Research paper

Developing and initially evaluating two training modules for healthcare providers, designed to enhance cultural diversity awareness and cultural competence in diabetes

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What is known on this subject

- Competence related to cultural diversity is difficult to achieve and also to measure in healthcare.
- Barriers to the implementation of cultural competence training programmes have been identified.
- People of South Asian origin are more likely than their White British counterparts to be reluctant to accept insulin therapy for management of their type 2 diabetes.

What this paper adds

- Using specifically developed quantitative evaluation tools, we were able to show changes in knowledge, attitudes and confidence following two training modules (one general module and one diabetes-specific module).
- Changes included enhanced confidence in discussing insulin with people of South Asian origin.
- Our findings support previous reports that recruitment for cultural competence training can be challenging, but protected learning time and peer-to-peer approaches are helpful.

ABSTRACT

In this paper we describe the development, piloting, refining and further testing of two training modules for people working in healthcare settings: first, a general module about cultural diversity, and secondly, a module focusing on cultural competence in facilitating the management of type 2 diabetes, including people of South Asian origin. After piloting, each module was delivered once in Leicester, Northampton and Derby, UK. This gave a total of six sessions, the impact of which was assessed using specifically developed pre- and post-training questionnaires and telephone interviews. Analysis of the questionnaires revealed positive short-term changes in knowledge, attitudes and confidence. Changes included higher levels of awareness of how healthcare interactions are influenced by healthcare providers' own culture and by their patients' culture,

Introduction

Developing the ability to provide appropriate healthcare to a diverse range of patients is an ongoing process that requires continual reflection. Achieving cultural competence can be a challenging process, and training may be difficult to implement for a number of reasons, including lack of protected learning time for clinical staff (Dogra et al, 2009a). Staff may also be suspicious about the reasons for being asked to participate (Papadopoulos et al, 2004), and may often dismiss training as irrelevant or too politically correct. In addition, cultural competence is difficult to measure (Papadopoulos et al, 2004, Kurnas-Tan et al, 2007). Cultural competence training can provide a conceptual framework to support healthcare professionals during this journey. In this paper we describe how we developed and initially evaluated two training modules relating to competence in terms of understanding and being responsive to the diverse needs of a wide range of patients.

Aims and scope

The project was limited to the development of a general module about cultural diversity, and a second module with a specific focus on people of South Asian origin who have type 2 diabetes. This group was targeted because, according to the most recent census, people of South Asian origin form the largest minority ethnic group in England and Wales (Office for National Statistics, 2012). In addition, there is a body of qualitative literature highlighting specific health beliefs

and confidence in discussing insulin with people of South Asian origin (P < 0.01 in each case). The outcomes of the telephone interviews suggested that the module content was highly acceptable and relevant. Interview data highlighted specific examples of impact, including a broadened definition of culture and motivation to find out more about South Asian diets. Recruitment presented some challenges, particularly in relation to lack of available time among healthcare providers. Although our findings were encouraging, we also conclude that it is important to identify ways of incorporating this type of training into the work routines of busy healthcare providers.

Keywords: cultural competence, diabetes, diversity

about diabetes among people from a range of subgroups broadly categorised as South Asian (see, for example, Greenhalgh et al, 1998; Lawton et al, 2007; Stone et al, 2005). From the literature providing quantitative evidence (Millet et al, 2007; Bellary et al, 2008) we were aware of considerable reluctance to accept insulin therapy, when clinically indicated, among people of South Asian origin in the UK. This was supported by findings from our own qualitative research (Patel et al, 2012), in which healthcare providers described difficulties with initiating insulin therapy among their South Asian patients, for example, due to lower levels of understanding about diabetes. Our objectives in developing the diabetes module therefore included provision of training that would highlight potential barriers to accepting insulin and encourage participants to think about ways of working with patients to address these barriers.

Methods

Development of the training modules

The general module about cultural diversity was developed in collaboration with a senior member of the academic staff working at the University of Leicester (ND). The content was largely adapted from training previously delivered to medical students and clinicians, with some additional material based on training delivered at a conference, in which the project coordinator (NP) had been involved. The module aimed to encourage those attending to consider a

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broad definition of culture, to be aware of some relevant legislation, and to think about the ways in which the cultural identity of both patients and healthcare providers can influence healthcare encounters. Participants were sent a copy of a relevant academic paper (Dogra, 2010) so that they could do some optional preparatory reading prior to attending the training.

