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Citation: Alhyas, L., Jones Nielsen, J. D., Dawoud, D. & Majeed, A. (2013). Factors affecting the motivation of healthcare professionals providing care to Emiratis with type 2 diabetes. *Journal of the Royal Society of Medicine*, 4(2), pp. 1-13. doi: 10.1177/2042533313476419

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Permanent repository link: <https://city-ref-test.eprints-hosting.org/id/eprint/4983/>

Link to published version: <https://doi.org/10.1177/2042533313476419>

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Factors affecting the motivation of healthcare professionals providing care to Emiratis with type 2 diabetes

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DECLARATIONS

Competing interest

None declared

Funding

This study was supported by sponsorship provided to LA by the United Arab Emirates Ministry of Research and Higher Education, Abu Dhabi. The funders had no role in study design, data collection and analysis, decision to publish or preparation of the manuscript

Ethical approval

Ethical approval was sought from Al-Ain Medical District Human Research Ethical Committee

Guarantor

LA

Contributorship

LA carried out the interviews and

Summary

Objective We aimed to identify facilitators of and barriers to healthcare professionals' motivation in a diabetes centre in the United Arab Emirates (UAE).

Design A qualitative research approach was employed using semistructured interviews to assess perception of and attitudes regarding healthcare professionals' motivation in providing good quality diabetes care.

Setting A diabetes centre located in Abu-Dhabi, UAE.

Participants Healthcare professionals including specialist physicians, dietitians, podiatrists, health educators and nurses were recruited through purposive sampling.

Main outcome measures After data collection, the audiotaped interviews were transcribed verbatim and subjected to content analysis.

Results Nine semistructured interviews were conducted with healthcare professionals of various professional backgrounds. Important facilitators and barriers related to patient, professional, organization and cultural factors were identified. Barriers that related to heavy workload, disjointed care, lack of patient compliance and awareness, and cultural beliefs and attitudes about diabetes were common. Key facilitators included the patient's role in achieving therapeutic outcomes as well as compliance, cooperation and communication.

Conclusion This qualitative study provides some unique insights about factors affecting healthcare professionals' motivation in providing good quality care. To improve the motivation of healthcare professionals in the management of diabetes and therefore the quality of diabetes care, several steps are needed. Importantly, the role of primary care should be reinforced and strengthened regarding the management of type 2 diabetes mellitus, privacy of the consultation time should be highly protected and regulated, and awareness of the Emirate culture and its impact on health should be

analysed the data.
All the authors wrote
and revised the
paper

Acknowledgements

The Department of
Primary Care &
Public Health at
Imperial College
London is grateful for
support from the
NIHR Collaboration
for Leadership in
Applied Health
Research & Care
(CLAHRC) Scheme,
the NIHR Biomedical
Research Centre
scheme and the
Imperial Centre for
Patient Safety and
Service Quality

disseminated to the healthcare professionals providing care to Emirates with diabetes. Also, greater emphasis should be placed on educating Emiratis with diabetes on, and involving them in, the management of their condition.

Introduction

Improving the quality of diabetes care remains important worldwide.^{1–3} There is increasing evidence that diabetes care is suboptimal in terms of standards attained, degrees of variability and levels of accountability of health professionals.⁴ Previous studies that have been local, observational or exploratory in nature have identified several factors influencing the quality of type 2 diabetes mellitus (type 2 DM) care related to patients, healthcare professionals and organization of care.^{5–7} Factors related to patients (i.e. financial constraints, compliance with medications and gender issues) have been shown to affect the quality of type 2 DM care in previous studies.^{8–14} Other factors related to organization of care and health professionals such as availability of medications, heavy workload, as well as motivation of the healthcare professionals^{11–13,15–24} have also been shown to influence the care provided to people with type 2 DM.

