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Barriers and enablers to healthcare access and use among Arabic-speaking and Caucasian English-speaking patients with type 2 diabetes mellitus: a qualitative comparative study

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ABSTRACT

Objective: The objective of this study was to explore the decision-making processes and associated barriers and enablers that determine access and use of healthcare services in Arabic-speaking and English-speaking Caucasian patients with diabetes in Australia.

Study setting and design: Face-to-face semistructured individual interviews and group interviews were conducted at various healthcare settings—diabetes outpatient clinics in 2 tertiary referral hospitals, 6 primary care practices and 10 community centres in Melbourne, Australia.

Participants: A total of 100 participants with type 2 diabetes mellitus were recruited into 2 groups: 60 Arabic-speaking and 40 English-speaking Caucasian.

Data collection: Interviews were audio-taped, translated into English when necessary, transcribed and coded thematically. Sociodemographic and clinical information was gathered using a self-completed questionnaire and medical records.

Principal findings: Only Arabic-speaking migrants intentionally delayed access to healthcare services when obvious signs of diabetes were experienced, missing opportunities to detect diabetes at an early stage. Four major barriers and enablers to healthcare access and use were identified: influence of significant other(s), unique sociocultural and religious beliefs, experiences with healthcare providers and lack of knowledge about healthcare services. Compared with Arabic-speaking migrants, English-speaking participants had no reluctance to access and use medical services when signs of ill-health appeared; their treatment-seeking behaviours were straightforward.

Conclusions: Arabic-speaking migrants appear to intentionally delay access to medical services even when symptomatic. Four barriers to health services access have been identified. Tailored interventions must be developed for Arabic-speaking migrants to improve access to available health services, facilitate timely diagnosis of diabetes and ultimately to improve glycaemic control.

Strengths and limitations of this study

- The qualitative recruitment strategies and non-random sampling (aimed at enrolling Arabic-speaking migrants with maximum variation) may limit generalisation or extrapolation of findings.
- The large numbers of participants does not guarantee representativeness of the target populations; however, they did provide wide-ranging views, as was intended. Data collection continued until theoretical saturation was achieved that may reduce concerns over interpretation of findings.
- The absence of cultural difference between the interviewing author and Arabic-speaking interviewees helped to obtain participants' opinions in a permissive, non-threatening environment and delivering questions in a very clear and cultural-appropriate language with little opportunity for misinterpretation by participants or interviewer. Including members of Arabic-speaking community created a unique research environment whereby power sharing and maintenance of equity between researchers and participants was established, as well as helped the research team to become part of the community of focus.
- The involvement of community social workers, and cultural advisors to assist in designing the recruitment strategy and overall methodology was critical to the successful recruitment and open sharing of personal information and 'real' insights into their experiences with access and use of healthcare services.

INTRODUCTION

Modern healthcare systems, in upper-middle and high income Western countries face significant challenges to providing equitable, accessible and culturally competent healthcare for growing ethnic minority groups.[1]

Definitions of 'access to health services' are variable ranging from the narrow focus approach of service entry to the multidimensional approach, which includes: availability, acceptability, affordability, and accommodation.[2] For publicly funded healthcare systems, and assuming adequate healthcare services exist to meet patient demand, access to these services is primarily dependent on patients' decisions.[3] Delayed patient access to healthcare services results in late treatment and leads to increased probability of significant morbidity.[4–8]

There is a good evidence to suggest that hitherto ethnic minority groups largely underutilise and delay access to healthcare services and experience poorer health when compared with their non-immigrant counterparts.[9–13] Poor access to healthcare services by ethnic minority groups is a key factor contributing to increased morbidity and poorer health outcomes.[14 15] Ethnic minorities understand and experience disease, healthcare and treatment differently to mainstream society.[16] When experiencing symptoms, it is not uncommon for people of ethnic minority groups to attempt to solve health problems on their own, or within social networks of their communities (within family members, peers and friends). People of ethnic minority groups more often seek professional healthcare only after an escalation of illness symptoms.[17]

Delays in accessing available healthcare services among ethnic minority groups are a major concern and have been investigated at three levels; patients, healthcare providers and systems.[18 19] At the patient level, barriers include patient's lack of knowledge about available health services and how to use them, language problems, health and cultural beliefs, low level of acculturation, perceptions about healthcare professionals, patients' appraisal and knowledge of symptoms and diseases, low education levels, anxiety and depression, lack of private health insurance and high medical costs.[20–22]