The diabetes module was developed in collaboration with trainers from the Diabetes Education and Self Management for Ongoing and Newly Diagnosed (DESMOND) collaborative, and was informed by the philosophy and style of delivery used in DESMOND education and training sessions (Davies et al, 2008). Although it was considered that some of the messages would be relevant to healthcare provision for a broad range of people with type 2 diabetes, the content was intended to be particularly suitable for those involved in the care of people from South Asian backgrounds. When considering who to target for the diabetes training, we took account of the fact that patients' perceptions about their diabetes, including insulin therapy, may be broadly influenced by conversations conducted in a healthcare setting, rather than solely by direct clinical encounters. Patients may, for example, raise the issue of insulin treatment informally with healthcare assistants, particularly if they have relevant language skills, and this type of conversation may contribute to their overall views and beliefs. We therefore invited a wide range of people with whom patients are likely to interact in the context of healthcare.

Although it was recognised that it would be useful to provide some information, for example, about relevant legislation and about dietary practices, the training modules focused principally on exploring and supporting participants' ability to understand and be aware of their own professional and cultural attitudes and influences, as well as those of their patients, and on recognising the potential pitfalls of stereotyping.

Piloting

Initial versions of the two half-day training modules were piloted during one full day of training which was held in Leicester in November 2011. The main purpose of piloting was to assess the feasibility, acceptability and effectiveness of the sessions. Findings from the pilot sessions were used to refine the content and delivery of the two modules. The original plan required people to attend the cultural diversity module before undertaking the diabetes module. However, based on feedback from the pilot, the two sessions were redesigned to be run independently. It also became apparent that the original plan to deliver each session over 3 hours would not be feasible due to time constraints for people working in healthcare; the programmes for each of the two sessions were therefore redesigned to run for 2.5 hours.

An additional objective of running the pilot sessions was to consider the validity of our proposed methods of evaluation, which included using specifically designed pre- and post-training questionnaires and collecting qualitative feedback through telephone interviews. These evaluation methods appeared to work well during piloting. The mixed-methods approach was therefore confirmed for evaluating the main sessions.

Delivery of main sessions

Six sessions were delivered for formal evaluation. The two modules were each delivered once in Leicester, Northampton and Derby, in hospital or primary care settings, between March and May 2012. Participants were recruited by distributing flyers via healthcare organisations and by direct invitation to, or via, known healthcare provider contacts. The final programmes for the two sessions, including details about the topics covered, the format and learning outcomes, are outlined in Tables 1 and 2. The general module was facilitated by the clinical academic member of the research team (ND), and the diabetes module by one or two trainers from the DESMOND diabetes team (SA, HD).

Evaluation

Although the principles of good ethical research practice were recognised in the conduct of this project, it was categorised as service development work and, as such, did not require formal ethical approval.

Quantitative evaluation

Quantitative evaluation was conducted using a set of four questionnaires. These were specifically developed for the project, as no previously validated questionnaires could be identified that were felt to be sufficiently fit for purpose. A set of questions previously used by one of our trainers (ND) to evaluate medical student and healthcare professional cultural diversity training were used for guidance in designing these questionnaires, full details of which can be obtained from the authors. The post-training questionnaires contained the same questions as those delivered at the start of the session, together with additional questions specifically designed to assess perceptions about the training (e.g. in terms of its relevance and acceptability).

