

Adults with diabetes and their experiences of wearing prescribed orthotic devices

Abstract

Background: This study was initiated because the author noted that a large number of patients with diabetes attending a vascular orthotic clinic were not wearing the orthotic devices they had been prescribed and this was having detrimental effects on their health. A literature search found that there was very little evidence to explain why patients choose not to wear such devices. The evidence available was quantitative, which may have prevented patients from discussing their opinions. **Objectives:** The aim of this study was to explore the experiences of adults with diabetes regarding the prescription and wearing of orthotic devices to better understand why some patients chose not wear them. **Methods:** Participants were interviewed using semi-structured interviews. These interviews were taped, transcribed and analysed by the author and a number of themes and categories were identified. **Results:** The themes that emerged included the patients' past experiences, experiences of the clinic, problems associated with their footwear, beliefs and motivations, compliance, and coping strategies. **Conclusions:** The findings have a number of implications for the care of people with diabetic foot disease. These include the need to assess and treat patients holistically, to develop trusting and open patient-practitioner relationships, and to use strategies to help patients adapt to their circumstances. **Conflict of interest:** None

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KEY WORDS

Diabetes
Orthotic devices
Concordance
Holistic care

This study explores the experiences of adults with diabetes who have been prescribed orthotic devices. The aim was to better understand why these patients sometimes neglect to wear the orthotic devices that they have been prescribed, with a secondary aim being to explore their individual beliefs about health in relation to foot care.

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orthology clinic. A large percentage of the patients who attend this clinic have diabetes with severe foot complications and as a consequence they have been prescribed orthotic devices. This study was initiated because while working in this clinic the author had become uncomfortable with the amount of patients who were not wearing their prescribed devices and were subsequently experiencing adverse health effects.

It was also noted from a review of the current literature that there was very little evidence regarding the reasons why patients choose not to wear prescribed orthotic devices. The evidence that was available was quantitative and this may have prevented patients from revealing their opinions on the matter. This study was designed to fill this gap in the literature.

Literature review

What is diabetes mellitus?

Diabetes mellitus is a complex metabolic disorder, characterised by chronic hyperglycaemia or raised blood glucose concentration caused by either

insulin deficiency, resistance to the effects of insulin or a combination of these (Page and Hall, 1999).

Complications of diabetes mellitus that affect the foot

Foot problems are common in patients with diabetes. The main factors responsible for this are neuropathy, ischaemia and infection and these can lead to tissue breakdown in the foot, resulting in morbidity and possible amputation (World Health Organization, 1995). Diabetic neuropathy affects the motor, sensory and autonomic nervous system (Calhoun et al, 2002).

Motor neuropathy causes muscle weakness and deformities of the architecture of the foot (Reiber et al, 1998). Sensory neuropathy leads to a loss of protective sensation to pain, pressure and heat, which can lead to repetitive trauma to the feet that can go unnoticed by the patient (Page and Hall, 1999). Autonomic neuropathy causes abnormalities of the skin such as dryness and callusing, which can increase the risk of injury due to skin cracking and increased

localised pressure (Reiber et al, 1998). Peripheral vascular disease causes a loss of circulation and associated ischaemia, which can lead to ulceration, gangrene and impaired wound healing. Ischaemia also reduces the ability to fight infection by impairing delivery of oxygen, nutrients and antibiotics to the infected area (Calhoun et al, 2002).



Figure 1. A patellar-tendon-bearing orthosis viewed from the front.



Figure 2. The side view of the patellar-tendon-bearing orthosis.

Orthotic devices

The use of orthotic devices that are custom built for each patient's requirements has been advocated as a strategy to prevent and treat diabetic foot ulcers (Ball and Afheldt, 2002). There is a range of orthotic devices, which are prescribed for a number of different reasons. Rationales include stabilising joints to prevent deformities, thus providing better positioning and reducing pressure, or relieving pressure that would otherwise cause localised areas of ischaemia and subsequent ulceration (Armstrong et al, 2001; Calhoun et al, 2002). The diabetic foot is at particular risk of developing pressure-related injury when the architecture of the foot changes, resulting in a reduction in the surface area and elevated pressure being exerted through the load-bearing areas (Reiber et al, 1998). This is often further complicated by peripheral vascular disease that affects healing by lowering the oxygen concentration of the localised tissue (Page and Hall, 1999).

