Barriers to attendance in diabetes education centres: A systematic review

Muili Lawal

The use of structured patient education is widely acknowledged as one of the strategies for diabetes management in the UK. Nevertheless, the delivery of education programmes such as DAFNE (Dose Adjustment For Normal Eating) and DESMOND (Diabetes Education and Self-Management for On-going and Newly Diagnosed) in the primary care setting is often challenged by decreasing attendance over time (known as attrition). The aim of this systematic review is to identify the reasons and barriers associated with non-attendance in diabetes education centres by examining the empirical evidence.

Studies have identified the beneficial effects of diabetes education in promoting self-care knowledge and improvements to diabetes management. Structured diabetes education programmes can improve diabetes knowledge among those who have the condition (Deakin et al, 2006; Rygg et al, 2012) and reduce complications and hospitals admissions (Cinar et al, 2010; Karakurt and Kasikci, 2012). Tang et al (2006) have also shown that diabetes self-management education can have a positive health outcome, particularly in improving knowledge, blood glucose monitoring, attitudes towards diet and exercise, glycaemic control, adherence to medication and coping abilities, and a study by Khunti et al (2012) based on data from the DESMOND (Diabetes Education and Self-Management for On-going and Newly Diagnosed) programme concluded that diabetes education led to improvements in some illness beliefs.

NICE guidelines (2003; 2009) recommend structured patient education (SPE) for every newly diagnosed person with diabetes with an annual update. Similarly, Standard 3 of the *National Service Framework for Diabetes* emphasises the importance of education and empowerment for people with diabetes (Department of Health [DH], 2001). However, despite the evidence supporting the benefits of SPE and the government directive, uptake among people with diabetes still varies across the country (DH, 2007). I aimed to identify the barriers associated with attendance to diabetes SPE through a systematic review of the literature.

Methodology

The health-related databases searched were EBSCOhost, CINAHL, Medline, Ovid, EMBASE, PubMed and the Cochrane Library. In addition to using various electronic databases, articles were selected manually from the references of key articles.

The search terms used were "diabetes self-management education", "attrition", "drop-out", "missed appointment", "did not attend", "barrier to attendance", "non-attendance" and "diabetes education". The Boolean operators "and" and "or" were used to join the key words such as "diabetes" with "self-care management", "attrition" or "missed appointment" to broaden the search, while "not" was used to narrow and exclude some resources.

Table 1 shows the eligibility criteria for the current systematic review. The criteria included articles that investigated non-attendance in people with diabetes and the barriers to attending SPE. The articles had to be published in English, be peer-reviewed and could be primary research papers or systematic reviews. Studies on non-

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Article points

1. Structured diabetes education is a useful strategy to achieve positive patient outcomes.
2. There are numerous barriers that lead to non-attendance in diabetes education centres, such as personal circumstances, perceptions and attitudes, and communication and motivation problems.
3. Non-attendance in diabetes education centres has negative resource implications for clinical commissioning groups and service providers in the UK.
4. The instigation to sustain a healthy behaviour requires individual motivation.
5. There is limited documentation on the phenomenon of non-attendance in diabetes education centres in the UK, but solving this problem remains a global challenge.

Key words

- Barrier to attendance
- Diabetes education
- Non-attendance
- Self-management

Author

Muili Lawal is Senior Lecturer at the University of West London, London.

Page points

1. Inclusion criteria for the systematic review included English language publications, peer-reviewed primary and secondary research articles and studies on non-attendance associated with diabetes education.
2. Fourteen articles from the initial search met the inclusion criteria, and all the articles were either qualitative or quantitative research articles published in a peer-reviewed journal.

Table 1. Eligibility criteria for articles.

Inclusion criteria
English language publications
International studies
Publications from database inception to 31 July 2013
Systematic reviews
Primary research articles
Full-text peer-reviewed articles
Studies on non-attendance associated with diabetes education

Articles were excluded if they were based on non-attendance for other medical conditions, if they were related to non-education settings or if they were not research papers, e.g. literature review, general information paper, opinion-based documents.

attendance in relation to other disease conditions or settings (e.g. non-attendance to routine appointments with healthcare professionals) were excluded. Comprehensive searches from the earliest possible date to 31 July 2013 were conducted.

