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Health professionals interface with cultural conflict in the delivery of type 2 diabetes care

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ABSTRACT

Objective: This study explored the knowledge and experiences of health professionals (HPs) caring for South Asian patients with type 2 diabetes (T2D).
Design: Fourteen HPs, who supported patients with T2D, were interviewed. The recruitment strategy employed purposeful and theoretical sampling methods to recruit HPs who worked across primary and secondary care settings.
Main Outcome Measures: Grounded Theory (GT) methodology and analysis generated a theoretical framework that explored HP's perceptions and experiences of providing diabetes care for South Asian patients.
Results: A GT, presenting a core category of Cultural Conflict in T2D care, explores the influences of HP's interactions and delivery of care for South Asian patients. This analysis is informed by four categories: (1) Patient Comparisons: South Asian vs White; (2) Recognising the Heterogeneous Nature of South Asian Patients; (3) Language and Communication; (4) HPs' Training and Experience.
Conclusions: The findings consider how the role of social comparison, social norms, and diminished responsibility in patient self-management behaviours influence HPs' perceptions, implicit and explicit bias towards the delivery of care for South Asian patients. There was a clear call for further support and training to help HPs recognise the cultural-ethnic needs of their patients.

Introduction

A key component of diabetes management is the promotion of individual behaviour change (Hood et al., 2015). Health professionals (HPs) encourage and support people with type 2 diabetes (T2D) to engage in healthy lifestyle behaviours (e.g. optimum

nutrition, regular physical activity), treatment implementation (e.g. taking medication as prescribed), and various self-care activities (e.g. self-foot examinations) (Federation of European Nurses in Diabetes, 2014; Wilson, 2015). Despite a range of evidence-based interventions and approaches (Lim et al., 2019), people with T2D continue to report difficulties in making and sustaining recommended health behaviours, and as such, clinical outcomes for this clinical population vary (Pardhan & Mahomed, 2004; Stone et al., 2005). Evidence suggests that intervention delivery and interactions with HPs are shown to be most effective when information is tailored to address individual patient needs (Noar et al., 2007; Trevena et al., 2006). The National Institute for Health and Care Excellence (NICE) in the UK, and the American Association of Diabetes Educators (AADE, 2014), for example, both promote individualised care. NICE (2009, 2015, 2019) suggests that HPs should 'adopt an individualised approach to diabetes care that is tailored to the needs and circumstances of adults with type 2 diabetes' (p. 12). The adoption of an individualised approach to care aids provider-patient communication and relationships. The person with T2D feels understood, listened to, and engaged with their shared decision-making. Positive relationships between health-care providers and the person with diabetes have been shown to influence self-management behaviours and thus clinical outcomes (Roter et al., 1998). The concept of individualised care should also incorporate 'cultural, linguistic, cognitive, and literacy needs' [section 1.2.5] (NICE, 2009, 2015, 2019). However, evidence varies on what and how to implement such individualised approaches, as there are no clear guidelines on how to achieve such recommendations.

Offering individual person-based approaches to care and considering cultural needs is particularly important when supporting underserved populations. Evidence suggests that health disparities with T2D prevalence exist in South Asian (SA) populations compared to European counterparts (Bhopal, 2013; Meeks et al., 2016; Modesti et al., 2016; Sattar & Gill, 2015). People of a SA heritage are six times more likely to develop T2D and, from the age of 25, are at a significantly higher risk and will experience more complications than White populations (Gujral et al., 2013; Wilmot & Idris, 2014). SA ethnicity now represents a significant proportion of the UK population and is expected to increase (Rees et al. 2016, 2017). Consideration for individual needs of those belonging to ethnic minority groups, for example, SA populations, is necessary to ensure optimal T2D care is offered to all.

Previous research has explored the impact of culture in lifestyle behaviour change, such as physical activity (Jepson et al., 2012) and dietary behaviour in the ethnic minority general population (Osei-Kwasi et al., 2016) and those with T2D (Vanstone et al., 2017). Specifically, research on the SA population has suggested that patients seek to manage psychological, behavioural and cultural conflicts which influence their T2D self-management decisions. Difficulties in managing such conflict interfere with their interpretation and alignment to any advice received from HPs. As such, SA patients may prioritise their cultural identity before that of their health and T2D status, which may negatively impact their self-management behaviours (Patel et al., 2021).

Despite clinical guidance and research evidence suggesting that HPs should individualise services and consider cultural and other personal needs of people with T2D, there is a paucity of research exploring HPs' experiences of offering such individual

approaches for people with T2D, especially for ethnic minority groups. Previous research has suggested that there is a poor understanding of culture for ethnic minority individuals and how it is applied into clinical practice (Cortis, 2004; Fagerli et al., 2005), and specifically for SA people (Bhurji et al., 2016; Patel et al., 2021; Sohal et al., 2015). However, there is a need to better understand HPs' knowledge and experiences of caring for SA patients with T2D, as there is limited evidence on how to tailor advice for the growing SA population in the UK.

Method

Design

Semi-structured interviews and grounded theory (GT) analysis (Strauss & Corbin, 1990) were employed to generate a theoretical framework that explored HPs' perceptions and experiences providing diabetes care for SA patients. A university research ethics committee approved this study (14/NSP/028).

Two philosophical stances influenced this GT study: Symbolic interactionism explored HPs' lived experiences and behaviours of supporting patients with T2D (Blumer, 1969) and constructivism (Charmaz, 2006), which considered the process of how HPs understood their role as a diabetes provider (meanings) and how that understanding subsequently informed their healthcare delivery (actions).

Sampling

Participants were eligible for recruitment if they were HPs' supporting patients diagnosed with T2D. HPs were initially recruited via opportunity sampling from various primary and secondary healthcare settings around the North West of England (Bolton, Blackburn and Preston). To rigorously employ GT methodology, interviews were transcribed verbatim, and simultaneous data collection and analysis occurred (including fields notes). This process informed researcher discussions to make appropriate iterations to the interview schedule and inform the selection process of participants (engaging in purposeful and theoretical sampling) (Birks & Mills, 2015). Purposeful sampling (Creswell, 2013) informed the process of recruiting specific HPs (e.g. those who worked in areas of high ethnic diversity, HPs of varied ethnicity, HPs working in different settings). Subsequent theoretical sampling (a unique process to GT) commenced refining category analysis and theoretical development (Charmaz, 2014). Sampling was discontinued once the research team deemed a point of theoretical saturation, whereby categories and their properties were considered sufficiently dense, and data collection no longer generated new interpretations (Glaser, 1992; Strauss & Corbin, 1998).

Participants

Semi-structured interviews were conducted between July 2014 and October 2015 with 14 HPs. Ten females and four males (mean age 51.25 years, range 32–58 years). Eight participants were White British, and six were SA (subgroups: $n = 3$/Indian, $n = 1$/

Table 1. Characteristics of participants.