Motivation of healthcare professionals in the management of type 2 DM is a complex issue, and is seen as a collective term covering multiple matters such as the healthcare professional's interests and intentions when providing diabetes care.²⁵ Although 'motivation' is an unspecified term,²⁵ its influence on the quality of diabetes care has been shown in previous research (e.g. refs^{12,13}). Several authors linked professional motivation to better therapeutic outcomes for patients with diabetes.^{26–28} Motivation was one of the common health professional factors alluded to by the healthcare professionals themselves in many studies (e.g. refs^{12,13}). For instance, healthcare professionals' motivation was identified as one of the top five factors associated with improving either the process or outcome of diabetes care in primary care centres in Tunisia.¹³ However, factors affecting the motivation of healthcare professionals in the Middle East and the Gulf region specifically remain poorly defined and less investigated, despite the alarming prevalence known in this region. The United

Arab Emirates (UAE) has the second highest prevalence rate of diabetes worldwide;²⁹ and is in a region with a high prevalence of risk factors for poor diabetes outcomes.³⁰ Therefore, providing effective diabetes care is essential for improving the quality of life for people with diabetes, delaying diabetes-related complications and reducing treatment costs. To optimize the management of diabetes care in the UAE, identifying factors affecting quality of care is essential. The influence of healthcare professionals' motivation on diabetes care has been progressively recognized as a key factor.¹⁵ The significant influence of motivation on improving diabetes care is perhaps unexpected; hence identifying factors affecting motivation is important. Perceptions of and attitudes regarding healthcare professionals' motivation for caring for patients with diabetes living in the UAE have received little attention.

In the present study, a qualitative approach was implemented to identify the facilitators and barriers affecting the motivation of healthcare professionals at a diabetes centre located at a tertiary health care setting in the UAE. The exploration of these factors was based on the theoretical framework of the three main categories (including patient, healthcare professional and organization) that are related to health professionals' practice. The perspectives, attitudes and experiences of healthcare professionals were the focus of the present study. Moreover, the study aimed to (1) identify the facilitators of and barriers in motivating healthcare professionals to provide good quality type 2 DM management and (2) develop a knowledge framework from the perceptions, understanding and experiences of healthcare professionals regarding the management of people with type 2 DM to improve quality of care.

Methods

Ethical approval

Following approval from Al-Ain Research Ethics Committee and the head of the diabetes centre,

participants were contacted to participate in the study.

Setting

The study was carried out in a diabetes centre located at a tertiary hospital in Al-Ain, Abu-Dhabi. This centre provides inpatient and outpatient services for all people with diabetes as well as a diabetes antenatal clinic. The centre focuses largely on educating people with diabetes and their families regarding diabetes and its management through education courses and providing patients with information on insulin pump use and diabetes foot care.

This particular centre was chosen for the following reasons. Firstly, the study aims to identify healthcare professionals' views on barriers to and facilitators of the motivation for providing diabetes care among physicians, nurses, diabetes educators and podiatrists. In this centre diabetes care is provided through a multidisciplinary team composed of a variety of healthcare professionals which would guarantee the targeting of information-rich participants needed to achieve the study aim. Also, many of the healthcare professionals working in this centre are regularly assigned to different primary care settings; hence their views on barriers to and facilitators of the motivation of diabetes care would be informed by their experiences in both primary and secondary care settings.

Further, this centre is one of the biggest diabetes centres in the UAE; it provides type 1 and 2 and gestational diabetes services to people from various age groups including children, young adults and the elderly.

Study design and sampling

A qualitative research approach using semistructured interviews, and the researcher's observations and reflections was adopted to address the aims of the present study. A list of the healthcare professionals who work in the diabetes centre was obtained from the head of the centre along with their hospital email addresses and the date of joining the centre. Healthcare professionals who had worked in the centre for one year or more, managing people with type 2 DM, and

Table 1
Participant characteristics

<i>Interviewee</i>	<i>Years worked in the profession</i>
Diabetes specialist 1	>3 years
Diabetes specialist 2	>3 years
Diabetes specialist 3	>3 years
Diabetes educator 1	1–3 years
Diabetes educator 1	1–3 years
Nurse 1	>3 years
Nurse 2	1–3 years
Dietician 1	1–3 years
Podiatrist 1	1–3 years

were available during the interview period were contacted by email. From the 10 healthcare professionals who were contacted, nine agreed to be interviewed; therefore, the response rate was 90%. Homogenous purposive sampling was used to recruit participants as they were chosen to be 'information rich'. Nine semistructured interviews were conducted with three diabetes specialists, two educators, two nurses, one dietician and one podiatrist. Table 1 provides a brief outline of some of the characteristics of the healthcare professionals who participated in this study.