People from ethnic minority groups with diabetes have poorer access to healthcare services than the general population with diabetes.[2] Timely diagnosis of diabetes reduces the risk of developing complications and ameliorates the burden of disease.[23–25] A recent study by Zhang et al,[26] found that limited access to healthcare was significantly associated with undetected diabetes. Barriers to healthcare access from the perspectives of Arabic-speaking communities residing in Western countries are relatively unexplored. These communities appear to be among the least studied ethnic minority groups globally. Without greater understanding of why people delay accessing treatment, current interventions to improve timely access to medical services may be less effective.[27]

Limited information is available about health-seeking behaviours in Arabic-speaking patients with diabetes.[28] In Arabic-speaking countries the prevalence of type 2 diabetes mellitus (T2DM) has increased to alarming levels with high-morbidity and high-mortality rates. Currently, six Arabic-speaking countries lead the world in T2DM prevalence with approximately one in five people having diabetes: Kuwait, Lebanon, Qatar, Saudi Arabia, Bahrain and UAE.[29] The prevalence of diabetes in Arabic-speaking countries is anticipated to rise in the next few years.[30] Continued political instability in the Middle East is expected to encourage large outflows of migrants and refugees fleeing violence.[31] These migrant populations have inadequate awareness about diabetes management and have different cultural norms and health beliefs which negatively impact on healthy practices needed for diabetes management.[32 33] Also, these challenges are compounded by difficulties in navigating the healthcare systems of their host country. To reverse this trend, there is an urgent need to determine specific barriers to healthcare access and use among Arabic-speaking communities. This study aims to explore and compare the decision-making process to access and use of healthcare services and identify associated barriers in Arabic-speaking and English-speaking Caucasian patients with T2DM in Melbourne, Australia.

METHODS
Patient and public involvement in research design and recruitment
This study involves members of Arabic-speaking communities contributing to the research beyond being participants. This project began by familiarising two key social workers and one lay-led community group coordinator within Arabic-speaking communities in Melbourne, Australia about the purpose of the study. We asked for feedback regarding proposed recruitment strategies, study design and data collection. Including members of the targeted research community created a unique research environment whereby power sharing and maintenance of equity between academics and participants was established, as well as helped the research team to become part of community of focus. As equal participants in open discussions, social workers working with the Arab community questioned proposed recruitment strategies of using posters and flyers in lay Arabic at community centres and general medical practices. They felt that first-generation Arab immigrants dislike reading any written materials, even those translated into Arabic, as they are likely to have limited reading proficiency in their own language. The social workers warned of low-participation rates if such a recruitment strategy was to be used. Instead, they suggested more active recruitment strategy of having an Arabic-speaking person available at proposed recruitment sites to orally explain purpose of the study and to provide the information sheet written in Arabic. In addition, they volunteered themselves to spread information about the study within Arabic-speaking community. They highlighted how close social networks within Arabic-speaking community enable this informal mechanism to circulate information about study, thus increasing participation rates. With regard to study design, the original research protocol

Table 1 Interview guide

Major concepts	Examples of questions
Healthcare system	Do you have a regular doctor? ▸ How important is it for you to find an Arabic-speaking doctor? Do you know what healthcare services are available to you to help you control your diabetes?
Predisposing characteristics/enabling resources/perceived need	When you had symptoms of diabetes, did you discuss the decision to go to doctor and/or access medical services use with anyone? If yes, who? ▸ Family members ▸ Peers and friends ▸ Husband/wife/partner
Use of health services	Think back to the time when you were told that you have diabetes, can you tell me more about that? How did you know that you had diabetes? What were you experiencing at the time of diabetes onset? What does it mean for a person in your views to have diabetes? Have you ever been concerned with developing diabetes complication? If yes, what did you do? When do you go to see a doctor? ▸ Regular basis ▸ For check-ups ▸ When very ill/sick ▸ To get a prescription Is there any difficulty in accessing and/or using available healthcare services?
Consumers' perceptions of healthcare services/providers	What is your impression about interacting with your GP/other health professionals? If you have been referred to endocrinologist/other health professionals at hospital setting in the past few years, what is your impression of your interaction with those healthcare providers?