	Age	Gender	Ethnicity	Job title	Years in job	Service employed
1	44	Female	British White	Diabetes Specialist Nurse	13	Hospital Clinic
2	48	Female	British White	Diabetes Specialist Dietician/Diabetes Education Coordinator	26	Community Health Service
3	48	Female	South Asian	Diabetes Specialist Nurse	24	Hospital Clinic
4	58	Female	British White	Diabetes Specialist Nurse	40+	Community Setting
5	48	Male	Indian	Dietician (Service manager)	3	Hospital Clinic
6	44	Female	British White	Diabetes Specialist Nurse (Team Leader)	9	Hospital Clinic
7	47	Female	Asian, Gujarati	Diabetes Link-worker	15	Lancashire Care Foundation Trust
8	50	Female	British White	Extended Scope Podiatrist	28	Hospital Clinic
9	54	Male	British White	Extended Scope Podiatrist	31	Hospital Clinic
10	32	Male	British Pakistani	GP	10	GP/Hospital Clinic
11		Female	South Asian	Consultant Physician	15	Hospital Clinic
12	48	Female	British White	Practice Nurse	10	GP Practice
13		Male	Indian British	GP	20	GP Practice
14	46	Female	British White	Practice Nurse	14	GP Practice

Pakistani, $n = 2$/unknown) (see Table 1). Seven worked in a hospital setting; four were from Primary Care, and three were from Community Health Services. On average, the HPs had been employed in their current roles for 18.42 years (range 3–40).

Materials

The first section of the interview schedule focussed on general diabetes care (for example: What are the key issues regarding self-management for patients with T2D?). The schedule subsequently explored knowledge of SA culture (e.g. Are there differences within SA populations, Bangladeshi compared to Pakistani patients? between SA and White patients?). Interviews included open-ended questions to allow participants the opportunity to explain their experiences fully.

Procedure

The HPs read an information sheet explaining the study purpose, the risks, and the benefits of taking part. Participants signed a consent form and agreed to a convenient interview time and location. Demographic information was collected and included data on age, gender, job title, years in the job and which service they were employed. All interviews took place in the HPs place of work, in a private room, taking a mean duration of 28 min (range 22–58). Once completed, the participant was thanked and debriefed.

Quality

The quality of the methods employed during this study (Meyrick, 2006) ensured the credibility of qualitative analysis. Both Methodological (Giles et al., 2013) and

Investigator triangulation (Stewart et al., 2017) were adopted throughout the research process. The first author conducted all interviews and developed field notes during, and reflection notes post interviews, and discussed these with the last author to evaluate the employed interviewing technique; to review the content of the interview; to consider appropriate iterations to the interview schedule; to review the purposeful/theoretical sampling methods; and to discuss the analysis. Moreover, analytical interpretations of data were challenged through discussions across the multi-ethnic research team (mixed ethnicity and mixed researcher experience). The research team comprised of a SA female (first author) PhD, who had a research interest in SA health and T2D, and members of her family were diagnosed with T2D; a Male Black Senior Lecturer, PhD, with expertise in diabetes (second author); a white female Reader in Applied Psychology, PhD, with expertise in qualitative research methods (third author); a male SA researcher, PhD, with interest in SA health and T2D (fourth author); a female SA, Consultant Physician, MD, with expertise in diabetes and endocrinology (fifth author), and a white female Reader in Applied Health Psychology, D.Health Psyc, Health Psychologist and Project Lead with expertise in diabetes and qualitative research methodology (last author). In addition, data triangulation was completed through the analytical process: interviews were audio-recorded and transcribed verbatim, following assessing raw data, codes, concepts, categories and theoretical saturation. The analysis engaged in persistent observation through simultaneous recruitment and analysis. This process included inspecting, analysing and reanalysing the data continuously until a theoretically saturated GT was developed.

Throughout this research, we (the authors) remained transparent and sensitive to context (Yardley, 2000). To ensure findings represented participants' perspectives, a selection of verbatim participant quotations are included as raw data to support analytical commentary. Due to the nature of this qualitative research, in line with legal and ethical processes, participants of this study did not agree for their transcripts to be shared publicly, so supporting data beyond the sample quotation extracts are not available. The conduct of this research and the presentation within this article align to the COnsolidated criteria for REporting Qualitative research (COREQ) Checklist (Tong et al., 2007) (see Supplementary File 1).

Analytical procedure

GT methodology and analysis (Strauss & Corbin, 1990) was conducted. The GT process adopted simultaneous data collection and analysis, leading to theoretical saturation (Strauss & Corbin, 1998). A total of 1821 codes were identified. Subsequently, 13 axial codes and various memos were reviewed. Selective coding and organisation of categories developed a theoretical framework (Figure 1). The analysis referred to verbatim extracts of data as evidence to support analytical commentary, and quotes were coded with the following information: Interview number (1–14), Gender (Male, M; Female, F), Ethnicity (White, W), South Asian (SA) (e.g. 11FW).

Findings

This GT presents four categories: (1) Patient Comparisons: SA vs White; (2) Recognising the Heterogeneous Nature of SA Patients; (3) Language and Communication; (4) HPs'

Training and Experience. While presented as individual categories, each informs and entwines with the other categories, together informing the Core Category of Cultural Conflict in T2D Care.

Category 1: Patient comparisons; SA vs white

Most HPs recognised the involvement of social, psychological, cultural factors in the effectiveness of a patient's diabetes self-management. Many acknowledged that both ethnicity and religious beliefs could influence patient engagement with self-management. Moreover, HPs acknowledged the value of personalised patient care and tailoring advice towards individual patient needs. HPs reflected on the similarities and differences between the ethnicity of their patients and made comparisons between SA and white patients' understanding of T2D:

> Yes. I mean, I would say the (South) Asian population has a very low understanding of their diabetes, don't prioritise it. A lot are in denial. Maybe that's because they don't quite understand the consequence of the disease. (5MSA)

HPs considered that social and cultural surroundings profoundly influenced the SA patients. In comparison, White patients were viewed as independent and proactive.

> …the Caucasian are very proactive, more proactive than the SA population, in the sense that their lifestyle is different from the South Asian population. They go to exercise without us telling them; they are understanding the language, there is no language barrier, whereas the SA population has a language barrier all the time. They are more prone to be at home, the SA population, especially the females, compared to the Caucasian…. (13MSA)

HPs suggested patient expectations and experiences of care differed according to ethnicity, which made their role in supporting SA patients more challenging. HPs consistently expressed that SA individuals tend to have a relatively casual attitude towards their T2D. It appeared that the high frequency of T2D within their community had desensitised people to the severity of T2D. As such, the HPs report that SA people are more likely to 'tolerate ill-health' compared to 'other maybe Caucasian people (who) are less tolerant' and recalling seeing SA patients for 'crisis intervention. They only ever come when there's a serious problem' (3FSA). HPs overall reported that SA patients had more difficulty managing T2D compared to their white counterparts and considered this in part due to a sense of diminished responsibility.

> whatever happens, happens. 'It's kind of … you know, it's fate, and it's … there's nothing I can do about it'. (2FW)

Category 2: Recognising the heterogeneous nature of SA patients

When exploring individual differences in beliefs, attitudes and behaviours, and asked to consider difference within various SA subgroups, most White HPs were not able to recognise differences and largely considered SA patients as a homogeneous group. For example, when asked to consider different needs and lifestyle behaviours of specific subgroups (e.g. Indian/Pakistani or Muslim/Hindu/Sikh).