Results

The initial searches identified 1704 publications (EBSCOhost 386; CINAHL 538; Medline 311; Ovid 224; EMBASE 233; PubMed 12) that were informative but not appropriate for the review based on the inclusion criteria. No publications were identified through the Cochrane Library. Fourteen articles from the initial searches met the inclusion criteria (*Table 2*), and all the articles were either qualitative or quantitative research articles published in a peer-reviewed journal. The Critical Appraisal Skills Programme (CASP) tool (Public Health Resource Unit, 2008) was used as a framework to judge the validity and relevance of the shortlisted articles. The key features of each article that met the inclusion criteria are displayed in *Table 3*.

Table 2. Database search results.

Database	Date covered	Number of selected articles
CINAHL	1984 – 31 July 2013	1
Medline	1984 – 31 July 2013	2
Ovid	1946 – 31 July 2013	1
Cochrane Library	2005 – 31 July 2013	0
EMBASE	1980 – 31 July 2013	2
PubMed	Inception to 31 July 2013	0
EBSCOhost	Inception to 31 July 2013	4
Supplementary search*	Reference sources	4

*Supplementary search involved manual searches of published research papers for relevant literature cited in the selected articles.

The 14 articles consisted of nine survey studies, three retrospective studies (Articles #1, #2, #4), one controlled experimental study (Article #14) and one systematic review (Article #5). The majority of the studies adopted a descriptive approach and used various data collection methods such as questionnaires, interviews and retrospective studies of medical records. Six of the 14 studies were conducted in Canada, five in the USA, one in Germany and one in Turkey. The systematic review by Gucciardi (2008) selected 14 research articles from the US, Japan, New Zealand, the Netherlands, Canada and the UK.

From the initial database search, four articles were of UK studies conducted between 1983 and 1992 (Scobie et al, 1983; Hammersley et al, 1985; Lloyd et al, 1990; Archibald et al, 1992). However, these studies did not meet the inclusion criteria for the current systematic review because they focused on non-attendance to hospital clinic appointments instead of non-attendance to SPE for diabetes. The four UK studies were conducted before the advent of key policy documents such as the *National Service Framework for Diabetes* (DH, 2001) and NICE guidelines (2003; 2009), which recommend SPE in England. The search results from this systematic review show that non-attendance is not a new phenomenon as studies on the subject date back over two decades in America (e.g. Graber et al, 1992). There is limited documentation on this particular phenomenon in the UK.

Participant sample

The participant sample sizes of the studies in the 14 articles varied widely. Rhee et al (2005) had the largest study population (605 people with diabetes attending a diabetes clinic for an initial visit) while Uitewaal et al (2005) had the smallest sample size (45 attendees with

diabetes). With the exception of the systematic review by Gucciardi (2008), which had 1704 participants, the total participant sample size for this systematic review was 3926: 3527 (89.8%) people with diabetes who attended the hospital for diabetes education sessions, 256 (6.5%) non-attenders and 143 (3.6%) practitioners.

Twelve of the articles solely sampled participants of diabetes SPE programmes, while Temple and Epp (2009) surveyed attenders and non-attenders of diabetes and heart education programmes. One American study (Article #12) surveyed the perspectives of practitioners with membership to a diabetes educators association.

Barriers to attendance

All the studies explored the reasons for non-attendance to diabetes SPE; some focused on the association between baseline characteristics of the non-attenders, while others investigated attendance barriers in general.

The reasons people with diabetes gave for not attending diabetes education programmes were reported in the 14 articles eligible for this systematic review. The most common reason for non-attendance was a low perception of the seriousness of diabetes, which was reported by half of the articles (Articles #3, #5, #6, #7, #9, #12, #14). Another common barrier for attendance was a low perception of the benefits of attending diabetes education sessions (Articles #3, #5, #6, #9, #11, #12).

Multiple studies found that logistical factors such as transportation (Articles #3, #5, #13), distance to venue (Articles #2, #5, #11) and travel expenses (Articles #3, #5, #11) were a hindrance to attendance. An inconvenient time and location of SPE sessions were reasons for non-attendance in the survey carried out by Gucciardi et al (2012). The results of three studies indicated that the type of medical insurance cover and the financial implications of attending the education sessions were also potential barriers (Articles #3, #5, #11). Three studies reported that participants stated there had been a lack of adequate publicity for the sessions, which was why they had not attended (Articles #3, #5, #13). Gucciardi (2008) identified an inability for participants to contact the clinic as a barrier for attendance, and Schafer et al (2013) reported that some participants had negative feelings about the education sessions being conducted in a group environment, such as some people finding the group environment intimidating. A number of studies identified work-related problems as a factor contributing to non-attendance to diabetes SPE, such as not being able to take time off (Articles #5, #11, #13).