The questionnaires that were used to evaluate the general session also included two questions designed to assess knowledge and understanding of the concept of culture and relevant legislation. One question

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Section	Format of delivery	Main learning outcomes
Definition of culture and key legal considerations	PowerPoint slide presentation with comments and discussion invited from the group	Enhanced understanding of the range of factors that contribute to an individual's cultural identity and the way in which this is reflected in current legislation
Stereotyping	Flipchart used to facilitate small group work, with feedback and discussion involving the whole group	Willingness to recognise and reflect on the impact of stereotyping
My multicultural self	Materials provided; participants invited to work on this exercise in their own time during break or after the session	Recognising (own) shared and different characteristics in the context of understanding cultural identity
Refreshment break		
Role play and case studies	'Video' role play and written case study used to stimulate whole group discussion	Enhanced ability to reflect on aspects of cultural diversity that may have an influence on the effectiveness of healthcare encounters
Making changes	Whole group discussion	Motivation to build and act on learning achieved during the session

Table 1 Components of the cultural diversity training session

Table 2 Components of the cultural competence in diabetes session

Section	Format of delivery	Main learning outcomes
Healthcare encounters in type 2 diabetes	Combination of small group and whole group work, facilitated using flipcharts	Enhanced awareness of the impact of beliefs and other characteristics of each stakeholder in healthcare consultations
South Asian diets	Interactive discussion session using resources that include food models, and illustrations on 'banners'	Increased knowledge of common dietary characteristics, with a focus on the role of diet in the management of type 2 diabetes; ability to reflect on how to gain more knowledge in this area
Refreshment break		
Type 2 diabetes and insulin	Facilitated small group work based on a series of 'statements' about insulin (based on our previous qualitative work), followed by feedback and discussion involving the whole group	Enhanced ability to reflect on patients' and own beliefs about insulin and consider practical ways of helping patients to overcome barriers to accepting insulin treatment
Action planning	Whole group discussion with materials provided for making individual plans either during or after the session	Motivation to build and act on learning achieved during the session

invited participants to rate their confidence levels with regard to working with a diverse range of people, and a set of questions assessed perceptions about the impact of cultural factors in healthcare encounters. Respondents were asked to score the extent to which they agreed that the patient-healthcare provider consultation may be affected by a number of factors (e.g. the health beliefs of the patient and the health beliefs of the healthcare provider).

In addition to the post-training feedback question, the questionnaire for diabetes sessions included two questions about confidence levels in working with patients of South Asian origin and in discussing insulin therapy with people from this background. The posttraining questionnaire also included a free-text opportunity to list up to three key learning outcomes.

Qualitative evaluation

At the start of each session, participants were asked if they were willing to be interviewed. Those who indicated their agreement were invited to complete a form providing contact details and information about their work role. Telephone interviews were conducted by an experienced qualitative researcher (MS) with a purposive sample of 20 people (10 individuals who had attended one of the general sessions and 10 who had attended a diabetes session). This sample included people from each of the three participating sites and with a range of work roles (doctors, nurses, healthcare assistants, individuals with backgrounds in pharmacy, a podiatrist, a community support worker and an administrator). A topic guide was used to provide some consistency between interviews, but a flexible approach was adopted in order to accommodate ideas raised by the interviewee. Topics discussed included overall impressions of the training, views about specific sections of the session, reflections on the impact of the training on personal perceptions and work practice, and ideas about implementation. Saturation was considered to have been reached after completing these 20 interviews. The free-text responses from the diabetes post-training questionnaires and observation notes taken during the sessions were also considered as part of the qualitative data set.

Analysis

Questionnaire data were collated and analysed descriptively using Microsoft Excel. In addition, paired sample *t*-tests were used to compare pre- and posttraining scores, in order to assess the statistical significance of any changes identified. Qualitative data, including summaries of the telephone interviews, were collated using a process of charting as utilised in the framework approach to qualitative data analysis (Ritchie and Spencer, 1994).

Results

Attendance at main sessions

A total of 29 people attended one of the general sessions in the three sites, and 44 people attended one of the three diabetes sessions. These included general practitioners, practice nurses, diabetes specialist nurses, healthcare assistants, one health support worker, administrators, and people with professional backgrounds in secondary care medicine, physiotherapy, pharmacy and podiatry. We found that peer-to-peer individual approaches were the most successful method of recruitment.

Quantitative findings from the evaluation

Analysis of pre- and post-training questionnaires completed by individuals who attended the general diversity training indicated that there had been some statistically significant positive changes in knowledge, attitudes and confidence as a result of the training (see Table 3). In addition, scores were overall very high for the additional questions on the post-training questionnaire assessing factors such as usefulness and acceptability. Most people 'strongly agreed' or 'agreed' with the positive statements, and the mean overall score per question was 3.2 (where 4 = strongly agree, and 3 = agree). Analysis of the questionnaires from the diabetes sessions also indicated positive changes (see Table 3), and again most people 'strongly agreed' or 'agreed' with positive statements about the training, with a mean overall score per question of 3.3.