> Indian versus Bangladeshi I couldn't tell you any particular information about that, but we really class all … everybody as South (Asian)… Because really most of the population that seems to have settled in (Northwest city) are South Asian, but I couldn't tell you much about Indian versus Bangladeshi. (1FW)

SA HPs were more able to recognise individual ethnic, religious and cultural variations within the SA populations. Although HPs often relied on their personal experiences and their own ethnic backgrounds, which subsequently gave them greater insight and knowledge of SA subgroup nuances. However, whilst SA HPs were more knowledgeable about the SA subgroup populations, they were also more likely to report specific stereotypes of such SA subgroups. For example, previous literature suggests that many patients with diabetes struggle with self-management behaviour, regardless of education level (Zeh et al., 2012). However, SA HPs reported that Indian patients were 'better educated' (8FW); they thus engaged more effective with self-management than their comparison SA subgroups (e.g. Pakistani and Bangladeshi patients).

> Yes. The Indians tend to adapt more, and I think because of the fact that they're pushing – they have more of an appetite for education and obscuring (*sic*) themselves, generally. (10MSA)

Patients from Pakistani, Bangladeshi and Bengali sub-populations were reported to be the hardest to reach patient groups.

> Yes, I do. I think there's an education, possibly an education difference, I think. I think some of the Bangladeshi, some of the Pakistani I come across, are from a lower socio-economic…. (8FW)

Despite HPs suggesting they used various methods to try and engage 'hard to reach groups', the HPs acknowledged there were still barriers 'like a brick wall that's built up' (3FSA). The HPs presented frustrations and a sense of hopelessness which resonated more generally across their support offered to SA patients as a whole. Recognition of SA subgroup differences may indicate distinct individual differences in engagement and communication practices that have not yet been explored.

> I feel like Pakistani community are more not taking things on board than Gujarati maybe. I don't know. And then the Bengali, because it's a small community in (town), Bengali. You don't come across so many Bengali, but then yes, it's a bit hard to reach group as same as the Pakistani, but because we do run Urdu courses for the DESMOND as well, and then, because I speak Gujarati and Urdu, but I don't speak Bengali and Telugu, but then people who speak Bengali, they would probably understand Hindi or Urdu. But we don't really get many Bengali speakers coming, but we do have some small community. I think they're a bit more hard to kind of reach group maybe, or maybe they're not very, I don't know how to put it. But I think, you know, they have different belief and different kind of way of thinking, don't they? (7FSA)

Category 3: Language and communication

When patients do not speak English as a first language, or at all (Rhodes et al., 2003), a 'language barrier' exists which hinders the quality and delivery of care. This

language barrier was assumed to be partially mitigated by providing a link worker/translator services.

> Diabetes is quite a difficult thing to get your head around, it makes it even more difficult if you're having to use language line. So I have to tell somebody down the phone they're then tell…. I pass the phone to a patient. They talk. It's really difficult to get complex information across using a telephone interpretation thing, so that is tricky. (1FW)

Language barriers influenced the delivery of HP care and appeared to influence their patient's engagement with services (e.g. 2FW). However, (foreign) language per se was not the primary difficulty. Understanding and communicating the complex language associated with diabetes itself may supersede the foreign language issue:

> At one time, you could say, 'Well, yes, it's a language barrier, it's a culture barrier'. Our consultant speaks Urdu. One of our other consultants Hindi, I speak Gujarati, one of our nurses speaks Urdu and Gujarati, so (foreign) language isn't the problem. Access to the materials isn't the problem. It's that group of people that we still find it very hard to get compliance, concordance with medication, and the ability to make the changes. (3FSA)

Previous research has acknowledged how subtle differences in spoken language (a variation on words in the same language) can influence patient acceptance, understanding and adherence to advice (Ahmed et al., 2015; Ali & Johnson, 2017). Where language itself differs, between HP and patient, the translation process of information may alter essential aspects of the message (Hull, 2016; van Rosse et al., 2016), as has been described by the HPs in this study. Moreover, when language barriers and cultural influences of the patient's lifestyle are combined, this appears to create additional confusion, which interferes with the patient's perceptions and understanding of diabetes and the advice they have received.

> A lot of the GPs in the area are Caucasian, and a lot of the trainers in terms of your dietary advice or your nurses are Asian – are not Asian, sorry. So when they're talking about diet it might not be in the same context as them, or they'll politely nod as – as many people do where they don't understand anything, they're just kind of continuing with – and you – you think they're understanding and taking everything on board, but they're just not. So the language (communication) is a big barrier. (10MSA)

Category 4: Health professionals training and experience

Many HPs referred to a lack of formal training/education regarding healthcare delivery for ethnic minority patients, explicitly acknowledging their misunderstanding of the SA culture, and they reported being unclear how to tailor advice for SA patients. It is noteworthy that some HPs had independently sought cultural training and ongoing support from peers.

> No. Other than you need to have the knowledge that they're more at risk earlier. You're looking for a different waist circumference. Because if you look at a Bangladeshi lady, they're all very petite, very slim, but if you do a waist measurement, they're always in the at-risk bracket. But I'd like to think I've done a lot of training around this because this has been, sort of [name of place] has a high Pakistani and Bangladeshi population. (4FW)

Those who had more experience, working in areas of high SA populations and length of service as an HP supporting patients with T2D, reported greater awareness

of tailoring care towards individual differences. Specifically, HPs were better able to recognise SA patients' ethnic, cultural and religious nuances.

> No, not at all, no. My previous practice I worked at was very high Asian. This was in (area), and it was very high Asian population, so I think I was thrown in at the deep end there. I learnt a lot from that respect, but nothing, no specific training. I think it's just all experience really. (14FW)

The White HPs had specific knowledge about certain cultural and religious aspects, most of which have received media attention (Diabetes UK, 2020). Some White HPs mentioned fasting (6FW), as a religious obligation, specifically Ramadan for Muslims, therefore being aware that the SA population were at high risk during that period. Although rather than increasing support during this period, often programmes such as DESMOND were not delivered during the month of Ramadan suggesting many SA patients' would not attend.

> Our (SA link worker), she knows the community really well. So she knows that there had been a big wedding or something. You know, she often says 'Well, there wouldn't be … you know, I know there's not as many people will come.' You know, we don't run things generally through Ramadan because, again, people are less likely to come and don't have the energy to take on-board additional education. (2FW)

Other nuances, such as more frequent fasting activities, were not acknowledged (e.g. Hindus engage in weekly religious fasts, Kumar, 2020). This suggests that HPs were unaware of possible additional and cultural influences beyond that of Ramadam for Muslims, and as such, may demonstrate a lack of individualised patient-centred care for some SA patients. HPs, specifically non-SA HPs, with less experience supporting SA patients, may be less likely to tailor advice to individual patient needs and subsequently, find it more challenging to support SA patients effectively (e.g. newly qualified or new to working with SA populations). White HPs relied on ad-hoc support from their SA colleagues for specific guidance about SA patients, and SA HPs acknowledged that they offered such peer support.