Previous exposure to diabetes education (Article #6), insensitive interaction with healthcare professionals providing the education class (Article #9) and a long waiting list (Article #9) were also barriers for people to attend diabetes SPE.

Participant baseline characteristics

Some of the articles investigated whether there was an association between participant baseline characteristics and non-attendance. Male gender and smoking (Articles #1, #2, #8), being over 65 years of age (Articles #4, #6, #10), inability to adhere to weight loss (Article #8) and having diabetes for over 5 years (Article #14) were reported as contributory factors to non-attendance. Graber et al (1992) and Benoit et al (2004) suggested that some smokers dropped out of diabetes education programmes perhaps because the session encouraged smoking cessation. Rhee et al (2005) and Schafer (2013) both reported poor vision and hearing as a barrier to attendance. Two studies also stated that family problems (Articles #5, #11), forgetting to attend (Articles #5, #13) and the feeling that seeing a family physician provided the same level of diabetes education (Articles #5, #6) prevented some respondents from attending the diabetes SPE. Other barriers reported by a single study included when participants did not have English as a primary language (Article #4). Three of the 14 research articles reported that participants preferred for physicians to manage their medical condition (Articles #5, #6, #11), while three studies found that a low level of education was associated with a higher rate of non-attendance (Articles #3, #10, #11). Failure to attend the session due to ill health (Articles #5, #9, #10) was identified by three studies.

Page points

1. With the exception of the systematic review by Gucciardi (2008), the total participant sample size for this systematic review was 3926: 3527 (89.8%) people with diabetes who attended the hospital for diabetes education sessions, 256 (6.5%) non-attenders and 143 (3.6%) practitioners.
2. All the studies explored the reasons for non-attendance to diabetes structured patient education; some focused on the association between baseline characteristics of the non-attenders, while others investigated attendance barriers in general.
3. Male gender, smoking, being over 65 years of age, inability to adhere to weight loss and having diabetes for over 5 years were reported as contributory factors to non-attendance.

Table 3. Characteristics of the 14 articles included in the systematic review.

Source	Location	Aim	Sample	Design and method	Key findings	Limitations
[#1] Benoit et al (2004)	USA	To investigate factors that are associated with attrition from a diabetes education project	573 in total: 504 people who stayed for at least 6 months and 69 who dropped out	Case–control retrospective study using medical charts	The predictors of drop-out were insurance status, high blood pressure or HbA_{1c} and smoking.	• Retrospective data analysis • Focused on participants' characteristics • Failure to assess participants' perceptions, beliefs and other attributes such as distance and work schedules
[#2] Graber et al (1992)	USA	To determine the reasons why patients drop out from ongoing diabetes medical care, education and nutritional counselling	422 people with type 1 and type 2 diabetes	Retrospective survey using medical records	Drop-out rate was influenced by distance of over 100 miles to the education centre, non-insulin treatment and cigarette smoking.	• Retrospective analysis • Limited information about follow-up care • Failure to distinguish between the various insurance coverage
[#3] Graziani et al (1999)	USA	To examine the use of diabetes education programmes	Convenience sample of 150 people with type 1 and type 2 diabetes who attended a non-acute clinic	Descriptive survey of one open-ended question	The reasons for non-attendance were lack of time, lack of transportation, low level of education of the participant, stress, being unaware of the programme, low perception of the seriousness of the disease, denial/fear, lack of interest and no perceived benefits of the session. Another contributory factor for non-attendance was the perceived cost caused by a lack of awareness that insurance premiums covered the session.	• Small sample size with convenience sampling technique • Sample population was largely African-American females from a university-based family practice (limited generalisation)
[#4] Gucciardi et al (2007)	Canada	To assess utilisation pattern and identify factors that are associated with attrition in diabetes self-management education	536 people with type 2 diabetes who attended a diabetes education centre for the first time	Retrospective study using medical charts of first-time visitors	Factors associated with attrition from recommended education programme were over 65 years of age, working full or part time and primarily speaking English.	• Retrospective analysis • Difficult to conclude what factors are responsible for the outcomes • Possibilities of incomplete data on clinical and contextual factors • Limited generalisation
[#5] Gucciardi (2008)	Several countries	To examine the factors that are responsible for attrition in either diabetes clinics or diabetes education centres	14 research studies	Systematic review comprising 1704 people with diabetes	Reasons for defaulting were feeling unwell, inability to take time off from work, being too busy, having a family physician, not being interested, forgetting the appointment, being unable to contact the clinic, family problems, finance, transportation, distance and the programme not providing new information.	• Thirteen of the 14 studies were conducted retrospectively • Most studies related to clinic appointment as opposed to diabetes education • Most studies surveyed the opinion of people after they had attended an initial visit to the centre • Focus of most studies was on socio-demographic and clinical factors, with limited attention to psychosocial and contextual reasons • Most studies performed descriptive analysis • Studies using diverse methodologies with small sample sizes
[#6] Gucciardi et al (2008a)	Canada	To determine whether men and women with type 2 diabetes have different behavioural, psychosocial and clinical characteristics during first contact with diabetes education centre	275 men and women with type 2 diabetes attending first appointment	Cross-sectional study using medical charts and questionnaires	Men and women have different psychosocial and behavioural characteristics that can affect attitudes and behaviours towards diabetes education. These include differences in previous exposure to diabetes education and expectations of the benefits.	• Participants were users of diabetes education centres • The differences between both sexes were observed at a single point
[#7] Gucciardi et al (2008b)	Canada	To examine the factors that are associated with attrition behaviour in diabetes self-management programmes	267 people with type 2 diabetes who attended a diabetes education centre; 118 who dropped out	Retrospective, cross-sectional study consisting of a review of medical charts and a telephone interview	Factors contributing to attrition behaviour in the study were full or part time work, aged over 65 years, fewer diabetes symptoms, confidence in knowledge and ability to self-manage, regular physician consultation, low perceived seriousness of diabetes and lack of familiarity with the centre and services.	• A single open-ended question was asked • Quantitative data were collected retrospectively

