents.

Participants believed that parties and social occasions presented an obstacle because many people felt hesitant to ask for healthier food options for fear of offending their hosts. This represents a major barrier for patients who put a lot of effort into managing their diet, as they may feel pressured to consume food that is unhealthy for them. Musaiger (2011) found that over the past four decades, food consumption patterns and dietary habits had increased notably in the Eastern Mediterranean region. Therefore, people have little freedom to choose what they consume while attending parties and social events.

The need for women to have a companion and transport is believed by participants to be key hindrances to self-management education support for T2D. Some women are unable to participate in physical activity in the absence of people to accompany them to public exercise venues. The findings in the current study agree with those reported by Al-Hazzaa et al. (2011), who pointed out that social norms in KSA restrict opportunities for women to participate in physical activity. The participants further noted that women were restricted by these social norms and unable to break away from them. This limits the ability of healthcare teams to effectively employ self-management education support for T2D.

The participants also pointed out that because women are not allowed to drive themselves, they are assigned male drivers. The fact that Saudi Arabian women are not allowed to drive was also noted by Baldove et al. (2016). Furthermore, participants pointed out that the Saudi Arabian education system does not allow physical education for females, a concept that was also pointed out by Alshaikh et al. (2016).

The lack of gyms designated for women in the KSA is another challenge. Participants believed that women were capable of participating in physical exercise if they had their own gyms. The presence of gyms designated for women is important because it would make it possible for women to exercise adequately at their own convenience and without the need for assistance. Randsdell et al. (2005) noted that physical exercise is important for reducing the incidence of T2D.

Limitations

This study was limited to patients with type 2 diabetes (T2D); hence, the results may not apply to type 1 diabetes patients. The study was also limited to 247 respondents so it cannot be generalised to all people with T2D. Another limitation was that convenience sampling was used for the current study. This may make it difficult to generalise the results to the whole Saudi population.

6. RECOMMENDATION

Knowledge is power, as discussed earlier, and for this reason the government could set out to initiate programs in which medical personnel meet with people to provide counsel on issues regarding the disease. This could be achieved through door-to-door campaigns where easier access to information about the disease is assured for each individual in the country. Mass production of brochures on T2D could be in circulation, courtesy of the government. The government could collaborate with health institutions to ensure that information is accessible to all. The brochures could be distributed in markets, places of religious gatherings, financial institutions and other areas that are frequented to ensure easy distribution to and access by individuals.

Conflict of interest

The authors declare that they have no conflict of interest.

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