> Explaining to some of the team that they need to go on cultural awareness training, and to understand some of the science behind, or the differences behind the Asian population and the Caucasian population. (4MSA)

All HPs reported being confident in providing diabetes advice. However, some HPs felt that they could benefit from learning more about the dietary aspects of self-management, gaining a more comprehensive understanding of cultural influences on eating habits, and insight into religious and broader health needs.

> (Health professionals need) probably more about their diet really, and cultural things really, and sort of learning about barriers that they feel…. So it's understanding that cultural thing as well, and trying to make the best of what we have…. (14FW)

There was a recognition that SA HPs have better insight into SA patient needs and used such insight to influence service planning. Although all HPs reported limitations in their knowledge and hence reported that the SA population was a 'hard to reach' and 'more challenging group of patients compared to White patients', for example:

> I certainly think there's more knowledge and understanding that I could have that would make it easier for me to do my job better. (2FW)

Core category: Cultural conflict in T2D care

Figure 1 represents a summary of the GT findings which are developed into a theory of Cultural Conflict in T2D care, a presentation of the influences of HPs' interactions and delivery of care for SA patients. These categories summarise the interactions of a range of psychological constructs that help interpret and explain the findings further: HP's implicit and explicit bias; health literacy of a patient; social and cultural understanding and acceptance; patients' social norms; and social comparisons between and across patients.

Cultural Conflict in T2D as a core category, was informed by HPs' reflections of the patient's sociocultural influences on their health beliefs. HPs in this study suggested that SA patients did not have a sound understanding of diabetes compared to White patients and overall reported that SA patients were difficult to treat due to sociocultural factors that influenced their lifestyle and engagement in healthcare services. SA patients are thought to consider T2D as a social norm (Social Norm Theory, Perkins & Berkowitz, 1986) within their community, a given disease, for which they have limited behavioural influence. This finding is congruent with research exploring the beliefs of SA patients living with T2D (Patel et al., 2021). HPs suggested that patients made social comparisons (Social Comparison Theory, Festinger, 1954) towards others with and without T2D and compared T2D against other health diseases (such as cancer).

Moreover, HPs acknowledged explicit comparisons of SA patient's beliefs and behaviours compared to White patients in their understanding of T2D. HPs understood these comparisons and acceptance of social norms to reinforce a greater sense of diminished responsibility in SA patients compared to White patients, and thus these
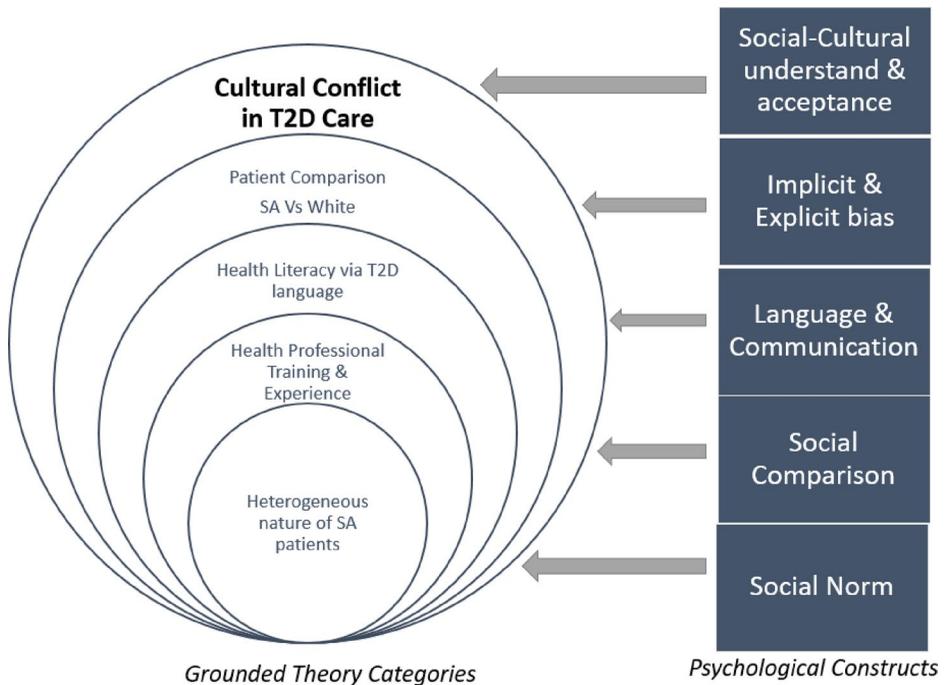

Figure 1. Cultural conflict in T2D care.

perceptions influenced the SA patient's engagement with T2D care advice. In turn, the behaviours and perceived attitudes of SA patients influenced HPs' delivery of care. In this study, HPs acknowledged difficulties supporting SA patients and offered explanation and description of how they bring these considerations into the delivery of care, recognising individual needs. Specifically, HPs acknowledged attempts to personalise T2D advice relevant to cultural needs, such as offering advice in a (foreign) appropriate language, although at times HPs demonstrated both explicit and implicit bias towards SA patients. In healthcare, HPs typically promote health equality and are mindful of holding negative evaluations based on individual or group characteristics, especially to those who are already vulnerable, such as those from ethnic minorities, women, or people who are disabled (Martin et al., 2014). HP's attempt to recognise and manage any such explicit (consciously held) attitudes and resolve these through supervision, clinical management, training and experience (Sabin & Greenwald, 2012). Implicit bias refers to unconscious cognitive constructs outside of conscious awareness and manifests through thoughts and actions. Implicit bias has been evident as a common occurrence amongst HPs. A systematic review of 14 studies, including more than 15,000 HPs (over 80% were physicians), stated that almost all studies reported evidence of implicit bias, representing bias levels similar to that of the general population, and specifically highlight that race and ethnicity were the most common categories for bias (FitzGerald & Hurst, 2017). In this study, HPs referenced SA stereotypes, which were considered recognition of adapting towards patients' personalised needs, as opposed to being considered an (unconscious) negative evaluation. However, such evaluations may subsequently influence the healthcare advice offered, thus influencing their patient–provider interactions.

Moreover, implicit bias may also manifest through non-verbal behaviours such as frequency of eye contact or physical proximity to the patient (FitzGerald & Hurst, 2017). This may help explain HP's acknowledgement of their limited connection and relationships between themselves and their SA patients. Consequently, a SA patient may evaluate these interactions and recognise bias or possible limitations in healthcare delivery. The outcome of these assumptions and unspoken evaluations may explain subsequent patient engagement with healthcare advice (Dickinson, 2017). In this study, HPs recognised their varied knowledge of SA ethnicity and culture. As such, they attempted to personalise care for their SA patients. However, this GT unpicks some challenges in the successful delivery of healthcare and emphasises the patient–HP conflicts that influence HP delivery of care and might help explain perceived difficulties with patient engagement and rapport.