Interviews were carried out in January to February 2011. Audiotapes and note-taking were used to record the interviews, permission of the participants was sought, and confidentiality and anonymity were emphasized. Participants were informed that they could withdraw from the interview at any time. All the interviews were carried out by the researcher (interviewer) and transcribed in English. Ten to 15 minutes was the estimated time for each interview. A predetermined set of topics obtained from the literature^{12,13} was discussed with participants. An interview guide (see appendix) consisting of a set of open-ended questions was constructed by the researcher and employed to collect data on the interviewees' experience, perspectives, beliefs and attitudes with regard to the facilitators of and barriers to healthcare professionals' motivation regarding the management of type 2 DM in the centre. After data collection, the audiotaped interviews were transcribed verbatim by the researcher (interviewer) and analysed by the researcher using thematic analysis. This research process aims to investigate the experiences, meanings and reality of the participants.²⁸

Table 2**Frequency factors facilitating healthcare professionals' motivation**

<i>Facilitators</i>	<i>Total</i>	<i>Diabetes specialists</i>	<i>Podiatrist</i>	<i>Dieticians</i>	<i>Educators</i>	<i>Nurses</i>
Patients related						
Cooperation with healthcare professionals to achieve therapeutic targets	9	3	1	1	2	2
Compliance with the treatment plan	8	3	0	1	2	2
Awareness about diabetes and related complications	7	3	1	0	2	1
Appreciation of the role of healthcare professionals	7	3	1	1	2	0
Providing feedback to the healthcare professionals	7	2	1	1	2	1
Patients' characteristics	7	2	1	1	2	1
Healthcare professionals related						
Good communication skills	9	3	1	1	2	2
Good time management skills	8	2	1	1	2	2
Organization related						
Satisfaction regarding pay	9	3	1	1	2	2

Results

Nine healthcare professionals, five women (56%) and four men (44%), were interviewed in the study. Overall, participants reported a wide range of factors affecting their motivation, including twenty motivation facilitators and barriers that were identified as outlined in Tables 2 and 3. These facilitators and barriers are related to the patient, healthcare professional and organization of care. Two barriers identified were culture-specific.

Perceived facilitators of healthcare professional motivation

Participants attached importance to the role of patients in increasing their motivation. It was felt if patients cooperated with them, complied with treatment regimens or plans and were aware of the nature of their disease then therapeutic targets can be achieved and diabetes-related complications can be either prevented or delayed. Healthcare professionals expressed satisfaction when their efforts to manage each case were appreciated by their patients. Other interviewees felt satisfied when they received positive feedback

from their patients regarding the care they provided.

Enrolling patients in the treatment strategy is an important tool to achieve the desired targets. If the patient understands clearly what is needed from him/her, then achieving the treatment targets would be easy. When the targets are achieved, I feel satisfied and motivated to manage the case. (Specialist Physician)

When asked about patient characteristics that impacted their level of motivation, healthcare professionals also identified characteristics including age, gender and educational level. For instance, participants noted that in most cases patients with high levels of educational attainment complied with treatment plans and achieved target outcomes more successfully and in higher proportions when compared with patients with other educational backgrounds.