All of the items assessed in both the general training and the diabetes training showed a significant positive change when pre- and post-training scores were compared (see Table 3), suggesting that the training was effective and also that the method of evaluation used was sensitive to change. The high scores from the evaluation questions about the training suggested that, in general, participants found the sessions acceptable, useful and relevant.

Findings from the qualitative evaluation

A high level of engagement and participation was observed among those who attended the sessions and, overall, feedback from those interviewed was positive for both modules. Words and phrases used to describe the sessions included the following: 'massive benefit', 'refreshing', 'opportunity and space to reflect on things', 'better than I expected' and 'enlightening.' A striking feature of the interviews was the frequency

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General	dive	ersitv	session

Item assessed $(n)^*$	Findings	P value
Understanding of the concept of diversity $(n = 28)$	Mean score increased from 3.2 (pre-training) to 4.0 (post-training)	< 0.01
Knowledge of relevant legislation $(n = 29)$	Mean score increased from 3.8 (pre-training) to 4.3 (post-training)	0.03
Awareness of the influence of own and patients' culture on healthcare interactions $(n = 29)$	Mean score increased from 3.2 (pre-training) to 4.0 (post-training)	< 0.01
Confidence in working with a range of people $(n = 28)$	Mean score increased from 7.2 (pre-training) to 8.1 (post-training)	< 0.01
Diabetes session		
Item assessed	Findings	P value
Confidence in working with people from the South Asian community with type 2 diabetes $(n = 39)$	Mean score increased from 6.6 (pre-training) to 7.4 (post-training)	< 0.01
Confidence in discussing insulin with people from the South Asian community $(n = 37)$	Mean score increased from 5.4 (pre-training) to 6.8 (post-training)	< 0.01

* Number of cases with valid responses available from both pre- and post-training questionnaires.

with which people described the sessions in terms of how they 'made you think', although some people would have liked more factual information. In general, those who were interviewed liked the mix of presentation styles and felt that the interactive style of learning had kept them engaged. Some parts of the sessions were more relevant than others to the work roles of some participants, particularly in the case of administrators. Nevertheless, it was felt that both courses would be useful for people working in a broad range of roles, and also for students and trainees.

In terms of impact and key messages, those who were interviewed described how the training had increased their awareness of the influence of the beliefs of the healthcare provider as well as those of the patient in healthcare encounters, and the importance of body language, especially when communicating with patients through interpreters. Some individuals mentioned that they had revised and broadened their definition of culture to include factors other than ethnicity. All, including those who were of South Asian origin themselves, had learned something about Asian diets from the diabetes module. For some, awareness of the problem of reluctance to start taking insulin among people of South Asian origin had been introduced or increased, and discussion about this topic had been useful for those who had encountered this problem among their patients.

Some individuals described the sessions in terms of reinforcing their beliefs and reassuring them about their current practice, while others mentioned that they had been motivated to take specific steps following the course (e.g. by talking to patients to find out more about their diet). One of those interviewed said that they had been stimulated to do some additional reading to increase their understanding of the definition of culture, while another described specifically trying not to overcompensate when interacting with people from different ethnic backgrounds. Another respondent described a firm intention to introduce the seriousness of type 2 diabetes and its progressive nature as soon as patients are diagnosed with the condition.

Interviewees were asked to offer suggestions with regard to ways of facilitating attendance at this type of training. Some felt that the training should be made mandatory, with an alternative suggestion being to include the training in staff induction programmes. Using protected learning time was seen as a good strategy for making sure that healthcare staff had the time necessary to take up this type of training opportunity. Clinicians who were interviewed about the diabetes training were also asked for their views about how to evaluate this type of training. It was generally felt that this would need to be linked to rates of complications of diabetes, but measuring the impact on patients' quality of life was also mentioned.