Discussion

Numerous studies have documented how cultural factors influence self-management behaviours in the SA population (Prinjha et al., 2020; and see reviews Bhurju et al., 2016; Sohal et al., 2015). The SA population have many subgroups, and each subgroup has its own cultural needs that should be considered in an individual care plan. There is a growing body of literature documenting that when HPs understand a patient's needs, it leads to active patient engagement. Although previous qualitative studies have explored HPs' views (Capell et al., 2008; Cortis, 2004; Fagerli et al., 2005), attitudes

and perceptions of T2D patients (Bani-Issa et al., 2014; Clark & Hampson, 2003; Torres et al., 2010; Wens et al., 2005). There is a paucity of research exploring HPs' views on diabetes management in SA patients specifically. The studies that have investigated SA patients have explored singular SA subgroups. For example, Hawthorne et al. (2003) studied a Bangladeshi participant group, Cortis (2004) and Fagerli et al. (2005) focused on Pakistani patients and thus have investigated groups out of real-world context. SA population subgroups pose various attitudes, beliefs and values related to health, making the development of cultural competence specified in the care of SA patients essential for every healthcare provider. Therefore, this study offers insight into how HPs understand (or not) the diverse, heterogeneous nature of SA T2D patients.

T2D is a multifaceted and complicated condition to explain, monitor and manage. Variation in HPs' delivery, understanding and subsequent communication with patients exists, regardless of culture, religion, or ethnicity (Avery et al., 2015; Rushforth et al., 2016; Yach et al., 2006). However, in addition to these generalised issues, there are specific problems associated with the delivery of diabetes for SA patients, as also recognised in previous literature (Mukhopadhyay et al., 2006; Soljak et al., 2007). HPs in this study recalled attempts to adapt care towards SA patient practical needs, but often such adaptations were limited, e.g. delaying start times or offering interpretation/printed material in (foreign) languages (Khunti et al., 2009; Marwa et al., 2004). Foreign language has previously been acknowledged as a communication delivery issue (Alam et al., 2012; Dickinson et al., 2017; Rhodes et al., 2003). Although in this study (foreign) language was discussed, it was not a critical difficulty, given the HPs reported access to various resources to mitigate, e.g. via access to a diverse HP population who spoke varied languages or an interpreter. The difficulties in delivering complex self-management and disease-specific advice and information appeared not to be about merely transferring spoken words from one language to another. Specific advice is needed to tailor to SA patient groups, such as culturally relevant dietary advice (Marwa et al., 2004).

The GT framework presented in this study advances our understanding of diabetes self-management in SA T2D patients over and beyond traditional health behaviour models. The unique element of the new GT framework suggested that integrating psychological constructs, such as tackling an individual's health beliefs of T2D with reference to sociocultural influences including social norms, social comparisons, and diminished responsibility, relevant to a person's health and cultural-religious beliefs could help to personalised T2D towards the needs of SA patients and thus reduce health disparity present within this population group. Current practice suggests that HPs offer standardised advice, and for example, often advise patients not to participate in religious obligations (which promote variation in food consumption and thus impact T2D outcomes), such as fasting behaviours. However, in doing so, such advice is disconnected from the patient's daily lifestyle, religious and social-cultural world. For example, Lawton et al. (2008) reported that SA communities' religious and cultural behaviours are influential and central components to SA individuals' everyday life. If a person is seen (within the SA community) as doing something out of the norm (i.e. not fasting abiding by religious requirements), the person is judged. Fears of becoming isolated and singled-out manifest (moved into 'out-group'); such fears may supersede any healthcare advice offered by the HP and thus impact lifestyle decisions.

Understanding individual patient needs and health beliefs, alongside religious and social-cultural influences, and integrating these aspects into practice could help elucidate communication barriers.

Implications for clinical practice

The cultural formulation interview (CFI) (American Psychiatric Association, 2013) has been developed for use within mental health services to help HPs assess the overall cultural influence of diagnosis and care and to explore a patients identity, their understanding of an illness, factors related to the psychosocial environment, and the HP–patient relationship. The CFI is a relatively new tool, and further research is warranted on its fidelity, implementation and effectiveness, though it has been reported to enhance patient–HP communication and rapport in mental health contexts, helped the HP to understand the patient's social-cultural perspectives further, and for the patient to engage more confidently with clinical advice (Callegari et al., 2016; Díaz et al., 2017; Muralidharan et al., 2017; Shem-Tov et al., 2018). This type of CFI considers many of the factors highlighted within this GT framework, and therefore CFI could be applied to diabetes services. However, it is a lengthy interview (containing 16 base questions before prompting) (Aggarwal et al., 2013) and may be an unfeasible recommendation to implement within day-to-day diabetes healthcare practice. Nevertheless, HPs may benefit from an adapted CFI approach in diabetes care, and services should consider how aspects of cultural formulation may be integrated systematically and holistically into the care provided.

The current study extends the call for healthcare training and further support, highlighting HP's lack of cultural knowledge about specific ethnic needs across the SA subgroups and, as a result, lacked knowledge which perpetuated misconceptions of SA patients. These misconceptions informed HPs' experiences and behaviours towards diabetes delivery, specifically pertinent to SA patients. While White HPs explicitly acknowledged this as a gap in cultural understanding, SA HPs demonstrated some stereotypical beliefs regarding SA patients, which may itself indicate a need for further training and insight into the heterogeneous nature of the SA group.

Strengths and limitations

This study has expanded previous research by considering HPs' ethnicity, which past research has not explored. Previous research has focused mainly on the job role of the HP. Indeed, this is important. However, accounting for HP's ethnicity and the hours of culture-specific training undertaken allows individuals to understand their perception of culturally tailored care. Upon reflection, HPs were nervous about discussing knowledge relating to ethnicity, culture, and religion. This was perceived as a sensitive topic, the interviewer was SA, and as such, HPs needed some reassurance and examples of feedback from other participants to aid the flow of the interviews (this was particularly noteworthy for White HPs who were unsure about commenting on SA patients, or perhaps did not want to offend the SA interviewer knowingly). It is acknowledged that the recruitment strategy adopted purposeful and theoretical sampling to aid theoretical saturation (Strauss & Corbin, 1998). Overall, eight British

White and six SA HPs were recruited with a range of experience and employed across primary care, community and hospital settings. The participant sample was purposely selected according to the simultaneous analytical GT process, and we consider the allied HP sample, as a whole, representative of the routine care for which a patient with T2D may experience. The participants acknowledged their own years of experience in their development as a successful communicator with SA patients with diabetes, and so it could be plausible to expand recruitment to those in training or very newly qualified HPs. The latter may have minimal experience of working with SA patients with diabetes or focus further on specific HPs that may have further nuanced messages to deliver, such as podiatry. This study has rigorously employed GT methodology in data collection and analysis and has developed a comprehensive account of the challenges facing HPs supporting SA patients with T2D.

The study findings and this GT framework may apply to other contexts, such as to other healthcare services in an area of high SA population (beyond that of Northwest England), or the findings could be considered more broadly for the management of other health conditions experienced by SA patients, or even maybe relevant to other minority ethnic groups. To help our readers assess the transferability of the findings in this study to other contexts, we have provided a rich account of the data, explaining the study setting, recruitment strategy, participant demographics, interview procedure, analytical process, and offer verbatim quotes from the raw data to act as evidence to support our commentary.