GP, general practitioner.

proposed breaking group interviews according to gender, that is, male groups and female groups. After conducting the first male group interviews, the community group coordinator suggested complementing data collection efforts by including semistructured individual interviews. This reflected the view that Arab immigrants might be more willing to reveal 'real life' practices and challenges in diabetes self-management during one-to-one interview setting without fear of peer judgement. All the aforementioned suggestions were adopted by the research team.[34]

Research design

Two qualitative methods were used, face-to-face semi-structured individual interviews and group interviews. To gain in-depth understanding about participants' decision-making processes and barriers to healthcare access, open-ended questions were developed following an extensive literature review and were refined over the course of interviews (table 1).[35–37] Prior to interview initiation, written informed consent was obtained from each participant, including permission to access medical records.

Setting and recruitment

The study was conducted in diverse healthcare settings in the metropolitan area of Melbourne. Recruitment occurred at diabetes outpatient clinics in 2 tertiary referral hospitals, 6 primary care practices and 10 community centres. A combination of purposive and convenience sampling strategies were used. Different settings were targeted to ensure recruitment of a diverse sample of first-generation Arab migrants with a wide range of sociodemographic and clinical characteristics. Recruitment continued until data saturation was achieved. Participants were eligible to participate in the study if they met the inclusion and exclusion criteria (table 2). During the data collection period, eligibility was determined by local healthcare personnel at regular intervals. They reviewed computer databases of patient files for patients' who were scheduled to soon attend primary care practices and outpatient clinics. At community centres participants were screened for eligibility and approached regarding participation by a researcher (HA). Patients were approach by a researcher or local practice staff with written information about the study. Patients were given the option to participate in either an individual interview or focus group at a later date.

Data collection and analysis

Prior to initiation of interviews, sociodemographic and clinical information was gathered from consenting participants using a self-completed questionnaire (researcher-administered if required) and medical

Table 2 Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
▶ Diagnosed with type 2 diabetes mellitus ▶ First-generation migrants, born in the Middle East, and self-identified as of Arabic-speaking background, defined as someone whose first language is Arabic, born in any of the following countries: Iraq, Kuwait, Bahrain, Oman, Qatar, Saudi Arabia, UAE, Yemen, Jordan, Lebanon, Syria or Egypt ▶ Self-identified as 'Caucasian English-speaking'; defined as someone of Anglo identity born in North America, Australia, UK or New Zealand; and whose first language is English	▶ Diagnosed with type 1 diabetes mellitus ▶ Older than 75 years ▶ Diagnosed with any form of malignancy (cancer)

records. All interviews in this study were conducted in private rooms at the various sites: 2 major hospitals (diabetes outpatient clinics), 6 general medical practices, 10 community centres, and the Faculty of Pharmacy and Pharmaceutical Sciences at Monash University. Two Arabic-speaking healthcare providers were consulted to ensure the cultural relevance of proposed questions. Duration of interviews ranged between 30 and 110 min. Participants were asked questions about who they approached when symptoms suggestive of diabetes developed, when and how they made a decision to access and use healthcare services and associated barriers and enablers, perceptions about healthcare professionals, and their knowledge of currently available diabetes healthcare services. For the Arabic-speaking group, all interviews were conducted in Arabic by a bilingual researcher (HA) without an interpreter (HA received extensive training in qualitative methods). Audio-recorded interviews were transcribed verbatim in Arabic. A certified professional translation service was used to translate Arabic transcripts into English. To validate the translation process, 30% of the Arabic transcripts were independently translated by a lay translator of Middle Eastern descent with an extensive knowledge of colloquial Arabic. The two versions were compared for any discrepancies and these were resolved by mutual agreement among the research team. Field notes were taken immediately after interviews. For Arabic-speaking female group interviews, a female Muslim researcher was present to help with logistics and to make sure that participants were comfortable. De-identified transcript data were coded using NVivo (QSR NUD*IST Vivo: V.8.0) software and organised into themes that best described participants' views using a thematic analysis framework.[38] Interview data were initially coded by HA and appropriateness of coding and resultant themes were confirmed an on-going basis by two other researchers. Thematic analysis is a widely used qualitative analytic method, which has several advantages, first, its flexibility which can provide a rich and detailed account of data. Second, it is a useful analytic method for generating qualitative analysis suited to inform policy development and interventions. Our study aim was to explore barriers to access and use of available health services and use findings to inform development of future interventions and policies. Third, thematic analysis is a useful method

for working with participatory research paradigm, such as ours, where participants are perceived as collaborators.