Benefits of orthotic devices

Good quality research evidence regarding the effectiveness of orthotic devices is scarce (Boulton and Jude, 2004). A Cochrane review of randomised controlled trials found that evidence was limited, however, it also concluded that orthotic interventions were effective at preventing and healing diabetic foot ulcers (Spencer, 2004). From their two-year study of 400 patients, Reiber et al (2002) concluded that specialised footwear might be of benefit for people with severe foot deformities. In another study, Uccioli et al (1995) found that after randomising 69 patients into two groups, one including those with therapeutic shoes and one including those with normal footwear, those who wore therapeutic footwear had approximately half as many ulcer relapses or new ulcers compared with the control group.

The patellar-tendon-bearing orthosis

This article relates to a study involving a specific group of patients who were prescribed a patellar-tendon-bearing orthosis (PTBO) (Figures 1 and 2). This device is prescribed for

patients who are at the greatest risk of developing foot ulceration because of significant foot deformities or existing extensive ulceration (Khaira et al, 1998; Edmonds et al, 2004). PTBOs have been advocated as a means of relieving pressure from the diabetic foot by suspending the weight through the patellar tendon and therefore facilitating wound healing in the neuroischaemic foot (Khaira et al, 1998; Trepman and Donnelly, 2002). Figures 1 and 2 illustrate the PTBO being utilised in a patient with diabetes who underwent partial amputation of the foot because he had developed infected gangrene. The PTBO was prescribed in this case to relieve weight from the bottom of his foot and maintain mobility.

The author found one study which stated that compliance when wearing PTBOs was problematic (Trepman and Donnelly, 2002). It cited general debility and difficulty with balance and comfort as reasons why patients were not keen to wear them. However, Trepman and Donnelly's aim was to evaluate patient outcomes in relation to improvements in condition rather than to investigate the reasons for poor compliance, so the validity of these results may be questionable.

Factors that cause non-compliance with orthotic devices

Six studies were found that specifically considered compliance with specialised footwear or orthotic devices and they all identified factors that contributed to the compliance rate. The factors that improved compliance included:

- ▶▶ Patient age
- ▶▶ Type of diabetes (type I had greater compliance rates)
- ▶▶ An overall better health rating
- ▶▶ An overall healthier foot rating
- ▶▶ Renal replacement therapy (Breuer, 1994)
- ▶▶ The regularity of visits to a physician for foot care (Slavens and Slavens; 1995)
- ▶▶ The aesthetics and fit of the footwear (Knowles and Boulton, 1996)
- ▶▶ Difficulty with balance and discomfort (Trepman and Donnelly, 2002)

- ▶▶ The inability to take the orthotic device off (Ha Van et al, 2003)
- ▶▶ Aesthetic issues, such as comfort and the perceived value of the footwear (Macfarlane and Jensen, 2003).

However, all of these studies were quantitative in nature and used patient observation or questionnaires as a means of identifying compliance rates and reasons for a lack of compliance. Therefore no new themes, which might have emerged from the participants discussing their attitudes, were identified (Polit and Hungler, 1999).

Factors that cause non-compliance with other diabetic regimens

A number of factors were cited in the literature that related to non-compliance with other diabetic health regimens. These included social and economic factors (Vivian and Wilcox, 2000; Toljamo and Hentinen, 2001; Vermeire, et al, 2001; WHO, 2003; Bissell et al, 2004); healthcare team and system-related factors (Gillibrand and Flynn, 2001; Thorne and Paterson, 2001; WHO, 2003; Bissell et al, 2004); condition and therapy-related factors (Hjelm et al, 2002; Trepman and Donnelly, 2002; Macfarlane and Jensen, 2003); and patient-related factors (Whittemore, 2000; Hjelm et al, 2002; Johnston-Brooks et al, 2002; Ogden, 2004).