Estimated cost

The estimated cost of delivering one of the 2.5-hour sessions to 15 people, based on the assumption that a local previously trained facilitator would deliver the course, was $\pounds 270$ ($\pounds 18$ per person). It was noted that training costs for a new facilitator, facilitator travel, room hire, and the cost of providing a meal before or after the training would add to the cost per participant.

Discussion

Overview of findings

The findings from both the quantitative and qualitative methods of evaluation suggest that the two training modules had generally been very acceptable to participants, and that they had led to improvements in confidence, knowledge and self-awareness. These improvements have the potential to contribute to the quality of interactions between healthcare providers and their patients, including those of South Asian origin with type 2 diabetes. In addition, the questionnaires that were developed and used for the quantitative evaluation were shown to be sensitive to change. In common with other authors (Papadopoulos et al, 2004), we found that recruitment of people to attend the sessions was not straightforward. For our project, this appeared to be largely linked to lack of time available within the busy work schedules of healthcare staff. Modifications made after piloting, including reducing the length of the sessions, helped to address this challenge.

Limitations

It is acknowledged that the basis of our evaluation has some limitations. In order to show that cultural diversity and competence training have a real impact for those to whom care is provided, improvements in patient outcomes would need to be demonstrated. This type of evaluation would be challenging to undertake; a systematic review including 34 studies from 1980 to June 2003 found no studies that have evaluated patient health status outcomes (Beach *et al*, 2005). However, in common with our own study, this review identified evidence that cultural competence training improves knowledge, attitudes and skills in healthcare providers. In a study published since this review, Khanna et al (2009) also based their evaluation on changes in knowledge and skills. Thom et al (2006) included outcomes in patients with diabetes and hypertension, but were unable to show any impact of cultural competence training on weight, blood pressure or blood glucose levels. In our service development project we aimed to develop and initially assess the impact of the two modules. Determining an impact on patient outcomes would have required a formal research study of much longer duration and involving larger numbers. The findings from our evaluation suggested that cultural competence in diabetes training has the potential to enhance the skills and knowledge of healthcare professionals in terms of helping them to achieve timely insulin therapy initiation in the management of people from South Asian backgrounds who have type 2 diabetes. This could assist with preventing or delaying micro- and macrovascular complications associated with type 2 diabetes. Providing hard evidence for these benefits and related potential cost reductions was not within the scope of this short-term project with a relatively low number of participants. Demonstrating changes in patient outcomes resulting from attendance at more general training, such as our diversity module, would be likely to present similar if not greater challenges.

The post-training questionnaires were completed immediately after the sessions, so we cannot confirm that the changes indicated would be sustained over a longer period of time. To encourage honest responses, the questionnaires were completed anonymously; we are therefore unable to comment on the potential impact of attending both sessions. The refined sessions were designed as stand-alone modules, and the majority of people attended only once. Participants came from a diverse range of backgrounds, and their experiences of previous cultural or diabetes training will have varied. Information about previous exposure to relevant training was not formally collected, but qualitative feedback indicated that the training was valued as it provided new ways of thinking about culture in the context of diabetes care. This suggests that, while knowledge and understanding improved as one might expect, these enhancements would also have a potential impact on practice, which is the stage at which outcomes might be influenced.

Conclusions

Despite these limitations, we believe that the findings from our project are encouraging. The use of both general and topic-specific modules, at a relatively low cost per participant, appeared to be both feasible and effective. The systematic review by Beach *et al* (2005) identified a low level of information about the cost of providing cultural competence training. Although costs are likely to be subject to variation, we believe that our calculation provides a useful estimate that forms part of the overall evaluation of the training provided. The design of the diabetes module was also innovative in terms of drawing specifically on findings from our own qualitative research involving people from the local South Asian population. Although the scope of the project was limited to these two modules, it was considered that in the future it would be feasible to use a similar development process for additional topic-specific training sessions focusing on other aspects of diabetes management and additional chronic diseases. A challenge that remains to be addressed is the need to incorporate this type of training into the work routines of healthcare providers whose roles involve many competing demands. Incorporating diversity training into existing training programmes, including medical student education, would help to address this challenge. In practice, however, provision of this type of training has been shown to be limited and subject to variations (Bentley et al, 2008; Dogra et al, 2009b).

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CONFLICTS OF INTEREST

None.

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