Findings
Participant characteristics
The sociodemographic and clinical characteristics of the 100 participants (60 Arabic-speaking and 40 English-speaking Caucasian) are shown in table 3. A total of 28 face-to-face individual semistructured interviews (14 Arabic-speaking and 14 Caucasian) were conducted and 14 group interviews (8 Arabic-speaking and 6 Caucasian) involving the remaining 72 participants. The two groups were of a similar age, had similar gender representation and range of comorbidities. Based on the most recent glycated haemoglobin (HbA1c) levels (taken from participants' medical records), more participants in the English-speaking group compared with those participants in the Arabic-speaking group (17.5% and 5%, respectively) had attained glycaemic control with HbA1c levels less than 53 mmol/mol (7.0%). Use of insulin to control diabetes was higher among the English-speaking group compared with the Arabic-speaking group.

Themes
Participants were asked to reflect on what they were experiencing at the time of diabetes onset. Only Arabic-speaking migrants admitted intentionally delaying access to medical services when signs of ill-health appeared. They were less likely to receive screening and diagnostic services, resulting in a late diagnosis of T2DM, mainly because they did not access available medical services. English-speaking Caucasian patients were less likely to be missed by the healthcare system as they had no hesitancy to access and use medical services when signs of ill-health appeared; their treatment-seeking behaviours were straightforward. Four barriers and enablers to healthcare access and use were identified: influence of significant others (identified by our participants as spouses, parents, children with carer responsibilities, close friends and, only in the case of Arabic-speaking participants, religious advisors), unique sociocultural and religious beliefs, experiences with healthcare providers, and lack of knowledge about healthcare services. There were missed opportunities to

Table 3 Participants' sociodemographic and clinical characteristics

Characteristic	Percentage (number) or mean (range)	
	Arabic-speaking participants (n=60)	English-speaking participants (n=40)
Gender		
Female	63% (38)	60% (24)
Male	37% (22)	40% (16)
Mean age, years (range)	57 (35–68)	60 (54–69)
Mean years since diabetes diagnosed (range)	9 (1–17)	7 (3–14)
Mean years in Australia (range)	8 (3–18)	NA
Diabetes status (HbA1c measurements in IFCC units and DCCT units (%))		
Excellent control 42–52 mmol/mol (6–6.9%)	5% (3)	17.5% (7)
Good control 53–63 mmol/mol (7–7.9%)	46% (28)	47.5% (19)
Indifferent control 64–74 mmol/mol (8–8.9%)	20% (12)	22.5% (9)
Poor control 75–85 mmol/mol (9–9.9%)	22% (13)	10% (4)
Exceptionally poor control >87 mmol/mol (>10%)	7% (4)	2.5% (1)
Comorbidity		
Hypertension	27% (16)	45% (18)
Dyslipidemia	37% (22)	22.5% (9)
Retinopathy	15% (9)	12.5% (5)
Other cardiovascular disorder	21% (13)	20% (8)
Prescribed medication		
None	3% (2)	7.5% (3)
Oral hypoglycaemic medications	80% (48)	55% (22)
Insulin	10% (6)	17.5% (7)
Both, oral and insulin	7% (4)	20% (8)
Family history of diabetes mellitus	35% (21)	32.5% (13)
Workforce participation		
Working part time	32% (19)	45% (18)
Working full-time	15% (9)	27.5% (11)
Housewife	37% (22)	12.5% (5)
Pensioner	5% (3)	12.5% (5)
Unemployed	11% (7)	2.5% (1)
Living arrangement		
Married and living with spouse and/or children	97% (58)	67.5% (27)
Living alone	3% (2)	32.5% (13)
Proficiency with English (self-rated)		
Little or none	35% (21)	NA
Moderate	47% (28)	
Excellent	18% (11)	
Country of birth		
Lebanon	38% (23)	NA
Jordan	7% (40)	
Iraq	18% (11)	
Syria	5% (3)	
Egypt	32% (19)	

DCCT, Diabetes Control and Complications Trial; HbA1c, glycated haemoglobin; IFCC, International Federation of Clinical Chemistry; NA, not applicable.

detect diabetes at an early stage in the Arabic-speaking group. Themes, subthemes and selections of quotes from participants are presented in table 4.