Methods

This study utilised a qualitative research approach because this provided a systematic means of describing life experiences and giving them meaning (Burns and Grove, 2001). This approach was underpinned by interpretative phenomenology (Linge, 1976; Mulhall, 1996; Krell, 1999; Gadamer, 2004). Interpretative phenomenology aims to understand the 'lived' experience of humans. It accepts that each individual has a subjective viewpoint and interpretation of their experience depending on past experiences, culture, social status and their knowledge base (Krell, 1999). It allows the researcher to gain insights into the participants' experiences as a whole (Linge, 1976; Gadamer, 2004).

Application of the interpretative phenomenological approach

The application of a qualitative approach informed by interpretative phenomenology requires a qualitative data collection method (Burns and Grove, 2001). Semi-structured interviewing is such a method and has been advocated as appropriate for gathering data related to healthcare experiences (Gadamer, 2004). The advantages of using semi-structured compared with structured interviewing is that it allows a flexible approach where the participant is encouraged to talk about issues that are most important to them (Pope et al, 2002). The researcher also has the flexibility to respond and ask new questions depending on the interviewees' responses (Melia, 2000; Bryman, 2001). The researcher and respondent are therefore allowed to 'participate in' the interview, which facilitates a collaborative and open environment and a more in-depth, authentic and detailed picture of the respondent's experiences (Sjostrom and Dahlgren, 2002; Gadamer, 2004).

In order to improve the quality and appropriateness of the information gathered in relation to the study aims, a set of questions was developed to provide a framework or guide to the interview. These questions were derived from the literature review and the aim of the research.

All the interviews were tape-recorded to ensure reliability of data (Polit and Hungler, 1999). In addition, anonymity and confidentiality were assured and the aims and benefits of the study were discussed at length when informed consent was obtained (Patton, 2002).

Sample

A purposive sampling frame was used, which included all adult patients with diabetes who had been prescribed and worn the PTBO from the orthotic vascular clinic in question (Barbour, 2001). The researcher chose to limit the study to only those patients who had been prescribed a PTBO because this was the device used for the most at-risk patients and in these patients the

Table 1
Participants' details

Sex	Male (n=6) Female (n=2)
Age range	41-76 years
Employment	Retired (n=5) Unemployed (n=3)
Diabetes type	Type 1 (n=5) Type 2 (n=3)

effects of not wearing the PTBO are often the most devastating — the most extreme outcome being amputation. PTBOs are also the most expensive devices used in the clinic.

The sample group was recruited by sending letters and a study information leaflet to all 18 patients attending the vascular orthotic clinic who had been prescribed a PTBO. Those who were interested in taking part in the study were asked to return a reply slip in a reply-paid envelope and informed that the researcher would contact them by telephone to arrange a convenient date and time for the interview. Eight participants agreed, and they were interviewed for about 60–90 minutes. Their demographic, social and diabetic details are shown in *Table 1*.

Approval was sought and gained from the local ethics committee before the study began.

The participants had all had experiences of being prescribed and of wearing orthotic devices over a period of four months to three years. Two participants had experienced profound problems in wearing their orthotic footwear and had decided not to use it at all. Three participants wore their footwear most of the time and three participants wore their orthotic device all the time.

Location

All eight participants stated that they preferred to be interviewed in their own homes on a previously agreed date and time. This enabled the participants to feel relaxed and talk openly and honestly (Slevin and Sines, 1999).

Issues relating to the quality of the research findings

Qualitative data can be evaluated by a number of criteria outlined by Lincoln and Guba (1985): credibility, dependability, confirmability and transferability. These criteria have also been advocated as suitable for phenomenological studies (Anells, 1999).

A number of strategies were used in this study to improve the credibility of the results. These included the researcher reflecting on her own presuppositions before, during and after the data were collected and during the data analysis (Priest, 2002). This process ensured that the researcher remained true to the data and that her own preconceptions did not influence the results (Haggman-Laitila, 1999).