Good communication and time management skills were common themes among healthcare professionals who openly expressed that the nature of their interactions resulted in increased level of motivation regarding the management of their patients. Healthcare professionals at the

Table 3**Frequency of factors listed as barriers to the healthcare professionals' motivation**

<i>Barriers</i>	<i>Total</i>	<i>Diabetes specialists</i>	<i>Podiatrist</i>	<i>Dieticians</i>	<i>Educators</i>	<i>Nurses</i>
Patients related						
Non-compliance with treatment plan	8	3	0	1	2	2
Lack of awareness of diabetes and its complications	8	3	1	0	2	2
Misunderstanding the role of diabetes educators	7	2	0	1	2	2
Patients' preference to receive the entire management of their disorder from the diabetes specialists	6	3	0	1	1	1
Patients' willingness to spend time with healthcare professionals	6	2	1	1	1	1
Fear of attending appointments with a podiatrist	4	2	1	0	1	0
Healthcare professionals related						
Attitudes and beliefs about type 2 diabetes mellitus	7	3	1	1	1	1
Organization related						
Heavy workload	7	3	0	1	2	1
Interruptions	4	2	1	0	1	0
Country specific						
Impact of Emirate culture on health behaviours and beliefs	9	3	1	1	2	2
Language differences between healthcare professionals and patients	3	2	1	0	0	0

diabetes centre also revealed that communication skills such as encouraging patients to take part in consultations, keeping good eye contact and attentive listening helped to facilitate better interaction between themselves and their patients. In most of the cases, participants reported feeling pleased, highly motivated and satisfied when they were able to communicate effectively with their patients.

Being friendly with the patients is important to build a good relationship. I try to listen to them and encourage them to ask any questions so that we can communicate effectively. (Diabetes Educator)

When asked about other incentives that affected their motivation, healthcare professionals at the diabetes centre explained that they are satisfied

with the amount of pay they received and thought that they are well paid for the rigorous work they completed daily, which, in turn, increased their enthusiasm and motivation regarding the management of their patients.

Participants perceived cooperation between the team members at the diabetes centre as the principal facilitator of effective teamwork and it increases their motivation to provide a high quality of diabetes care. They feel satisfied with the level of coordination and cooperation between the team members in the centre and they believe that all of them work hard to deliver high quality of care to people with type 2 DM.

From my experience at the diabetes centre, I feel satisfied working [with] such co-operative team members. (Nurse)

Perceived barriers to healthcare professional motivation

Healthcare professionals identified some patient-related factors as key barriers to motivation in their experience of managing their patients' care. Misunderstanding the role of diabetes educators, non-compliance with treatment plans including medication and lack of awareness of diabetes and its complications were common themes that emerged among participants who openly expressed frustration over expected therapeutic outcomes.

Patients at the hospital are still not aware about the role of the health educators in diabetes management which do not only affect the treatment plan with some cases, but also the relationship between the healthcare provider and patients is affected negatively. The diabetes educators feel that some patients do not appreciate their efforts in diabetes management; therefore they become less motivated to be enrolled in the treatment strategy. (Diabetes Educator)

Some healthcare professionals acknowledged that patients' preference to receive the entire management of their diabetes care from diabetes specialists reduced the motivation and involvement of other healthcare professionals in the management of some patients. When asked about this issue, healthcare professionals equated this patient preference to (1) the lack of confidence in other healthcare professionals and (2) lack of awareness of the role of other healthcare professionals rather than diabetes specialists in the management of diabetes and that this may contribute to disjointed care. Participants also reported the wide variation in patients' willingness to spend time with healthcare professionals in the centre. They believe that allocating sufficient time is important to deliver the needed information.

There are some patients related barriers to effective patient-professionals interaction. For example, some patients do not like spending time with healthcare professionals, they just want to take the prescription and run away. They do not want to listen to the healthcare

professionals' instruction or education, while others will stay, listen and take part in the management plan. (Specialist Physician)

Participants mentioned those patients' fears about attending appointments with a podiatrist results in patients not attending appointments, poor interaction between the podiatrist and patients and reduction in the podiatrist's motivation to get involved in patient care.

Furthermore, interviewees declared that healthcare professionals' attitudes and beliefs about type 2 DM can act as a barrier to increased motivation. In most of the cases, healthcare professionals voiced concern about diabetes being a 'complex' disease that needs intensive care. Reasons for the different beliefs about type 2 DM are outlined in Table 4.