Conclusion

Few studies have examined HP's attitudes towards diabetes self-management in SA patients. The findings from this study demonstrate that ethnicity plays a key role in HPs influencing patient's self-management, specifically in the SA population. There is a need for better knowledge of the SA population to help HPs identify ethnic, social-cultural, and religious variations in lifestyle and behaviours. HPs' experiences, attitudes, knowledge, and beliefs regarding the patient's ethnicity, alongside the patient's communication and interactions, shape the HPs' diabetes delivery and subsequent patient self-management behaviours. HPs need to be reflexive in their clinical practice to critically review their experiences with patients from SA or other minority groups and explicitly identify how they communicate and judge patients regarding their engagement with healthcare advice and subsequent T2D self-management behaviours. They need to be supported to reduce implicit bias by considering standard or assumed beliefs regarding SA patients. HPs should be skilled-up to integrate psychological assessment into clinical practice: to explore patients' health, cultural, social and environmental beliefs that may impact their engagement with HPs, and, or their implementation of advice relevant to T2D self-management behaviours.

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CRediT author statement

Tasneem Patel: conceptualisation, methodology, validation, formal analysis, investigation, data curation, writing original, data curation, visualisation. Kanayo Umeh: conceptualisation, validation, formal analysis, writing – review and editing, supervision support. Helen Poole: conceptualisation, validation, formal analysis, writing – review and editing, supervision support. Ishfaq Vaja: methodology, formal analysis, data curation, writing – review and editing. Shenaz Ramtoola: conceptualisation, recruitment of participant strategy, writing – review and editing. Lisa Newson: conceptualisation, methodology, validation, formal analysis, resources, data curation, writing – original, writing – review and editing, visualisation, lead supervision, project administration.

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Data availability statement

Raw data have been included as evidence via extracted quotes from verbatim transcripts as samples of evidence. Full transcript release has not received ethical approval or participant consent. For further study details, please contact the corresponding author. The authors confirm that the data supporting the findings of this study are available within the article.

References

Aggarwal, N. K., Nicasio, A. V., DeSilva, R., Boiler, M., & Lewis-Fernández, R. (2013). Barriers to implementing the DSM-5 cultural formulation interview: A qualitative study. *Culture, Medicine and Psychiatry*, *37*(3), 505–533. https://doi.org/10.1007/s11013-013-9325-z

Ahmed, F., Abel, G. A., Lloyd, C. E., Burt, J., & Roland, M. (2015). Does the availability of a South Asian language in practices improve reports of doctor-patient communication from South Asian patients? Cross sectional analysis of a national patient survey in English general practices. *BMC Family Practice*, *16*(1), 55. https://doi.org/10.1186/s12875-015-0270-5

Alam, R., Speed, S., & Beaver, K. (2012). A scoping review on the experiences and preferences in accessing diabetes-related healthcare information and services by British Bangladeshis. *Health & Social Care in the Community*, *20*(2), 155–171. https://doi.org/10.1111/j.1365-2524.2011.01027.x

Ali, P. A., & Johnson, S. (2017). Speaking my patient's language: Bilingual nurses' perspective about provision of language concordant care to patients with limited English proficiency. *Journal of Advanced Nursing*, *73*(2), 421–432. https://doi.org/10.1111/jan.13143

American Association of Diabetes Educators. (2014). AADE7 self-care behaviors. Retrieved 4 December, 2019 from https://www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/publications/aade7_position_statement_final.pdf?sfvrsn=4

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Publishing.

Avery, L., Charman, S. J., Taylor, L., Flynn, D., Mosely, K., Speight, J., Lievesley, M., Taylor, R., Sniehotta, F. F., & Trenell, M. I. (2015). Systematic development of a theory-informed multi-faceted behavioural intervention to increase physical activity of adults with type 2 diabetes in routine primary care: Movement as Medicine for Type 2 Diabetes. *Implementation Science*, *11*(1), 99. https://doi.org/10.1186/s13012-016-0459-6

Bani-Issa, W., Eldeirawi, K., & Al Tawil, H. (2014). Perspectives on the attitudes of healthcare professionals toward diabetes in community health settings in United Arab Emirates. *Journal of Diabetes Mellitus*, *5*(1), 1–11. https://doi.org/10.4236/jdm.2015.51001

Bhopal, R. S. (2013). A four-stage model explaining the higher risk of Type 2 diabetes mellitus in South Asians compared with European populations. *Diabetic Medicine*, *30*(1), 35–42. https://doi.org/10.1111/dme.12016

Bhurji, N., Javer, J., Gasevic, D., & Khan, N. A. (2016). Improving management of type 2 diabetes in South Asian patients: A systematic review of intervention studies. *BMJ Open*, *6*(4), e008986. https://doi.org/10.1136/bmjopen-2015-008986

Birks, M., & Mills, J. (2015). *Grounded theory: A practical guide*. Sage.

Blumer, H. (1969). *Symbolic interactionism: Perspective and method*. University of California Press.

Callegari, C., Diurni, M., Bianchi, L., Aletti, F. A., & Vender, S. (2016). The Cultural Formulation Interview (DSM-5) used in two clinical cases: The interference of spirituality and religion in the onset of psychopathological disorders. *Evolution Psychiatrique*, *8*, 191–201. https://doi.org/10.1016/j.evopsy.2015.10.004

Capell, J., Dean, E., & Veenstra, G. (2008). The relationship between cultural competence and ethnocentrism of health care professionals. *Journal of Transcultural Nursing*, *19*(2), 121–125. https://doi.org/10.1177/1043659607312970

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Sage.

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). Sage.

Clark, M., & Hampson, S. E. (2003). Comparison of patients' and healthcare professionals' beliefs about and attitudes towards type 2 diabetes. *Diabetic Medicine*, *20*(2), 152–154. https://doi.org/10.1046/j.1464-5491.2003.00896.x

Cortis, J. D. (2004). Meeting the needs of minority ethnic patients. *Journal of Advanced Nursing*, *48*(1), 51–58. https://doi.org/10.1111/j.1365-2648.2004.03168.x

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Sage.

Diabetes UK. (2020). Retrieved 3 June, 2020 from https://www.diabetes.org.uk/about_us/news/ramadan-2020

Díaz, E., Añez, L. M., Silva, M., Paris, M., & Davidson, L. (2017). Using the Cultural Formulation Interview to build culturally sensitive services. *Psychiatric Services*, *68*(2), 112–114. https://doi.org/10.1176/appi.ps.201600440

Dickinson, J. K. (2017). The experience of diabetes-related language in diabetes care. *Diabetes Spectrum*, *31*(1), 58–64. https://doi.org/10.2337/ds16-0082

Dickinson, J. K., Guzman, S. J., Maryniuk, M. D., O'Brian, C. A., Kadohiro, J. K., Jackson, R. A., D'Hondt, N., Montgomery, B., Close, K. L., & Funnell, M. M. (2017). The use of language in diabetes care and education. *Diabetes Care*, *40*(12), 1790–1799. https://doi.org/10.2337/dci17-0041