Table 3 (continued). Characteristics of the 14 articles included in the systematic review.

Source	Location	Aim	Sample	Design and method	Key findings	Limitations
[#8] Gucciardi et al (2009)	Canada	To identify factors associated with attrition in diabetes self-management education services	268 people with type 2 diabetes who attended a diabetes education management centre	Descriptive prospective study using a questionnaire	Failure to attend the sessions was due to inability to adhere to weight loss, recent diagnosis of diabetes, male gender and smoking.	• Items focused on psychosocial and behavioural measurement as opposed to assessing the barriers to attendance • Analysis was based on the number of contacts made in the hospital
[#9] Gucciardi et al (2012)	Canada	To explore participants' utilisation of diabetes education centres and the barriers to attendance	221 people with prediabetes, type 1 or type 2 diabetes in total: 159 attenders and 62 non-attenders	Internet survey and hard copy questionnaire	Failure to attend the sessions included the condition not being considered as serious, diabetes education not being a priority, perceived futility of the service, insensitive interaction with the professionals and inconvenient timing and location. Other factors included parking issues, language problems and illness.	• Small sample size • Convenience sampling technique • Lack of qualitative data to provide comprehensive information
[#10] Rhee et al (2005)	USA	To explore patients' perceptions of barriers to diabetes education	605 people (95% with type 2 and 5% with type 1 diabetes) who attended a diabetes clinic for an initial visit	Cross-sectional survey using a questionnaire	The potential barriers reported were poor vision, inability to read well, problems with hearing, English language problems, older age, employment status and low level of education.	• Self-developed questionnaire • A cross-sectional study that reported anticipated barriers
[#11] Schafer et al (2013)	Germany	To describe the reasons for non-participation in type 2 diabetes education programmes	297 people with type 2 diabetes: 165 attenders and 132 non-attenders	Cross-sectional observational study using results from a postal survey and medical chart review	Factors influencing non-participation were a belief of sufficient knowledge of diabetes, a feeling that the physician is responsible for diabetes management, the purpose of diabetes education not being clear and negative feelings about the course and groups of people. Barriers were also due to distance and travel expenses, physical and excessive demands of the education (e.g. difficult contents, occupation-related time pressure or working schedule, family-related time pressure and problems with vision and hearing).	• Small sample size • Retrospective data collected through medical chart • Inclusion of self-developed instrument
[#12] Sprague et al (1999)	USA	To assess the perspectives of diabetes educators on potential barriers to successful diabetes education	1996 members of the Washington Association of Diabetes Educators were invited to participate; 143 practitioners responded	Descriptive study using a mailed questionnaire	Barriers to attendance relate to lack of understanding of the nature of diabetes and the need for educational support, unaffordable follow-up care and lack of insurance cover for education.	• Self-developed questionnaire • Responses are perceptions of practitioners, which may not directly represent patient views
[#13] Temple and Epp (2009)	Canada	To evaluate the characteristics of attendees and non-attendees and their reasons for non-attendance at diabetes/heart health education programmes	A convenience sample of 124 people with type 1 and type 2 diabetes (62 attendees and 62 non-attendees)	Cross-sectional descriptive study using a telephone questionnaire	Barriers to attendance were due to participants being busy, transportation, work-related problems and other health issues that were more important. Other barriers included forgetting, needing the doctor to manage their disease, the participant not needing help or never having heard of the service.	• Self-developed questionnaire • Low response rate due to futile repeated phone calls • Low sample size with convenience sampling technique
[#14] Uitewaal et al (2005)	Turkey	To assess the association between patient characteristics and compliance	45 people with type 1 or type 2 diabetes who attended a diabetes education session	Controlled experimental study consisting of interviews	The characteristics of participants that influenced attrition from the education facilities were having diabetes for over 5 years and relatively poor knowledge of the seriousness of diabetes.	• Small sample size