Diabetes is a complex disorder. It needs intensive care to be managed properly and to prevent the diabetes related complications from occurring. If they occur, the management of the disease becomes harder. (Specialist Physician)

Healthcare professionals commented on the undesirable effects of the burden of a heavy workload in their daily routine. In this study, participants expressed their discomfort regarding the heavy workload as recognized from the frequent reported words 'busy', 'stressful' and 'tired'. Some healthcare professionals mentioned that many people with diabetes prefer to complete their management in the diabetes centre after their referral from the primary care settings even if their condition is under control, which increases the workload of the centre. They expressed frustration that the workload increases their stress and reduces the quality of care they provide to their patients in some situations. Participants pointed out that they have a busy clinic; therefore, the time they spend with each patient is roughly 10–15 minutes, and in some situations is more limited.

I think our job at the diabetes centre keeps us busy all the time, we have too many patients which is really stressful; and we try to provide the same quality of care to all patients. (Specialist Physician)

Training and involving other healthcare professionals in the diabetes team was highly recommended by the participants. They suggested the involvement of more of the two healthcare professions that are already available in the centre including dietitians and educators. Other healthcare professionals who are not available in the centre and highly endorsed were general physicians, clinical pharmacists, physiotherapists and ophthalmologists.

Patients need to know more about their drugs and side effects, they should be educated enough about the importance of pharmacological treatment in managing diabetes. The clinical pharmacist can help patients and educate them regarding medication use. Patients will feel more comfortable to have this service available in the centres instead of waiting for a long time (roughly 1 hour) in front of the pharmacy to receive their medications. (Nurse)

Care provided to diabetic patients at the primary care centres is not optimal; therefore once a patient is referred to the diabetes centre and the disease is under control she/he refuses going back to the primary care centres. Involving general physicians in the centre would reduce the workload on the diabetes specialist and build patients' confidence in the ability of general physicians to manage diabetes. (Specialist Physician)

We need general physicians in the centre. They can help us to deal with simple cases that need only follow up, and can deal with the refill prescription. By doing so, our workload can be reduced and quality of the care provided to diabetic patients would be better. (Specialist Physician)

Some participants were not pleased with the number of interruptions during their consultations with patients by other healthcare professionals or patients. For instance, some healthcare professionals sought advice from their colleagues on the management of some cases. Also, interviewees mentioned that some patients interrupt the consultation to confirm the date or time of their following appointments or to request a repeat prescription. Some healthcare professionals viewed interruptions as a hindrance in communication between the patient and healthcare professionals

and limited the consultation time; and as a consequence motivation for delivering a high quality of care would be reduced.

Healthcare professionals at the diabetes centre addressed and attached high importance to the impact of the Emirates' culture on lifestyle behaviours and health beliefs. They stated that the Emirates' culture impacts on lifestyle behaviours and that health beliefs act as barriers for providing high quality type 2 DM care, and lead to lack of motivation. Participants believed that changing health risk behaviours that are related to the Emirates' culture is a difficult task, and needs special skills and competencies that are not taught, to convince the patients to adapt to new, and at times untraditional, desired behaviours. Also, interviewees expressed their worries about the common health beliefs among Emirate people with type 2 DM and identified patients' cultural beliefs as a key barrier to motivation in their experience of managing their patient's disease. This worry was illustrated by the example of traditional herbal medicines being used in the management of their patient's glucose level without the use of pharmacological medicines.

It's very difficult to communicate with the Emirate patients regarding lifestyle changes; especially nutritional changes. For example, eating too many dates is believed not to raise the sugar levels. Special training for health professionals working in the diabetes field on the behavioural changes would be very useful. (Dietician)

Interviewees stated that differences in the language and cultural values between the healthcare professionals working in the diabetes centre appeared to be one of the barriers to effective team-work; therefore, motivation to provide high quality of diabetes care is influenced negatively. As a consequence of these differences, the communication and feedback between the team members is limited; therefore, holding regular meetings in the department to enhance communication and promote feedback between the team members was strongly supported.