Theme 1: Decision-making process

Participants in both groups struggled to understand what they were experiencing at the time of diabetes onset. Participants in the English-speaking group appeared less invested than the Arabic-speaking migrants in a self-diagnosis process when they experienced symptoms such as frequent urination, lethargy or blurred version. Participants in both groups reported actively adopting a 'wait and see' approach. During this waiting period the symptoms experienced were actively self-monitored to see whether or not they worsened, resolved, or persisted. Three differences were noted between the two groups with regard to the 'wait and see' approach. First, the length of that waiting period varied between the two groups with Arabic-speaking migrants reporting longer waiting

Table 4 Themes and examples of participants' quotations

Themes	Examples of participants' quotations
1. Decision-making process	
	"We are [Arabic-speaking migrants] are known to have the 'wait and see' mentality. I knew something was wrong with me. But I did nothing about it. I was feeling a bit of blurry eyes when I woke up in the morning and sometimes I was feeling thirsty. It didn't occur to me that I might be diabetic." ASP-31
	"I felt tired and had leg cramps, but I ignored these symptoms for a long time. One must not run to see a doctor unless he is very sick. You know it's quite different for us [men]; we have not to appear very cautious about screening and check-ups. To do so it's not very manly." ASP-44
	"I felt tired and unwell, so I thought I better go to my GP and have a check-up. He did few tests and I was told I have diabetes." ESP-92
	"I felt tired, and kept going to toilet, I suspected that I have diabetes…I went to my GP and after few tests I was informed that I have diabetes." ESP-76
	"I don't think it's a good practice for one to 'self-diagnose', doctors know better. In fact they are the experts. So I see it as no brainer if one feels sick to go to GP immediately to get examined." ESP-69
2. Barriers and enablers to access of healthcare services	
2a. Influence of significant other(s)	"In our culture it's a very common practice for people to share their stories and life experiences and involve those we trust. This sharing is part of social bonding…prior making any key decisions, we [Arabic-speaking migrants] often ask our close friends or a senior family member about what is the best course of action including health-related decisions. I remember when I first had symptoms like feeling tired, lack of energy, and losing weight I talked with my mother in law and she advised me that all these symptoms are because of stress and I shouldn't be worry. She even advised me to use certain herbal treatment to boost my energy levels and increase immunity…after a long time, and when the symptoms get worse I went to a doctor, and he told me that I have diabetes." ASP-13
	"I had some symptoms and I suspected it could be diabetes. My husband encouraged me to see our GP and have a check-up. He rang GP practice and organised an appointment. GP did few tests and he told me that I have diabetes." ESP-71
	"I knew something was wrong with me. I kept going to toilet and I was very tired most of the time. I had a chat with my best friend about these symptoms and his advice at the time was just get some rest and he told me not to worry. I didn't want to go to a doctor just for a check-up. If a man start to be worried or concerned about his health, then he will be perceived as being 'soft' or 'feminine'. I can't imagine myself saying to my wife, for example, that tonight I'm going to see a doctor for a check-up as I'm feeling tired and generally unwell!! She would laugh at me…" ASP-16
2b. Religious and sociocultural beliefs	"I knew I had some symptoms, and I should have gone to see a doctor. But, I preferred not to. I was afraid of being 'officially' told I have diabetes, because then I would be responsible for my own health. I preferred not to know, and hoped that these symptoms to go away." ASP-6
	"For us [Arabic-speaking migrants] diabetes is such a big thing that sometimes one would prefer to suffer rather than being told to have diabetes. People in our community consider diabetes to bring lots of other diseases with it and it severely diminishes one's health status. I suspected that I have diabetes, but I just delayed going to doctor! I basically I was just buying more time!…Now I knew better, I wish time goes back and acted more quickly." ASP-38
	"I had symptoms for quite some time, and I ignored them. I don't see the point of running to see a doctor and get examined. In this life time, Allah [God] determines everything…I was meant to have diabetes. So what is the big fuss about going for check-ups or have blood tests we will die when we suppose to not earlier and not before!" ASP-3
	"Having an illness, in my case it's diabetes, and to experience physical suffering is not a bad thing! Having an illness and suffering is a 'sign' of being close to Allah (God)…the closer the person the more challenges/he will experience!"ASP-13
	"I have diabetes now for many years. My health is generally weak! I'm happy to put up with physical suffering by being ill. The closer the person to Allah [God] the more challenges he experience. Suffering through illness is a way of living in a state of remembrance to Allah." ASP-5