Page points

1. Based on the results, the author conceptualised the reported barriers under four broad areas: personal difficulties, perceptions and attitudes of people with diabetes, communication and motivation.
2. The majority of the articles reported that personal difficulties were a barrier to attendance.
3. Some participants in the current systematic review failed to attend the education sessions owing to their perceptions about the nature of diabetes, their perceived benefits of the session and their belief about the level of knowledge they possessed.

Table 4. Emergent themes.

Themes	Articles
Personal difficulties	Graber et al (1992); Graziani et al (1999); Sprague et al (1999); Benoit et al (2004); Rhee et al (2005); Gucciardi et al (2007); Gucciardi et al (2008a); Gucciardi et al (2008b); Temple and Epp (2009); Gucciardi et al (2012); Schafer et al (2013).
Perceptions and attitudes of people with diabetes	Graziani et al (1999); Sprague et al (1999); Uitewal et al (2005); Gucciardi (2008); Gucciardi et al (2008b); Temple and Epp (2009); Gucciardi et al (2012); Schafer et al (2013).
Communication	Graziani et al (1999); Gucciardi et al (2007); Gucciardi (2008); Temple and Epp (2009).
Motivation	Graziani et al (1999); Gucciardi (2008); Gucciardi et al (2008b); Temple and Epp (2009); Schafer et al (2013).

Discussion of findings

Based on the results, I conceptualised the reported barriers under four broad areas: personal difficulties, perceptions and attitudes of people with diabetes, communication and motivation (*Table 4*).

Theme 1: Personal difficulties

The majority of the articles reported that personal difficulties were a barrier to attendance. Almost all of the studies identified personal difficulties such as work-related problems, family problems, illness, access to transportation, distance to SPE centre, travel expenses and the sessions occurring at an inconvenient time or location. Several other authors have identified similar personal difficulties as a barrier to attendance in general clinical practice, such as forgetfulness, being too busy, language problems and poor vision and hearing (Stone et al, 1999; Hamilton et al, 2002; Zailinawati et al, 2006).

Three US-based studies from this systematic review (Graziani et al, 1999; Sprague et al, 1999; Benoit et al, 2004) identified insurance status as a barrier to accessing and attending education sessions. This is not a major barrier in the UK as the healthcare system is different to the US (Kenny, 2014). The NHS is largely funded by national taxation (Baggott, 2010) rather than by individuals, so non-attendance at UK diabetes SPE centres has negative resource implications for clinical commissioning groups and service providers.

Theme 2: Perceptions and attitudes of people with diabetes

Helman (2007) acknowledges the influence of individual perceptions and beliefs on people's choice of health intervention, and this extends to perceptions and attitudes towards health education. Some participants in the current systematic review failed to attend the education sessions owing to their perceptions about the nature of diabetes, their perceived benefits of the session and their belief about the level of knowledge they possessed. The impact of negative perceptions on seeking and attending health education sessions has been long-established (Hammersley et al, 1985; Glasgow et al, 1997).

Another perception and attitude that was reported to affect attendance of self-management education sessions was the perception that it is the physician that manages an individual's diabetes with little or no input from the person with diabetes (Schafer, 2013). Metcalfe (2005) stated that the traditional paternalistic approach to care by the NHS is outdated for people with long-term conditions in terms of preventing unnecessary admissions and improving quality of life and independence. Rana and Upton (2009) also stated that patient empowerment entails involving individuals in the management of their care, which is a key factor in providing good care and engaging with the patient.