One of the participants also expressed his concerns about language differences between healthcare professionals and patients. This healthcare professional felt that the presence of a translator

cannot solve this issue completely as language differences could act as an obstacle for delivering information to the patient; therefore, the communication between them would be affected.

I believe that we do not communicate effectively as team members due to the different cultures we belong to. We come from different countries and have different behaviours. These differences work as barriers between us as care providers. (Specialist Physician)

Discussion

We identified several facilitators of and barriers to the motivation of healthcare professionals regarding the management of type 2 DM in the diabetes centre that were associated with healthcare professionals, patients and organization factors. Some culture-specific factors were identified as well.

Healthcare professional

In this study, as in a study carried out in Oman,³¹ participants agreed that motivators for effective communication include good eye contact, friendliness, encouragement and attentive listening.

We found cooperation between the team members in the diabetes centre a facilitator for motivating healthcare professionals to provide high-quality diabetes services. Positive perceptions of teamwork and team climate are often cited in qualitative research as facilitators of good diabetes care.^{9,32,33}

However, given that healthcare professionals at the diabetes centre are multinational, differences in the cultural backgrounds and languages between them were perceived as a barrier for communication between the team members. However, the influence of the healthcare professional's ethnicity on their motivation was not addressed in this study and we recommend future research to investigate and test this association.

Patient

We found some Emiratis with type 2 DM in the diabetes centre are not willing to spend sufficient

time with their healthcare professionals to discuss the management of their conditions. Many studies (e.g. refs^{34,35}) suggest that the length of consultation is associated with higher-quality diabetes care. For instance, among 60 general practices in England, the length of consultation was found to be a predictor of quality of care.³⁴ Emiratis with type 2 DM generally might believe that medically their conditions could be managed effectively only with the use of pharmacological drugs. Therefore, they do not spend time with their healthcare professionals to communicate and discuss other salient areas regarding the management of type 2 DM.

We found patients in this setting misunderstand the role of some healthcare professionals such as educators, and due to the worries they have regarding toe and foot amputations, they do not attend appointments with podiatrists. Hence, greater awareness of the role of healthcare professionals in type 2 DM management – such as optimizing metabolic control, delaying or preventing the complications and improving the quality of life – should be disseminated not only to people with type 2 DM, but other members of society also.

Participants also reported the problem of patient non-compliance with medications in this setting, which can delay the achievement of treatment goals or lead to the development of diabetes-related complications. In type 2 DM, patients' adherence to medication is sub-optimal globally. For instance, a recent systematic review showed a high rate of non-adherence to oral hypoglycaemic drugs and insulin (7–64% versus 19–46%, respectively).^{36,37} The involvement of a clinical pharmacist in the diabetes team would help, not only enhancing the adherence of people with diabetes to their medications through education, but also reducing the load on other healthcare professionals in providing education about pharmacological treatment.

Findings from this study confirm that successful involvement of Emiratis with type 2 DM in the management of diabetes is essential. People with type 2 DM play the main role in managing their disorder. Daily, they perform roughly 95% or more of the management of diabetes without consulting healthcare professionals.^{38,39} They have to cope with the challenges they face in their daily lives such as glucose monitoring and

complying with a medication regimen within the context of other goals, such as physical activity, decisions about diet, other health issues, family demands and other personal concerns.^{38,39} Therefore, more emphasis should be placed on educating Emiratis with type 2 DM on the management of their disorders effectively and on a patient-centred approach.

Organization

Our findings regarding workload, and how it can increase healthcare professionals' stress and reduce the quality of care they provide to people with type 2 DM in the diabetes centre, concur with other studies (e.g. refs^{12,13,40}).