Continued

Table 4 Continued

Themes	Examples of participants' quotations
2c. Perception of healthcare providers	"I like [Dr-XY an Arabic-speaking GP], he really understands me. I can talk to him about my 'real' concerns, life situations, and problems. I never felt that he judged me. I feel safe with him, maybe because he speaks the same language and have the same cultural background. When he goes overseas, I don't see any other doctor, even if I needed to!" ASP-15
	"I don't like to come here [diabetes outpatient clinic], doctors here are strict. I usually feel anxious prior seeing specialists. They demand more things to do, and sometimes suggest increasing doses of my diabetes pills or adding insulin." ASP-17
	"I trust my GP more [compared with specialist], I can talk to her without the need for an interpreter, she gets me. I came here [diabetes outpatient clinic] just because I had to." ASP-59
	"I trust specialists here [diabetes outpatient clinic], they are very knowledgeable…I have received really good medical care. I have a great respect for them." ESP-80
	"My GP always looks after me. She is the best; I try to follow her instructions as much as possible. I have been seeing her for the last 15 years. If I have any health problem, symptoms or in pain I go to see her immediately." ESP-83
2d. Knowledge about available health services	"When sometimes I hear people talk about diabetes care services, I have no idea what do they mean? I just go to see my Arabic-speaking GP. Are there other medical services?" ASP-8
	"It's difficult for us [Arabic-speaking migrants] to figure things out when it comes to health system. Everything is in English, it's not that easy." ASP-5

ASP, Arabic-speaking participant; ESP, English-speaking participant; GP, general practitioner.

periods (the scale of difference between the two groups, with regard to the waiting period, ranged from days/weeks for the English-speaking group to several months for the Arabic-speaking group). Second, participants in the English-speaking group than the Arabic-speaking group more often reported suspecting that their experienced symptoms could be diabetes related. Arabic-speaking immigrants attributed their initial symptoms to a range of non-diabetes-related factors, mainly cumulative stress. Third, English-speaking Caucasian patients demonstrated decisiveness when it came to health-related decisions, including accessing of healthcare. When they experienced initial symptoms and felt unwell this spurred them to see a doctor. Arabic-speaking migrants reported not seeking medical attention for symptoms commonly suggestive of diabetes. Instead, they engaged in conversations with their peers regarding how best to deal with those symptoms. Some had a suspicion that the symptoms could be diabetes related but failed to act regardless.

Within the Arabic-speaking group, male participants had a greater tendency to ignore their symptoms and more reluctance to have medical check-ups than female participants. The majority believed that medical services should only be accessed for medical emergencies, severe pain, and serious illnesses. This notion seemed to be reinforced by experiences with primary care prior to migration to Australia. Two participants recounted negative experiences when presenting with initial symptoms to doctors in the Middle East. Both encountered doctors who were openly critical of their presenting with issues that were deemed to be trivial. Such reactions validated the notion that visiting a doctor requires one to be very ill. Different views were reported by the two youngest participants who were diagnosed with diabetes in Australia: they were less reluctant or concerned about going to doctors and they had more trust in the healthcare system. They also reported a trusting relationship with their general practitioners (GPs) and that they were encouraged, rather than criticised, when seeking diagnosis for minor symptoms.

Theme 2: Barriers and enablers to access of healthcare services
Subtheme 2a: Influence of significant other(s)
The influence of significant others differed in its extent and direction between the groups. Compared with Arabic-speaking migrants, the English-speaking group were more independent in decision-making and less reliant on a significant others. In making decisions to access and use health services, both groups appeared to engage in conversations with significant others about experienced symptoms. The offered advice by significant others, however, differed significantly between the two groups. For the Arabic-speaking migrants, the offered advice was mainly to disregard experienced symptoms and to allow time to recover. Accessing medical services was considered a last resort. The English-speaking group reported that the significant others encouraged them to see their GP and access medical services promptly.