The use of open-ended questioning and a conversational interviewing style during the interviews also improved the quality of the study by putting the participants at ease and encouraging them to talk frankly about their experiences (Mays and Pope, 2000). This allowed the researcher to gain an in-depth understanding of their culture and views and facilitated the checking of misinformation and contradictions in the findings (Lincoln and Guba, 1985).

Quality was also improved by the use of extracts from the participants' verbatim accounts to illustrate the study findings (Benner, 1994). Peer debriefing was also carried out in order to improve credibility. This was conducted by a research supervisor who is knowledgeable about the subject matter and the research approach (Polit and Hungler, 1999). She questioned and assessed the various aspects of the data collection methodology and the analysis of the findings and thus ensured that the findings were validated and the researcher's credibility was established (Corben, 1999; Haggman-Laitila, 1999).

Interviewer bias was an issue in relation to the interviewer being an insider and known to the participants as a nurse, raising the possibility that participants might alter their responses

to appear in a more favourable light (Stiles, 1993). The interviewer overcame this by reassuring the participants that all information collected during the interview would be anonymous and that taking part in the interview would not affect their care in any way (Fielding, 1998).

Dependability and confirmability was improved by the presentation of the theoretical, philosophical and methodological decisions that were made during the course of the study to facilitate an audit trail (Koch, 1996; Anells, 1999). This allowed the reader and research supervisor to establish

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the appropriateness of these decisions and how they affected the research findings (Mays and Pope, 2000). The presentation of verbatim illustrations and the disclosure of the researcher's orientation and context also helped to ground the interpretation of the data and therefore improve dependability (Krell, 1999; Priest, 2002).

Finally, transferability or applicability of the data from this study was established by providing the reader with 'thick descriptive' data regarding the setting, the demographic details of the sample, their diagnoses and the orthotic devices in use as well as details of the data generation and analysis methods. This allowed the reader to decide how far and to whom the findings can be transferred (Polit and Hungler, 1999; Priest, 2002).

Data analysis

The researcher analysed the data gathered from interviews using two

processes; thematic analysis and the analysis of exemplars (Benner, 1994). The researcher began the process of analysis by transcribing all the interviews verbatim and then reading them all several times. This facilitated a thematic analysis that involved identifying themes and interrelating categories that consistently emerged from the data (Smith et al, 1999). The transcripts were continually read until no new themes or categories were identified and 'data saturation' had been obtained (Glaser and Strauss, 1967). The identification of themes and categories also helped with managing and sorting the data to ensure clarity of thought and to prevent misinterpretation (Polit and Hungler, 1999).

The second stage of analysis consisted of identifying exemplars. This allowed the reader to visualise the person in the situation (Benner, 1994). This ensured that the written analysis remained an authentic interpretation of the text and the reader understood the true nature of the experiences (Gadamer, 2004). The provision of concrete examples taken from the text also supports the validation of the findings (Haggman-Laitila, 1999).

Results

This study identified a number of themes and sub-categories that illustrate the participants' experiences in relation to their diabetic foot disease and wearing the PTBO.

Past experiences

All of the participants described protracted experiences of suffering from foot problems. The most significant category within this theme was ulceration, pain and hospitalisation. These problems had significantly affected their quality of life and sense of self.

Participant 8 said: 'Another operation... debride it, cleaned it all out... from that day onwards I've spent three Christmases out of five in there... all with the same problem... it goes all right and then it gets a build up.'

All the participants also described how immobility had restricted their life before wearing the PTBO.

Participant 3 said: 'But I had to rest... sort of more or less... I just got up, went to the bottom of the stairs got on the chair to the toilet... back again... for ages and ages... and... I did get really down with that.'

Added to the physical affects on their lives, four of the participants expressed the psychological effects of their diagnosis and past experiences in terms of shock, fear or depression. Three participants also described how their experiences had affected their lives financially because it had led to them losing their jobs and their income.

Experiences of the clinic

All the participants described experiences in the vascular orthotic clinic. The most significant category within this theme related to how the participants felt when they first saw the PTBO. All the participants described feelings of shock, horror or upset.