Fagerli, R. A., Lien, M. E., Botten, G. S., & Wandel, M. (2005). Role dilemmas among health-workers in cross-cultural patient encounters around dietary advice. *Scandinavian Journal of Public Health*, *33*(5), 360–369. https://doi.org/10.1080/14034940510005888

Federation of European Nurses in Diabetes. (2014). Diabetes, the policy puzzle: Is Europe making progress. Retrieved 3 December, 2020 from http://www.fend.org/sites/fend.org/files/ECD-PP4finalweb.pdf

Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, *7*(2), 117–140. https://doi.org/10.1177/001872675400700202

FitzGerald, C., & Hurst, S. (2017). Implicit bias in healthcare professionals: A systematic review. *BMC Medical Ethics*, *18*(1), 1–18. https://doi.org/10.1186/s12910-017-0179-8

Giles, T., King, L., & de Lacey, S. (2013). The timing of the literature review in grounded theory research: An open mind versus an empty head. *Advances in Nursing Science*, *36*(2), E29–E40. https://doi.org/10.1097/ANS.0b013e3182902035

Glaser, B. G. (1992). *Basics of grounded theory analysis: Emergence vs forcing*. Sociology Press.

Gujral, U. P., Pradeepa, R., Weber, M. B., Narayan, K. V., & Mohan, V. (2013). Type 2 diabetes in South Asians: Similarities and differences with White Caucasian and other populations. *Annals of the New York Academy of Sciences*, *1281*(1), 51–63. https://doi.org/10.1111/j.1749-6632.2012.06838.x

Hawthorne, K., Rahman, J., & Pill, R. (2003). Working with Bangladeshi patients in Britain: Perspectives from Primary Health Care. *Family Practice*, *20*(2), 185–191. https://doi.org/10.1093/fampra/20.2.185

Hood, K. K., Hilliard, M., Piatt, G., & Ievers-Landis, C. E. (2015). Effective strategies for encouraging behavior change in people with diabetes. *Diabetes Management*, *5*(6), 499–510. PMID: 30100925 https://doi.org/10.2217/dmt.15.43

Hull, M. (2016). Medical language proficiency: A discussion of interprofessional language competencies and potential for patient risk. *International Journal of Nursing Studies*, *54*, 158–172. https://doi.org/10.1016/j.ijnurstu.2015.02.015

Jepson, R., Harris, F. M., Bowes, A., Robertson, R., Avan, G., & Sheikh, A. (2012). Physical activity in South Asians: An in-depth qualitative study to explore motivations and facilitators. *PLoS One*, *7*(10), e45333. https://doi.org/10.1371/journal.pone.0045333

Khunti, K., Kumar, S., & Brodie, J. (Eds.). (2009). *Diabetes UK and SAHF recommendations on diabetes research priorities for British South Asians*. Diabetes UK.

Kumar, N. (2020). *Eating and fasting as a complex professional strategy. Food, faith and gender in South Asia: The cultural politics of women's food practices*. Bloomsbury Academic, p. 171.

Lawton, J., Ahmad, N., Hanna, L., Douglas, M., Bains, H., & Hallowell, N. (2008). 'We should change ourselves, but we can't': Accounts of food and eating practices amongst British Pakistanis and Indians with type 2 diabetes. *Ethnicity & Health*, *13*(4), 305–319. https://doi.org/10.1080/13557850701882910

Lim, S., Wyatt, L., Chauhan, H., Zanowiak, J. M., Kavathe, R., Singh, H., Kwon, S. C., Trin-Shevrin, C., & Islam, N. S. (2019). A culturally adapted diabetes prevention intervention in the New York City Sikh Asian Indian community leads to improvements in health behaviors and outcomes. *Health Behavior Research*, *2*(1), 4. https://doi.org/10.4148/2572-1836.1027

Martin, A. K., Tavaglione, N., & Hurst, S. (2014). Resolving the conflict: Clarifying 'vulnerability' in health care ethics. *Kennedy Institute of Ethics Journal*, *24*(1), 51–72. https://doi.org/10.1353/ken.2014.0005

Marwa, K., Mughal, S., Sunsoa, H., & Bibi, R. (2004). Challenges of managing diabetes in Asians. *Journal of Diabetes Nursing*, *8*(2), 47–52.

Meeks, K. A. C., Freitas-Da-Silva, D., Adeyemo, A., Beune, E. J. A. J., Modesti, P. A., Stronks, K., Zafarmand, M. H., & Agyemang, C. (2016). Disparities in type 2 diabetes prevalence among ethnic minority groups resident in Europe: A systematic review and meta-analysis. *Internal and Emergency Medicine*, *11*(3), 327–340. https://doi.org/10.1007/s11739-015-1302-9

Meyrick, J. (2006). What is good qualitative research? A first step towards a comprehensive approach to judging rigour/quality. *Journal of Health Psychology*, *11*(5), 799–808. https://doi.org/10.1177/1359105306066643

Modesti, P. A., Perticone, F., Parati, G., Rosei, E. A., & Prisco, D. (2016). Chronic disease in the ethnic minority and migrant groups: Time for a paradigm shift in Europe. *Internal and Emergency Medicine*, *11*(3), 295–297. https://doi.org/10.1007/s11739-016-1444-4

Mukhopadhyay, B., Forouhi, N. G., Fisher, B. M., Kesson, C. M., & Sattar, N. (2006). A comparison of glycaemic and metabolic control over time among South Asian and European patients with type 2 diabetes: Results from follow-up in a routine diabetes clinic. *Diabetic Medicine*, *23*(1), 94–98. https://doi.org/10.1111/j.1464-5491.2005.01735.x

Muralidharan, A., Schaffner, R. M., Hack, S., Jahn, D. R., Peeples, A. D., & Lucksted, A. (2017). "I got to voice what's in my heart": Participation in the Cultural Formulation Interview—Perspectives of consumers with psychotic disorders. *Journal of Psychosocial Rehabilitation and Mental Health*, *4*(1), 35–43. https://doi.org/10.1007/s40737-017-0076-y

National Institute for Health and Care Excellence. (2009, 2015, 2020). The management of Type 2 diabetes. Retrieved 3 December, 2019 from http://www.nice.org.uk/guidance/ng28

Noar, S. M., Benac, C. N., & Harris, M. S. (2007). Does tailoring matter? Meta-analytic review of tailored print health behavior change interventions. *Psychological Bulletin*, *133*(4), 673–693. https://doi.org/10.1037/0033-2909.133.4.673

Osei-Kwasi, H. A., Nicolaou, M., Powell, K., Terragni, L., Maes, L., Stronks, K., Lien, N., Holdsworth, M., & DEDIPAC Consortium. (2016). Systematic mapping review of the factors influencing dietary behaviour in ethnic minority groups living in Europe: A DEDIPAC study. *The International Journal of Behavioral Nutrition and Physical Activity*, *13*(1), 85. https://doi.org/10.1186/s12966-016-0412-8

Pardhan, S., & Mahomed, I. (2004). Knowledge, self-help and socioeconomic factors in South Asian and Caucasian diabetic patients. *Eye*, *18*(5), 509–513. https://doi.org/10.1038/sj.eye.6700680