Theme 3: Communication

The current systematic review found that some respondents did not attend the education session because of poor communication. These barriers included the participants' inability to speak or read English very well, an inability to contact the clinic, participants not being aware of the service and reported insensitive interactions with the healthcare professionals running the sessions. In

some cases, the participants appeared to have been absent owing to the appointment having been booked a long time ago (Gucciardi et al, 2012).

The benefit of prompt and effective communication between patients and care providers is well documented in the literature (Collin, 2009; Webb, 2011). While barriers to attendance relating to communication may vary, the onus is on the healthcare professionals to enhance effective communication to aid attendance.

Theme 4: Motivation

Individual motivation impacts on attendance: some participants forgot the appointment, some people were too busy to attend and some were simply not interested in the education programme. Others cited lack of time or lack of familiarity with the centre or the service as factors that prevented them from attending the sessions. A well-motivated learning experience may alter individual behaviour; however, Schafer et al (2013) emphasised the importance of motivation in diabetes education by saying that the success of the programme depends on the willingness of the individuals to engage with the education. Self-care management requires willpower; therefore, motivation is crucial to diabetes education programmes.

Limitations of the review

A key methodological weakness of this systematic review is that the majority of the participants studied were people who attended diabetes education centres rather than those who did not. It is possible to understand the reasons for missed appointments among attenders; nevertheless, the motivation for attendance in this group versus non-attenders may differ. The 14 studies selected for the systematic review had low sample sizes, lacked probability sampling of participants and included retrospective data. Therefore, focusing on attenders and methodological limitations reported makes it difficult to draw firm conclusions.

A major limitation was that most of the available studies were from countries outside the UK. These countries have a different funding approach (mostly private health insurance, based on single practice and of short duration) and education systems. Therefore, considering whether the barriers to attendance are relevant to the UK is difficult. A recent UK study which aimed to identify the barriers associated with attendance in diabetes education centres presented at the *10th National Conference of the Primary Care Diabetes Society* in Birmingham in November 2014 had similar findings (Lawal, 2014). The poster presentation illustrated how the study used a postal questionnaire to elicit data from 105 defaulted patients who were referred for structured patient education in four diabetes education centres in the South East of England. The findings of the study also identified perceptions and beliefs of patients, personal problems, inconvenient location and time as barriers, among others.

Implications for practice and research

Although there are several international research studies on non-attendance to diabetes education, a significant number of studies surveyed attenders while very few surveyed the views of non-attenders. The paucity of studies in this area may be attributed to the fact that people who fail to attend hospital appointments are difficult to access. According to a systematic review carried out by Ajay and Rubin (2003), investigating reasons for non-attendance in a primary care setting presents some obvious methodological issues because this group of people might not be willing to participate in research and may see it as being confrontational if not handled with care.

Based on the results of this systematic review, the key barriers to attendance are work, illness, language problem, distance, finance, lack of interest, low perception about the seriousness of the medical condition and the benefits of the session. Consequently, strategies to promote attendance include offering the education service in the community nearer to the patient and offering various choices of time such as evenings and weekend sessions. Also, the patients need to assume more responsibility for their health and the healthcare practitioners need to influence patients' beliefs and attitudes that are necessary to promote motivation and commitment.

Page points

1. Communication barriers included the participants' inability to speak or read English very well, an inability to contact the clinic, participants not being aware of the service and reported insensitive interactions with the healthcare professionals running the sessions.
2. Individual motivation impacts on attendance: some participants forgot the appointments, some people were too busy to attend and some were simply not interested in the education programme.
3. Although there are several international research studies on non-attendance to diabetes education, a significant number of studies surveyed attenders while very few surveyed the views of non-attenders.

"Understanding the barriers to attendance for people with diabetes is crucial in developing ways to improve care and engagement with people who have diabetes."

Conclusion

An ageing population and lifestyle changes have caused an increase in the prevalence of long-term conditions, of which diabetes is one. This has led to a growing pressure on the NHS. Equally, the challenge to achieve good health has caused a paradigm shift from the traditional paternalistic approach to long-term condition management to one of patient empowerment and self-management. This can be achieved through education sessions; however, this can be problematic when the attrition rate to SPE is high. Understanding the barriers to attendance for people with diabetes is crucial in developing ways to improve care and engagement with people who have diabetes. This review has established the need for further work and discussion to promote attendance to diabetes education sessions. ■

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