Participant 6 said: 'I wasn't expecting it to be so... big... it did shock me at first I thought I'd got to wear it forever...'

The second category is the participants' level of satisfaction with the service. Five participants described both negative and positive issues related to their level of satisfaction, in terms of how much support they received, whether they felt able to ask questions, the service delivery and how much information and education they had received.

Problems associated with footwear

The third theme to be generated from the transcripts related to the problems or difficulties the participants had experienced when wearing the PTBO. All eight participants spoke about the issue of embarrassment when wearing it, although three of these explained how they had not felt embarrassed. The embarrassment that was experienced related to the appearance of the covering shoe, not being able to wear their

preferred clothes, or that the PTBO made them walk with an unusual gait.

Participant 8 said: 'You've got to have so much play in your ankle to be able to walk without looking like an idiot.'

The second category related to the inconvenience of wearing the PTBO. Six of the participants described how the PTBO restricted their life in that they could not drive, walk up or down stairs, do the gardening or go on holiday. The perceived heaviness or restrictiveness of the PTBO was also expressed by five of the participants.

Participant 4 said: 'But um it's... it's... cumbersome I think is the way to describe it, it's cumbersome to walk in, it's very heavy to walk in, you can't walk great distances... especially if you are walking on anything that's any other than flat.'

Beliefs and motivations

The fourth theme to emerge from the transcripts relates to the participants' belief or perception of the benefits of the PTBO and their subsequent motivation to wear it. Six of the participants gave descriptions of how they understood the PTBO was working but two participants appeared to lack the theoretical knowledge and understanding.

Participant 1 stated: 'You see, eh, this makes me walk from me knee... instead of the ankle to take some of the pressure off... and at the bottom I've got what they call a rocker, like a sleeping policeman... that's so that when I'm walking I don't walk flat-footed... because on the bottom of my foot I've got a lump which is where my foot has gone.'

All but one of the participants described perceived benefits of wearing the PTBO. Within this category, five of the participants described how they believed the PTBO was helping to heal existing ulcers, prevent recurrence or reduce the leakage from the ulcer.

Participant 7 said: 'Oh we would be in a lot of trouble if we didn't have this because I don't think the ulcer would ever ever heal like it has with this one... yeah, I think that's done the job, yeah.'

Four participants described how the PTBO had increased their mobility. Another two participants said that by wearing the PTBO they were hoping to be normal again, while another described that his motivation for wearing it was to get back to work. Two of the participants powerfully articulated how they believed that the footwear was helping to prevent a worsening of their condition and the future need for amputation.

Participant 1 said: 'I'm hoping my foot won't break and I don't have my leg off... I've got to be fair I mean I suppose if I hadn't had this I expect I would have had my foot off by now'

The participant that had not described any perceived benefits of the PTBO did describe how he expected he would have his leg amputated in the future.

Participant 8 said: 'I look at it now I've been expecting it... I've been expecting it but that's how life goes... and I know at the end of the day... I can overcome it... it will happen I know it will.'

Adherence

The fifth theme of these results is adherence. Only five participants could describe the instructions they were given in relation to how often they needed to wear the footwear. All eight participants described how often they had worn the footwear and their reasons for a lack of adherence. These reasons included them being uncomfortable, the footwear being dirty meaning they did not want to wear it inside, a belief that it was not needed and the footwear not being waterproof. The participant who was not able to wear his footwear described how he had suffered pain and immobility when he tried to walk with the PTBO, which had led to him not wearing it at all.

Participant 8 said: '...and I was getting so frustrated... I couldn't go downstairs... I couldn't walk upstairs... And I just said that's it I'm not wearing it no more... I just lost it, I mean there's only so much anybody can take.'

Three of the participants described how they maintained a degree of flexibility in their adherence in order to manage their lifestyle in respect of special occasions such as Christmas or weddings and when wanting to drive or go out in the evening.