Arabic-speaking participants remarked on problematic aspects to the collectivist Arabic culture. Participants spoke of strong social networks that exist within Arabic-speaking immigrant communities and the

concept of being a 'good' individual within these communities. It appears that an archetype of a 'good' person is one who trusts friends, discloses life situations and involves significant others in decision-making processes, including health-related decisions. There was an expectation on participants to discuss health-related decisions with their peers as a part of the process through which they fulfilled 'social roles' and verified their trust in significant other(s)—peers and friends within Arabic-speaking communities, always of the same gender, as well as family members (excluding partners). Participants' decision-making to access health services relied heavily on these lay community members. Although Arabic-speaking participants felt free to make health-related decisions, they reported an inability to make such decisions independently in practice. This led to a willing relinquishment of independent decision-making and drove participants to have further discussions with significant others regarding the best course of action in dealing with experienced symptoms. This collectivist decision-making among Arabic-speaking migrants appeared to contribute to a significant delay in accessing needed medical services.

Subtheme 2b: Sociocultural and religious beliefs
Arabic-speaking participants described how sociocultural beliefs they developed during their former lives in the Middle East subsequently influenced health services use after migration. Fear surrounding the self-management burden and negative social labelling resulting from a diagnosis of diabetes contributed to delayed consultation with healthcare professionals. So too did general anxieties emanating from other personal and social circumstances. They preferred not to visit doctors to avoid being diagnosed with diabetes. Participants described their cultural context to be one in which diabetes was viewed as a predicament with no 'solution'; they reflected on how such a belief discouraged them from seeking medical diagnosis. Others feared the 'accountability' for self-management if a medical diagnosis was confirmed. These beliefs impacted negatively on participants' healthcare-seeking behaviour.

Participants held strong religious beliefs; they spoke of the notion that 'everything is predetermined'. Fatalistic beliefs were frequently reported such as 'human life is transient' and 'one should not be consumed in doing things to extend one's life such as constant accessing of medical services'. Suffering through illnesses (in this case diabetes) was favoured; it was perceived as a sign of being close to God (Allah) and having sins forgiven. Having poor health, therefore, was appealing for some. These beliefs appeared to act as a barrier to seeking medical care. Those individuals who adopt fatalistic belief system appeared to have a strong external locus of control and believed events in their life, including health challenges, were primarily predetermined by Allah (God) and not necessarily from their own actions or environmental influences. They were therefore less motivated to participate in diabetes self-management.

Subtheme 2c: Experiences with healthcare professionals
The two groups reported starkly contrasting views regarding their experiences with healthcare professionals; these varied according to healthcare setting. Unlike Arabic-speaking migrants, prior positive experiences of English-speaking participants with their healthcare professionals appeared to contribute in developing a sense of trust that enabled timely access and on-going use of available health services. The Arabic-speaking migrants felt that appointments with specialists were negative experiences. During these encounters, participants typically had little or no direct conversation with specialists, who were usually of English-speaking background and relied on interpreters. There appeared to be reluctance and fear among Arabic-speaking participants when they were referred to hospital-based diabetes services, particularly to specialists. Some felt they were being indirectly blamed for their condition and accused of not being adherent. Participants were fearful about ultimatums from hospital-based healthcare professionals around treatment intensification, such as increasing prescribed doses of oral hypoglycaemic agents, adding another type of oral hypoglycaemic agent or introducing insulin. A few participants in the Arabic-speaking group reported initiating further discussions with their Arabic-speaking GPs to counter recommendations for treatment intensification suggested by hospital-based healthcare professionals. They convinced their Arabic-speaking GPs not to act on those treatment intensification recommendations by promising that they would adopt healthier lifestyles. Others perceived that hospital-based healthcare professionals lacked insight into the emotional and social influences on participants' suboptimal self-management and their failure to meet clinical targets. Diminished rapport meant that participants were less inclined to adopt recommendations of hospital-based healthcare professionals. A clear preference to accessing Arabic-speaking GPs was reported. Participants felt that a shared cultural and linguistic background with those Arabic-speaking GPs enabled better understanding of their emotional context and life situation. It was evident that participants were willing to delay access to medical services if Arabic-speaking GPs were not available. English-speaking Caucasian participants, however, reported strong trust in the advice and more praise for the approach of diabetes healthcare professionals at secondary care settings than GPs.

