

What is the Lived Experience of the ‘Three Great Pathologies’ of Diabetic Foot Disease? An Interpretative Phenomenological Analysis of the Independent Thinking of Podiatrists in Diabetes Secondary Care

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Abstract

Researching the podiatrists' lived experience of The Three Great Pathologies may help improve the quality of patient care. The aim of this research using an Interpretative Phenomenological Analysis approach is to report on insights relating to the Three Great Pathologies of diabetic foot disease – infection, ischaemia and amputation. To do this, data was collected from six New Zealand diabetes care Podiatrists. Three superordinate themes resulted with subordinate themes. They are compromised health status, podiatric challenges and best outcomes. The findings are firstly, patient education remains a priority; secondly, there is an unmet need for postgraduate podiatry education; and thirdly, early intervention is a key measure for reducing the influence of the Three Great Pathologies. This study demonstrates that focussing on a group of six specialist podiatrists contributes to new priorities of care for dealing with the Three Great Pathologies of diabetic foot disease.

Keywords

diabetes, podiatry, interpretative phenomenological analysis, diabetic foot disease, diabetic peripheral neuropathy

What do we already know about this topic?

I hold a Master of Science Degree with Distinction in this subject area – Diabetes Podiatry. This article reports research from this area and was the original research that was required to successfully compete this Degree.

How does your research contribute to the field?

Often research in this area is patient centred, however, it is also important to find out the practitioners concerns. This research partially fulfils this and yields information as to unmet needs. Interestingly the findings found a strong consensus for the National Podiatry Educator to provide Post Graduate Pathways in Diabetes Podiatry – this is the first time formal research has resulted in this finding. Thus, by instituting a programme such as this health, outcomes may be improved.

What are your research's implications towards theory, practice or policy?

In terms of theory, this informs that more could be taught in the area of the three great pathologies as podiatric medicine is very nuanced with beneficial lower limb outcomes being difficult to achieve.

In terms of practice, resourcing and funding are an issue and this research highlights the need for increases in this area to be prioritised.

This research once published has the capacity to inform policy favourable to the findings noted above.

Introduction

Diabetes is a global concern with 8.3% of adults diagnosed with diabetes, 85–95% having the Type 2 variant¹ with this cohort being the main focus for this research. This figure is

expected to grow, with 366 million people expected to be diagnosed by 2030.² Diabetes leads to the formation the Three Great Pathologies (TGP),³ which in turn leads to the development of Diabetic Foot Disease (DFD).⁴ The TGP are



considered to be diabetic peripheral neuropathy (referred to herein as neuropathy), critical limb ischaemia (herein referred to as ischaemia) and infection.³ The consequential phenomena arising from the presence of the TGP – DFD are considered to be ulceration, Charcot foot, neuropathic pain, gangrene and amputation with the latter being a necessary treatment to prolong the life of the patient.⁴

Thus, the aim of this study is to report on the TGP from a different perspective. This study will use Interpretative Phenomenological Analysis (IPA) methodology,⁵ to create a focus on podiatrists' experience of the TGP, and thereby gain knowledge about the independent thinking of podiatrists. By focussing on the individual, the meanings they attach to this experience can be discovered.

The TGP and diabetic foot disease are now explained in greater detail.

Neuropathy is one of the most common long-term complications of diabetes, affecting peripheral, sympathetic and somatic sensorimotor nerves.⁶ Neuropathy presents clinically as sensory loss of which the patient may not be aware, resulting in trauma to the foot going unnoticed.⁷ The patient may also describe their feet as 'numb' or of having a 'dead feeling'.⁸ The longer a patient lives with neuropathy the greater the likelihood of developing neuropathic pain.⁹

Also stemming from neuropathy are the sometimes life-changing, diabetic foot ulceration and Charcot foot,³ which can lead to the most feared complication of those with diabetes the requirement to undergo amputation/s.¹⁰

The prevalence of ischaemia is approximately 12% of the adult population, increasing in frequency in patients over 50 years of age.¹¹ This is becoming with a dominant trend as the population lives longer, which implies that the onset of ischaemia occurs some years after the development of neuropathy.^{12,13} Due to the progressive nature of diabetes, and the parallel advance of ischaemia, skin integrity is affected, leading to ulceration and further complications for lower extremity amputation, such as presence of infection, necrosis and gangrene.¹⁴