Participant 4 said: '...over Christmas we like go to each others' houses...I thought well it's Christmas I won't wear the leg...Well everything goes out the window at Christmas... I have Christmas as a normal human being (laughs).'

Coping strategies

The sixth and final theme to emerge from the transcripts was the participants' coping strategies. Four participants said how they knew they had to be determined and persevere with wearing the PTBO. Two of these participants also discussed how you have to accept your situation in order to cope with it.

Participant 7 said: 'I think if you've got a problem like this you have to accept the things... you know... so instead of them saying that they'll try it and only trying it for a day... or a week... and then saying I'm not going to wear it again... because you're defeating the object aren't you?'

In summary, the findings of this study have shown that the experiences of diabetic adults who are prescribed and wear PTBOs are profound. They experience physical, psychological, financial and social effects on their lives, which in turn affect their sense of self. These findings have shown how the participants reflect on their history, culture, beliefs, values and expectations when making sense of their situation and interpreting how to behave in the future. The study has found that

many of the participants had a strong sense of what they needed to do or be provided with in order to preserve their quality of life and sense of self and made reference to social support, healthy interpersonal relationships, effective communication and education, a more responsive service, a flexible regimen and effective coping strategies.

Discussion

The themes identified in this study do correlate to the results of other studies. In relation to the patients' past experiences, a number of studies have found patients who live with diabetic ulceration experience immobility, unemployment and pain (Hjelm et al, 2002; Kinmond et al, 2003). Other studies have shown that people with diabetes have a lower quality of life (Aalto et al, 1997; Reiber et al, 1998).

Past experiences have also been linked in the literature to adherence to treatment regimens (Cameron, 1996). The health psychology literature explains that people make decisions relating to their self-care behaviour by reflecting on their health beliefs, their past experiences of illness and the perceived benefits of following prescribed treatment regimens (Caspi et al, 2004; Ogden, 2004).

This study also found that the patients' experiences of the clinic and the level of support they received from healthcare workers and their families was important. This has previously been identified in Toljamo and Hentinen's study (2001), which found that social support provided by friends and relatives had the most significant positive effect on self-care behaviour. Similarly, positive interpersonal relationships have been shown to be important in improving adherence to recommended health behaviour (Gregg et al, 2001; Thorne and Paterson, 2001).

Patient education has also been thought to be a significant issue when attempting to improve patient adherence with positive health behaviours (Chan and

Molassiotis, 1999; Whittemore, 2000). However, much of this literature also recommends that educational strategies are more effective when used in conjunction with mechanisms to improve patients' decision-making skills and motivation (Kinmond et al, 2003; McGough, 2004).

Motivation and its link to health behaviour is also supported by previous literature, which states that a person's belief regarding the value of changing will affect their motivation to adopt a behavioural change (Fingeld, et al, 2003; MacFarlene and Jensen, 2003; Ogden, 2004). This is also linked to the patients' expectations for the future with one participant in this study believing that there was no benefit to be gained from wearing the PTBO because amputation was inevitable. This is supported by a study of patients' decision-making skills that found patient's prognosis affected the decisions they made (Caspi et al, 2004).

Finally, in this study the patients' coping strategies were identified as a strong theme and this has been discussed in previous literature relating to chronic illness and diabetes (O'Neill and Morrow, 2001; Hjelm et al, 2002; Ogden, 2004). A person's ability to cope with adverse events has also been linked to their self-efficacy and belief in their ability to cope with the demands of illness (Johnston-Brooks et al, 2002) and their locus of control (Fitzgerald Miller, 2002).

Implications for practice

This study has shown that patients need to be assessed and treated holistically. It should be recognised that they are an integral part of the larger social and physical environment and that their mind, body and spirit are closely related and do not work in isolation. Healthcare practitioners should focus on the meaning patients assign to their health, experiences of illness, and healthcare choices and should respect their patients' decisions.

Building partnerships is important for the development of trusting and

open relationships where patients feel valued, are able to ask questions, can talk openly about their experiences, and are fully engaged in all the decisions related to their care.