Subtheme 2d: Knowledge about available health services
Arabic-speaking migrants were not as aware of currently available non-medical services for diabetes management as the English-speaking group. Most participants did not engage in any community-based diabetes support groups and reported having only limited access to diabetes educational sessions. Arabic-speaking migrants spoke of difficulties in navigating and accessing Anglo-centric healthcare systems. Some attributed the difficulties experienced to their poor reading skills and

lack of proficiency, in English as well as in the Arabic language. Arabic-speaking participants were not able to access and use internet-based educational materials and were unaware of the existence of such resources.

DISCUSSION

To the best of our knowledge, this is the first study that explored barriers to access and use of healthcare services among immigrant Arabic-speaking patients with T2DM. Findings yielded new insights into participants' decision-making processes and how the sociocultural context within Arabic-speaking communities influenced the way in which participants recognised and acted on their diabetes-related symptoms. Participants intentionally delayed access to, and seeking of, professional healthcare services when alarming signs of diabetes were experienced. The findings of this study identified four barriers to access and use of healthcare services among Arabic-speaking migrants with T2DM. Three of these barriers resonated with findings from previous international and Australian studies about barriers to health service: perceptions of and experiences with healthcare providers, lack of knowledge about available services, and language problems.[39–44] Our findings contained two unique facets that have not been reported previously. First, Arabic-collectivistic culture appeared to be a more salient barrier to timely health services access than overt lack of individual autonomy. Participants clearly differentiated between their freedom to independently make decisions and their lack of ability to arrive at decisions without involving significant others. The delay in accessing medical services and diagnosis was compounded by advice from significant others, offered through storytelling and anecdotes, as it encouraged ignoring of symptoms and encouraged a belief that there would be recovery. The influence of significant others in decision-making has previously been reported in other medical and social contexts, however the long-term influence in outcomes evident in this study demonstrates its important impact. The other unique finding was that participants regarded experiences with healthcare professionals in a hospital setting to be negative and they reported diminished rapport. This meant that participants were less inclined to adopt recommendations of hospital-based healthcare professionals than recommendations from Arabic-speaking GPs.

Drummond et al,[45] reported that West African refugee women in Western Australia were more likely to attended hospital outpatient clinics for treatment and had a trust in their therapeutic recommendations. This difference observed in our study of Arabic-speaking migrants could be explained by differences in migratory experiences, acculturation and integration levels, and adaptation to the new host society. Also, the shared cultural and linguistic background between participants and their Arabic-speaking GPs contributed to the creation of a safe and comfortable environment during medical encounters, thus establishing stronger rapport than with hospital-based healthcare professionals. This seemed to translate into greater trust on participants' part in GPs recommendations.

Religious and cultural beliefs have been previously identified as a key factor influencing healthcare-seeking behaviours.[46–49] Previous studies explored how patients' cultural understanding of religion profoundly affected their approach to illness.[50] Arabic-speaking migrants in this study reported unique religious and sociocultural beliefs that hindered access to available diabetes health services. Some participants preferred suffering through having uncontrolled diabetes and perceived it as a sign of being close to God (Allah) and having sins forgiven. Those who reported such views were more likely to endure symptoms and actively delay their access to medical services. It has been reported that Muslim patients with diabetes, who believe that Allah (God) is the healer, adopt a passive role in relation to their illness.[50] The negative impact of such cultural-informed religious belief may be expected among a collectivist culture such as Arabic-speaking communities, particularly because of the strong social networks and known tendencies among ethnic minorities to share their stories, views, understandings and experiences through informal mechanisms such as storytelling and gossip.[51] Identifying such modifiable beliefs provides a vital opportunity to design culturally appropriate interventions among ethnic minority communities that promote timely access to, and on-going use of, currently available health service. Capitalising on receptiveness of migrant communities to a storytelling approach,[52] rectifying Arabic-speaking people's misunderstandings and motivating them to engage with the healthcare system using such approaches seems possible.

CONCLUSION

Arabic-speaking migrants intentionally delay access to medical services when symptoms of diabetes appear. Important barriers to health services access have been identified. Targeting those barriers through tailored interventions is necessary, to facilitate timely diagnosis of diabetes, as well as to improve access and use of available healthcare services and ultimately to improve glycaemic control for Arabic-speaking communities.

Ethics approval Ethics approvals for the study were granted by the Monash University Human Research Ethics Committee and the Human Research Ethics Committees at the participating hospitals.

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