The coalescence of neuropathy and ischaemia sets the stage for the development of foot infection which is linked to increased morbidity and negatively impacts on physical functioning and psychological condition, such as quality of life.¹⁵

Infections are usually preceded by foot ulceration.¹⁶ To be considered a foot ulcer, the anatomical boundary for soft tissue or bone infection is said to be 'anywhere below the malleoli'.¹⁷ Often ulcers will remain superficial, however, up to

25% will deepen from the skin extending to tissue and bone¹⁷ and 10–30% will result in amputation. In the cases of infected ulcers, 60% will proceed to amputation.¹⁸

There is also a strong association between diabetes and the development of renal impairment^{19,20} and often with those who are pre-dialysis or treated by dialysis being recognised as an at risk group who should be under the care of podiatrists.²¹ The increased prevalence of infections and DFD in this cohort occurs for some well understood reasons, such as the presence of ischaemia and neuropathy which is then intensified by end stage renal failure, which leads to an increased prevalence of DFD.²²

This research will inform a better understanding of the TGP and create a focus which may improve the quality of services provided by podiatrists.

Material and Methods

Methodology and Method

An IPA approach is used to gather details of the participants' lived experience of the phenomena under study.²³ IPA is an approach to qualitative research which adopts an idiographic focus⁵ thus insights into how podiatrists make sense of the TGP of DFD can be gained. Ethical approval to conduct the study was gained by the University of Brighton External Ethics Review Committee Panel (Reference Number: REGC-16-001.R2). Written informed consent from the subjects prior to study initiation was also gained.

A total of six participants were chosen for this study which is considered of 'good fit' in terms of a sample size for this methodology,²⁴ as such no power calculation indicating an 'ideal number' of participants was required. Participants were selected from two hospitals. Prior to data collection a pilot test was undertaken as this allowed the researcher to become familiar with the question format and identify any problems or issues which could be resolved before commencing the study. This approach also confirmed that the research goals and design were realistic. Data was collected from one-on-one semi-structured interviews using questions adopted from the research of Shinebourne and Smith,²⁵ as these researchers were also interested in focussing on an individual's experience of a phenomenon. The participants' responses to the questions were recorded on a Dictaphone. Recording of non-verbal body language and some verbal features that provided meaning were also entered into a journal (Table 1) to aid analysis. To facilitate provision of in-depth data, the questions

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Table 1. Journaling Analysis.

Descriptive Coding	Interpretation	Participants
Use of quieter speech. Episodic speaking with a quieter voice with sideways movement of the eyes	Experiencing fear and anxiety	Aroha Betsy Fran
Hand gesturing	Allaying fear and hoping for something better	Aroha Betsy Clyde
Displaying open body language	Relaxing whilst reflecting on a time when treatment goals have not been met	Aroha Clyde Drew
Episodic long duration pauses in speech whilst looking into the distance	Thinking and searching for the right words, indicating reflective thought	Aroha Betsy Clyde Drew Ethan Fran
Laughing about a negative experience	Humour used as a coping strategy to allay the undesirable feelings when dealing with patients foot problems	Betsy Clyde Ethan
A pause with lowering of the chest and slumping forward	Expressing sadness when reflecting on patients in their care who have passed away	Betsy Clyde Ethan
Sitting comfortably back in the seat with hands relaxed on the lap	Talking with confidence	Betsy Clyde Drew Ethan Fran

asked were open ended, as this allowed a focus on the phenomena under study to pervade the interview.

The interviews took place in a work environment with most lasting one hour. The audio copies of each interview were checked against their respective transcripts to ensure accuracy. Non-verbal communication and observations of body language were logged at the time of interview then journalled which facilitated a cogent collection of data.

Pseudonyms were used to maintain participants' anonymity – however, the participants did accept that they could be deductively identified, therefore, no guarantees in relation to confidentiality could be given.

The data was transcribed and analysed using IPA⁵ methodology. Six steps, as proposed by Smith, Flowers and Larkin²⁴ were used in this study. They are Stage 1: reading and re-reading; Stage 2: initial note-taking; Stage 3: developing emergent themes; Stage 4: searching for connections between themes; Stage 5: moving onto the next case; and Stage 6: looking at themes across all cases. Remaining faithful to each stage was the key to yielding rich data. The analysis follows.

Discussion With Statistical Analysis of Themes

All participants have chosen to specialise as podiatrists who treat those with diabetes in secondary care settings. The analysis explored the meanings participants ascribe to their personal

experience of the TGP. The researcher then interpreted the participants' perceptions, with three superordinate themes being produced. These can be seen in Table 2 below.