Patel, T., Umeh, K., Poole, H., Vaja, I., & Newson, L. (2021). Cultural identity conflict informs engagement with self-management behaviours for South Asian patients living with type-2 diabetes: A critical interpretative synthesis of qualitative research studies. *International Journal of Environmental Research and Public Health*, *18*(5), 2641. https://doi.org/10.3390/ijerph18052641

Perkins, H. W., & Berkowitz, A. D. (1986). Perceiving the community norms of alcohol use among students: Some research implications for campus alcohol education programming. *International Journal of the Addictions*, *21*(9–10), 961–976. https://doi.org/10.3109/10826088609077249

Prinjha, S., Ricci-Cabello, I., Newhouse, N., & Farmer, A. (2020). British South Asian patients' perspectives on the relevance and acceptability of mobile health text messaging to support medication adherence for type 2 diabetes: Qualitative study. *JMIR mHealth and uHealth*, *8*(4), e15789. https://doi.org/10.2196/15789

Rees, P., Wohland, P., & Norman, P. (2016). The United Kingdom's multi-ethnic future: How fast is it arriving? In J. R. Lombard, E. Stern, & G. Clarke (Eds.), *Applied spatial modelling and planning* (pp. 157-171). Routledge.

Rees, P. H., Wohland, P., Norman, P., Lomax, N., & Clark, S. D. (2017). Population projections by ethnicity: Challenges and solutions for the United Kingdom. In D. Swanson (Ed.), *The frontiers of applied demography. Applied demography series, Vol. 9* (pp. 383–408). Springer.

Rhodes, P., Nocon, A., & Wright, J. (2003). Access to diabetes services: The experiences of Bangladeshi people in Bradford, UK. *Ethnicity & Health*, *8*(3), 171–188. https://doi.org/10.1080/1355785032000136407

Roter, D. L., Hall, J. A., Merisca, R., Nordstrom, B., Cretin, D., & Svarstad, B. (1998). Effectiveness of interventions to improve patient compliance: A meta-analysis. *Medical Care*, *36*(8), 1138–1161. PMID: 9708588 https://doi.org/10.1097/00005650-199808000-00004

Rushforth, B., McCrorie, C., Glidewell, L., Midgley, E., & Foy, R. (2016). Barriers to effective management of type 2 diabetes in primary care: Qualitative systematic review. *British Journal of General Practice*, *66*(643), e114–e127. https://doi.org/10.3399/bjgp16X683509

Sabin, J. A., & Greenwald, A. G. (2012). The influence of implicit bias on treatment recommendations for 4 common pediatric conditions: Pain, urinary tract infection, attention deficit hyperactivity disorder, and asthma. *American Journal of Public Health*, *102*(5), 988–995. https://doi.org/10.2105/AJPH.2011.300621

Sattar, N., & Gill, J. M. (2015). Type 2 diabetes in migrant south Asians: Mechanisms, mitigation, and management. *The Lancet. Diabetes & Endocrinology*, *3*(12), 1004–1016. https://doi.org/10.1016/S2213-8587(15)00326-5

Shem-Tov, R. G., Zubery, E., Hecht, N. L., & Latzer, Y. (2018). "A full stomach": Culturally sensitive diagnosis of eating disorders among Ethiopian adolescents in Israel. *Israel Journal of Psychiatry*, *55*(2), 22–30.

Sohal, T., Sohal, P., King-Shier, K. M., & Khan, N. A. (2015). Barriers and facilitators for type-2 diabetes management in South Asians: A systematic review. *PLoS One*, *10*(9), e0136202. https://doi.org/10.1371/journal.pone.0136202

Soljak, M. A., Majeed, A., Eliahoo, J., & Dornhorst, A. (2007). Ethnic inequalities in the treatment and outcome of diabetes in three English Primary Care Trusts. *International Journal for Equity in Health*, *6*(1), 8. https://doi.org/10.1186/1475-9276-6-8

Stewart, H., Gapp, R., & Harwood, I. (2017). Exploring the alchemy of qualitative management research: Seeking trustworthiness, credibility and rigor through crystallization. *The Qualitative Report*, *22*(1), 1–19.

Stone, M., Pound, E., Pancholi, A., Farooqi, A., & Khunti, K. (2005). Empowering patients with diabetes: A qualitative primary care study focusing on South Asians in Leicester, UK. *Family Practice*, *22*(6), 647–652. https://doi.org/10.1093/fampra/cmi069

Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage.

Strauss, A. L., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage.

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Torres, H. C., Rozemberg, B., Amaral, M. A., & Bodstein, R. C. (2010). Perceptions of primary healthcare professionals towards their role in type 2 diabetes mellitus patient education in Brazil. *BMC Public Health*, *10*(1), 583. https://doi.org/10.1186/1471-2458-10-583

Trevena, L. J., Davey, H. M., Barratt, A., Butow, P., & Caldwell, P. (2006). A systematic review on communicating with patients about evidence. *Journal of Evaluation in Clinical Practice*, *12*(1), 13–23. https://doi.org/10.1111/j.1365-2753.2005.00596.x

Vanstone, M., Rewegan, A., Brundisini, F., Giacomini, M., Kandasamy, S., & DeJean, D. (2017). Diet modification challenges faced by marginalized and nonmarginalized adults with type 2 diabetes: A systematic review and qualitative meta-synthesis. *Chronic Illness*, *13*(3), 217–235. https://doi.org/10.1177/1742395316675024

van Rosse, F., Suurmond, J., Wagner, C., de Bruijne, M., & Essink-Bot, M. L. (2016). Role of relatives of ethnic minority patients in patient safety in hospital care: A qualitative study. *BMJ Open*, *6*(4), e009052. https://doi.org/10.1136/bmjopen-2015-009052

Wens, J., Vermeire, E., Van Royen, P., Sabbe, B., & Denekens, J. (2005). GPs' perspectives of type 2 diabetes patients' adherence to treatment: A qualitative analysis of barriers and solutions. *BMC Family Practice*, *6*(1), 20. https://doi.org/10.1186/1471-2296-6-20

Wilmot, E., & Idris, I. (2014). Early onset type 2 diabetes: Risk factors, clinical impact and management. *Therapeutic Advances in Chronic Disease*, *5*(6), 234–244. https://doi.org/10.1177/2040622314548679

Wilson, V. (2015). Reversing type 2 diabetes with lifestyle change. *Nursing Times*, *111*(12), 17–19.

Yach, D., Stuckler, D., & Brownell, K. D. (2006). Epidemiologic and economic consequences of the global epidemics of obesity and diabetes. *Nature Medicine*, *12*(1), 62–66. https://doi.org/10.1038/nm0106-62

Yardley, L. (2000). Dilemmas in qualitative health research. *Psychology & Health*, *15*(2), 215–228. https://doi.org/10.1080/08870440008400302

Zeh, P., Sandhu, H. K., Cannaby, A. M., & Sturt, J. A. (2012). The impact of culturally competent diabetes care interventions for improving diabetes-related outcomes in ethnic minority groups: A systematic review. *Diabetic Medicine*, *29*(10), 1237–1252. https://doi.org/10.1111/j.1464-5491.2012.03701.x