The Department of Health (1999) has advocated partnership building between healthcare professionals and patients, carers and the public as a means of improving patient outcomes, patient satisfaction, services and public understanding, as well as patients' self-esteem, confidence and health. Effective partnership building will, however, be impossible while patients are viewed as 'non-compliant'. The terms adherence or compliance have been utilised throughout this study because they are widely used in the literature. However, there is a growing body of literature that favours the term concordance (Bissell et al, 2004).

The Department of Health (2003) proposed that the traditional model of compliance does not work to improve patient outcomes and that shared decision-making, or concordance, in which patients negotiate with healthcare professionals is the best course and can lead to a higher follow through of agreed courses of treatment. If healthcare professionals and patients are to act in true partnerships, concordance is an essential goal.

Finally, this study found that a number of the participants were dealing with the numerous physical, social and psychological effects of wearing a PTBO and having diabetic foot disease and they had developed coping strategies to enable them to deal with these effects. Healthcare practitioners should be more proactive in facilitating helpful strategies that enable a person to adapt to their changing circumstances. Patient education, coaching and guidance will help ensure this takes place.

Conclusions

This study has investigated, by using a qualitative methodology informed by interpretative phenomenology, the experiences of adults with diabetes who are prescribed and wear PTBOs.

It has found that their experiences are profound and have a wide-ranging effect on their lives.

Before wearing a PTBO the participants had suffered from the physical, social and psychological side-effects of having diabetic foot disease. While attending the orthotic clinic some of the participants had become frustrated and dissatisfied with the service provision. When wearing the PTBO participants had felt embarrassed, suffered discomfort and reduced mobility.

However, the majority of the participants understood why they had been prescribed the PTBO and could articulate the benefits of wearing it and their expectations of the future. These benefits and expectations included improved healing, preventing recurrence of ulceration, increased mobility, returning to work and reducing the risk of amputation. The participants also articulated why they did not wear the PTBO all the time and the reasons were most often of a practical nature in that they found the PTBO uncomfortable, not waterproof or too dirty to wear indoors. Some of the participants showed that they were maintaining a degree of flexibility in their adherence in order to preserve what they believed to be important to them. Half of the participants also articulated how they had used determination, perseverance, and acceptance as well as maintaining normality as means of coping with their situation.

When analysing the results it was identified that the participants appeared to be weighing up the side-effects of having diabetic foot disease, the benefits and disadvantages of wearing the PTBO and their expectations for the future when making decisions regarding when they would wear the device.

From this analysis the author concludes that the social, psychological, educational and physical status of adults with diabetes should be assessed and managed. The patients' own expectations and aims of treatment

Key Points

- ▶▶ People's past experiences of the symptoms of diabetic foot disease such as ulceration, pain and hospitalisation and the effects of the disease on their psychological or social well-being appears to affect their willingness to wear prescribed orthotic devices.
- ▶▶ The participants in this study also articulated that they made decisions about whether to wear the prescribed orthotic devices based on their understanding or belief about its benefits compared to the disadvantages or problems related to wearing it.
- ▶▶ Decisions were also made about adhering to prescribed regimens based on the persons understanding of that prescription, the side effects of that prescription and their social circumstances.
- ▶▶ The participants in this study believed that their ability to cope with wearing prescribed orthotic devices is improved with social support, healthy interpersonal relationships, effective communication and education.

should be determined and they should be given information and choices regarding orthotic devices so that they can be empowered to make informed decisions and choices that are suitable to their own circumstances. Patients should also be encouraged to develop coping strategies.

Healthcare workers must develop partnerships with patients that will then facilitate shared decision-making, concordance, flexibility in treatment options and respect for differing opinions. By using these strategies the

author concludes that the care and holistic health of adults with diabetes who are prescribed and wear orthotic devices will be improved. **WUK**

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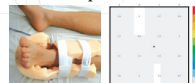
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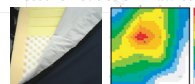
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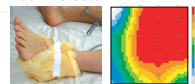
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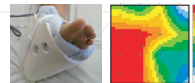
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