In alignment with the methodology noted previously, three superordinate themes were constructed with associated subordinate themes unique to each anchoring them as evidence (Table 2). They are formed by the direct quotes from the participants who provide accounts of their experiences dealing with the TGP. The first of these begin on the following page.

The Subordinate themes that build toward superordinate themes are derived from the interpretation of quotations of each participant, these are now discussed.

Superordinate Theme 1: Compromised Health Status

The first superordinate theme of 'compromised health status' implies diabetes is associated with a decline in lower limb health status which poses a challenge for the patient and the podiatrist.

The first subordinate theme that builds to the master theme above is 'the natural history of diabetes'.

'So her main problems are ischaemia and vascular disease' (Betsy).

'They've often got the three great ones occurring' (Drew).

Table 2. Cluster of Themes From the Three Great Pathologies Project.

Superordinate Themes	Compromised Health Status	Podiatric Challenges	Best Outcomes
Subordinate themes	The natural history of diabetes	Absence of postgraduate programmes	Early detection of risk factors
	Aggregation of the three great pathologies	Improving health outcomes for Maori and Pacific island people	The multidisciplinary team approach
	Mitigating risk with patient education	Dealing with diabetic foot disease	N/A

‘I think yeah – neuropathy is probably challenging for podiatrists’ (Ethan).

‘The neuropathy, infection and ischemia have a huge impact in the work that we’re doing.’ (Fran)

National and global Guidelines are implemented which use the TGP as a criteria by which patients are evaluated then if clinically indicated referred for podiatry services, with each of the pathologies noted by the participants as being evaluation criteria.²¹ The opinions of the participants also align with evidence also report the TGP as being phenomena more commonly occurring in those with diabetes than any comparable cohort.²⁶⁻²⁸

It is the role of the podiatrist to intervene in an attempt to change the natural course of diabetes to mitigate the risks this cohort face.²⁹ The burden faced by the patient is significant when these pathologies present as outcomes can vary and are not always predictable¹¹ Becoming uncomfortable with potentially poor outcomes is a deeper and potentially unwanted interpretation of this analysis, however, outcomes of DFD at initial presentation, or in an acute episode, may be too difficult or inappropriate to predict and often maybe poor.³⁰

The second subordinate theme – ‘aggregation of the Three Three Great Pathologies’ puts a patient in an invidious position as when these aggregate the patient often progresses to end stage complications of DFD.^{4,31} This is borne out from excerpts detailed below.

‘I think it could have terrible consequences you know’ (Aroha).

‘These three phenomenon come together and can have devastating effects.’ (Betsy)

The challenge of dealing with these is considerable, with a more experienced podiatrist mindful that less experienced colleagues require guidance when the TGP aggregate.

‘Mentoring them into these kinds of roles, um as podiatrists looking after these three pathologies.’ (Fran)

With the aggregation of the TGP people with diabetes become sicker representing a loss of the patient’s quality of life^{30,32} with an associated increase in mortality rate as reported in a Danish study.³³ An apparent conflict however becomes evident with regard to the patient who is becoming

sicker from the burden of diabetes,³⁴ as there is an opportunity for the podiatrists to ‘profit’ from their sickness as a means to learn and deepen their knowledge, which could be construed as exploiting the patient for their own gain.³⁵ Podiatrists know that people seek medical intervention to improve their health status and that upskilling in a specialist clinical environment is an accepted practice.³⁶ This approach may also satisfy career ambitions allowing for ‘ascending the ranks’ – or ‘laddering’ to occur in their career.³⁷ Thus, it could be said one person’s misfortune is another’s fortune. When interpreting this analysis more deeply, could podiatrists be considered vultures in this setting? Are they coffin sellers in war? The idea that their knowledge and upskilling is due in part to those who are becoming sicker, with some dying in their care, resulting in them gaining a fulfilling professional life due to increasing depth of knowledge being gained potentially at the expense of others.

This may be an extreme interpretation, but it illuminates the context in which they deliver podiatry care. When caring for the very sick, clinical decision making can be complex resulting in much consideration of appropriate treatment choices.³⁸ This scenario may be a reality imposed by the aggregation of the TGP to podiatrists who are charged with treating and managing this cohort.

The third subordinate theme ‘mitigating the risk with patient education’ to prevent occurrence of DFD is also a concern for podiatrists.