Diabetes is a chronic, multidimensional disease and even with high quality of care, particularly secondary prevention in primary care, expert help from secondary care is needed.⁴¹ In this study, we found people with diabetes prefer to receive their care from the diabetes centre after referral from the primary care setting, which increases the workload on the centre. Preference to receive management in secondary rather than primary care might be due to reasons such as poor care provided in some primary care settings, and beliefs among Emiratis that care provided in the secondary and tertiary care settings is better. Results from a study carried out in a primary care centre in Abu-Dhabi among Emiratis with diabetes showed poorer glycaemic control for those patients attending primary care clinics than attending hospital clinics.⁴² However, more studies should be carried out to evaluate and improve the quality of diabetes care in primary care settings in the UAE. The principal role of the primary care setting in the management of diabetes, particularly type 2 DM, should be reinforced through communication and cooperation across the primary and secondary and tertiary care settings in the UAE. Regular attachment of diabetes physicians to primary care clinics could increase the confidence in primary care of Emirate people with diabetes. Lack of cooperation between primary and secondary care has also been suggested as a barrier to providing high quality of diabetes care in some health systems (e.g. refs⁴³). Therefore, if people with diabetes are to be managed in both settings management

protocols should be shared between the primary and secondary settings.⁴⁴

Interruption from other healthcare professionals and patients during consultations was another important issue mentioned by healthcare professionals at the diabetes centre as a barrier to providing good patient communication and high-quality diabetes care. Also, these interruptions were believed to disturb the privacy of consultations. Similarly, findings from another study demonstrated that interruptions during consultation time by other colleagues or patients interrupt the privacy of consultation between patients and healthcare professionals.³¹ Lack of regulations regarding the consultation could be one of the causes for these interruptions; therefore, establishing specific guidelines that protect the privacy of consultations in the centre would be beneficial.

Culture

The Emirate culture had a significant impact on behaviours and health beliefs of the patients attending the diabetes centre. The residents of the Emirates, like other people living in the surrounding Gulf countries, have special behaviours and beliefs with regard to health issues and nutrition. For example, consuming a large amount of dates is believed to cure many diseases as this fruit is mentioned in the Holy Quran. Dates are rich in nutrients and have several health benefits; however, for people with type 2 DM controlling the amount of dates consumed is important.⁴⁵ Health beliefs and physiological factors are not only difficult, but complex to measure; nevertheless, Simmons *et al.* identified psychosocial and psychological barriers to improving diabetes care related to the patients such as patients' health beliefs and public health beliefs.^{14,15} Understanding health beliefs in the UAE, specifically those related to type 2 DM, is essential; they define the unique perspectives of individuals within a culture.⁴⁷ According to Jackson (2007), health beliefs affect healthcare professionals' behaviour, perception of health, and patients' decisions to access and comply with health care treatment.⁴⁶ The assumptions of healthcare professionals regarding the cultural needs of Emiratis with type 2 DM and lack of cultural understanding of health beliefs could be an obstacle for providing

competent care.⁴⁷ Hence, general understanding of the Emirate culture, which is an Arabic Muslim culture, and related health beliefs regarding type 2 DM in the UAE, could improve diabetes care.

Strengths and limitations

To our knowledge, this is the first study carried out in the UAE to identify factors affecting the motivation of healthcare professionals providing care to patients with type 2 DM. Another strength of this study is the diversity of healthcare professionals providing such care and the ability to compare and contrast their experiences and perceptions.

A major limitation of this study is the small sample size; however, this did not seem to affect the findings as participants were selected to contribute 'rich' information. Another limitation is that the study was conducted in one specialist diabetes centre, and the findings may not be generalizable to other diabetes centres in the UAE. However, we believe that findings from this study could be especially informative and beneficial to other diabetes centres that provide secondary and tertiary care to people with diabetes living in Al-Ain given the similarity in the health system and structure to that of the larger Abu-Dhabi area.

Implications of the study

Findings from the interviews revealed a number of factors that contributed to healthcare professionals' level of motivation in the management of diabetes care that are not currently fully addressed in the UAE. Specifically, from a cultural perspective, our findings suggest providing diabetes healthcare professionals with knowledge about the Emirate culture may be an important step in developing culturally sensitive and culturally appropriate training programmes. Increased knowledge about culture-specific health beliefs related to type 2 DM and 'risky behaviours' such as sedentary lifestyle and food intake may provide an opportunity to improve clinical decision-making and thus improve the quality of type 2 DM care. Also, findings from this study suggest involving the patient in the management plan and enabling them to be a full partner and an

expert in managing diabetes. This could be achieved by effective education and support not only from healthcare professionals but also families and society.