‘Education should be started at the start of their diagnosis.’ (Aroha)

‘Well a lot’s got to do with education.’ (Clyde)

‘By the same token you need to look at prevention, um education and um setting that patient up for healthy lifestyle.’ (Drew)

‘They might be having a lot of answers or questions that they need to find out so yeah education and knowledge is important.’ (Ethan)

‘And so it’s just working with them on education and management.’ (Fran)

The above findings are consistent with the evidence as reported by Pollock,³⁹ which found that a lack of knowledge with regard to lower limb changes caused by the TGP threatens health status. The participants in this study also believe education has a role and benefit to play in the treatment of the

TGP, which is in alignment with the work of several researchers.^{40–43}

The goals podiatrists hold or share in common with colleagues in regards to educating the patient may not always be met. Intensifiers used in the excerpts such as ‘right at the start’ and ‘working with them’ indicates a temporal aspect where the more time podiatrists have with their patients early in their diagnosis, or through the patient journey, the more success they may experience in spite of evidence and the reality of practice, suggesting contradictory findings. One participant’s comments are in alignment with this.

‘Although they say education doesn’t work and all that jazz, well even if I can teach people basic first aid of a cut, which you think everybody knows, but they don’t.’ (Betsy)

It is podiatrists’ ethical duty to educate patients which is consistent with the guidelines that frames approaches to rendering diabetes podiatry care.^{21,44} The above participant appears resolute in her efforts to maintain this approach, perhaps in a setting where there may be inconsistencies between her and her colleagues. However, in spite of potential differential standards of effort, Betsy maintains a focus to stay within the guidelines is a priority of her care.⁴¹

When considering this cluster of subordinate themes, the findings of the participants that anchor these to the superordinate theme are of vulnerability. This plays out in terms of poorer quality of patients’ lives⁴⁵ and the advancement along the pathway to amputation.^{46,47} Furthermore, the participants are aware of the high risk for end stage complications such as DFD. As such they want to use their skills to improve the quality of patients’ lives which may aid in preventing, delaying or reducing the severity of the development of these lesions and terminal treatment such as amputation.⁴⁸

The evidence is clear that morbidity and mortality are disproportionately high in this cohort which may provide the impetus for podiatrists to treat with diligence and care.^{49–51} A deeper interpretation is in alignment with an English novelist⁵² which seems of good fit to the clinical picture and findings presented by the these participants. This metaphor points to a picture of extreme vulnerability that is difficult to reverse.

‘A person is among all else a material thing, easily torn and not easily mended’.

This quotation aligns well with the pathological changes in the lower limb and in the lives of those affected with diabetes as the podiatrists use their best endeavours to ‘mend’ patients in their care.

Superordinate Theme 2: Podiatric Challenges

The first subordinate theme ‘absence of postgraduate programmes’ informs an argument for podiatrists who express a wish to engage in study pathways specific to diabetes podiatry.

‘There is no Maori health pathway for diabetes service that’s something I am really interested in starting to implement.’ (Aroha)

‘There are not many educational pathways in New Zealand; there are very little educational pathways that are targeted to diabetes.’ (Betsy)

‘Looking at more Post Grad specific stuff. . . . Maybe one day a diabetic sort of Post Grad thing.’ (Ethan)

These findings suggest presence of an unmet need for specialist or more advanced training within the podiatry profession which could lead to provision of improved podiatry care.⁵³ Nationally funding for this is only available to Senior Medical Officers, not allied health professionals within our tax funded health system.⁵⁴

This, in turn, leads to another challenge, lack of recognition, which may present a challenge to improving standards of care.

‘I think we’ve not respected enough in New Zealand, compared to other countries, which is quite disheartening’ (Aroha).

The lack of advanced education in diabetes podiatry indicates there may be improvements; however, resourcing, funding and policy may play their part. In spite of their lack of a speciality pathway, the following perspectives on specialising have been used by participants to describe a podiatrist’s professional profile.

‘I’ll think of that word. . . .expert is probably a good word.’ (Fran)

‘I hope they see me as a specialist.’ (Aroha)

Arising from deeper interpretation a cautionary note is offered for those considering themselves to be experts but have not received specialist training. This could potentially lead to a state of over-confidence or hubris.⁵⁵ This arises as podiatrists are referring to themselves as experts yet there is no clinical or postgraduate training pathway in place that if followed would ordinarily be expected to qualify them as a specialist. The consequential risk that could develop is that podiatrists could paint themselves to be better at their jobs than they actually are. Whilst a delicate choice of words is used, this occurrence means podiatrists should not use such a title unless they are suitably qualified. A potential way around this may be to consider these podiatrists as specialising, but cannot yet be considered specialists until educational pathways are instituted that may aid in the attainment of this qualification.