As more than 70% of the UAE population is composed of expatriates that come from all over the world, future research should focus on the motivation of the healthcare professionals providing diabetes care not only to Emiratis, but to expatriates living in the UAE also, to optimize the care provided to all people with diabetes.

Conclusions

This qualitative study provides some unique insights about factors affecting healthcare professionals' motivation. We found many players affecting the motivation of healthcare professionals in this study including the patients, healthcare professionals themselves, organization and the Emirate culture. To improve the motivation of healthcare professionals in the management of diabetes and the quality of diabetes care, several steps should be taken. Importantly, the role of primary care in the management of type 2 DM should be reinforced and strengthened, privacy of consultations should be protected and regulated, and awareness of the Emirate culture and its impact on health should be disseminated to healthcare professionals providing care to Emiratis with diabetes. Also, greater emphasis should be placed on educating and involving Emiratis with diabetes in the management of their disorders. Finally, non-adherence to treatment, particularly medications, was found as a barrier to healthcare professionals' motivation to provide high quality diabetes care; hence identifying factors that influence the adherence of Emiratis with type 2 diabetes to medications is essential.

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Appendix

Interview Guide

Research Topic: Factors affecting healthcare professionals' motivation

Aim:

To identify the facilitators and barriers affecting the motivation of healthcare professionals at a diabetes centre located at a tertiary healthcare setting in the UAE

Objectives:

- (1) To identify the facilitators of and barriers in motivating healthcare professionals' ability to provide a high quality of type 2 diabetes management
- (2) To develop a knowledge framework from the perceptions, understanding and experiences of healthcare professionals regarding the management of people with type 2 diabetes to improve quality of care.

Research questions:

- What are the main factors affecting the motivation of healthcare professionals at the diabetes centre?
- What are the specific barriers to the motivation of healthcare professionals at the diabetes centre?
- What are the specific motivators/facilitators of the motivation of healthcare professionals at the diabetes centre?

Introduction

- Introduce the study, its aims and the researchers
- Brief discussion of ethical issues i.e. confidentiality, anonymity and recording

Warm up

- Name
- Job position
- What is your role in managing people with diabetes?
- How long have you been involved in your role?

Motivation of healthcare providers

- How would you describe healthcare professionals' motivation in managing people with diabetes?
- What things do you think increase your motivation in managing people with diabetes in this centre?
- What things do you think decrease your motivation in managing people with diabetes in this centre?

Patient–healthcare professionals interaction

- Effective interaction between healthcare professionals and patients is essential, and it influences the motivation of healthcare professionals.
- As a diabetes healthcare professional at the diabetes centre what things do you think affect your interactions with people with diabetes?
- What do you think are the barriers to producing effective patient–healthcare professional interactions at the diabetes centre?
- What do you think are facilitators/motivators for producing effective patient–healthcare professional interactions at the diabetes centre?

PROMPT IF NOT MENTIONED

What about:

- Language
- Cultural background
- Time with each patient
- Gender
- Age

Care providers' perceptions and beliefs

- Many care providers rate diabetes as harder to treat than other chronic conditions. What is your perception about this disorder?
- What are the reasons behind that?

PROMPT IF NOT MENTIONED

What about:

- Lack of effective drugs
- Complexity of treatment
- Behavioural changes required by the patients
- Inevitability of future complications

Do you think this perception or these beliefs affect the quality of care you provide to people with type 2 diabetes?

If yes, how do you think these perceptions or beliefs can affect the quality of care you provide to people with diabetes?

Other factors/recommendations

What other healthcare professional factors in general that were not mentioned do you think affect the motivation of healthcare professionals in the diabetes centre?

Closing

- Before we finish, I would like to know if there is anything else you would like to say about the topic we have discussed.
- Thank you so much for participating. Your time is much appreciated.

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