The second subordinate theme which forms part of this superordinate theme ‘Podiatric challenge’s’, is ‘improving health outcomes for Maori’. Maori are the indigenous people of New Zealand who are over-represented in diabetes statistics.⁵⁶ This is due to differential access to quality of

life indicators such as lack of access to cultural, economic political and social determinants of health.^{57–59} Healthcare for Maori should be delivered within a cultural context favourable to Maori rather than from a world view of dominant New Zealand European culture, as this approach may aid in reducing the ‘unfair’ burden of diabetes which they sustain.^{60,61} This commitment was set in place with Maori at the Treaty of Waitangi signing in 1840, at Waitangi, in the Bay of Islands.⁶² The Treaty, New Zealand’s founding document is an agreement between the British Crown (and therefore by proxy the New Zealand Government) and Maori. For reasons outside the scope of this study, the Treaty has been and still is a contentious political symbol, yet it is also seen as a contemporary framework for policy that focuses on Maori.^{63,64}

The three guiding principles which inform healthcare policy enshrined in the Treaty are Partnership: a collaborative process between, in this case, podiatrists and Maori to achieve healthcare gains; Participation: enabling Maori to reduce inequalities (addressing more favourably the over-representation of Maori in diabetes statistics^{51,65}) and Protection: where governance policies of the Crown are favourable to Maori. These are known as the ‘Three P’s’.⁶³

‘I really see like how the three P’s can really drive that’ (Aroha).

To, in part, reduce the trauma Maori suffered through colonisation podiatry conduct towards Maori is framed within preferred governance structures.^{66,67} Disposition toward Maori through adopting or being familiar with Maori cultural practices are central to this process.^{68,69}

Thus, indebtedness to Maori is held by podiatrists from their sphere of practice, as they are agents of the Crown who supply services in government-funded hospitals honouring the partnership provisions of the Treaty (the ‘three Ps’). Podiatrists cannot, however, be expected to solely assuage the foot health burden imposed on Maori due to the impacts of colonisation. They can, however, by being disposed toward Maori, in a manner which is acceptable to Maori with lead to better outcomes. A deeper meaning can be ascribed to this which is of paramount importance.⁷⁰ Maori want to be included in society on an equal basis as people of non-Maori ethnicity. It is only when this happens that parity may be reached in diabetes statistics between Maori and non-Maori, allowing Maori to move forward in the community which they live.

Dealing with the poor outcomes associated with the presence of DFD^{4,71–75} is a constant challenge for podiatrists who deal with these phenomena.^{76–78} This forms the third subordinate theme ‘dealing with diabetic foot disease’.

“I see a patient that’s got ischaemic ulcerations” (Clyde)

This is a common outcome of peripheral vascular disease^{79,80} with some patient’s trajectory toward amputation occurring as ulcers become infected.

“You know the black gangrene they literally die before your eyes” (Betsy)

DFD also presents as a state of pain when peripheral neuropathy and peripheral vascular disease develop.^{81,82}

“Quite a lot of pain and these sorts of things common with ischaemic patients” (Ethan)

With limited arterial perfusion in the lower limb, pain often occurs,⁸² which is consistent with this perspective. Yet another phenomenon of DFD also noted is the presence of Charcot neuroarthropathy.

“Numbness or tingling of the foot, right through to Charcot foot” (Fran)

Whilst Charcot foot may be rare, the life-changing consequences of this element of DFD can be mitigated with early intervention.^{83,84}

A feature common to all these statements was reflective thought (Table 1). There were few embellishments in the comments, which could be interpreted as value laden and ‘intense’, particularly as podiatrists may relate to the seriousness of these developments. However, these developments need to be explained to patients with the usual professionalism expected of a podiatrist⁶⁷ and treatments such as amputations or other life-changing interventions need to be discussed in spite of fears patients may hold toward them.^{85,86}

Superordinate Theme 3: Best Outcomes

The development of the third superordinate theme ‘best outcomes’ is built upon the shared beliefs of the participants that practices and perspective adhered to in secondary care engender the best outcomes that are possible. Two subordinate themes were developed: ‘early detection of risk factors’ and ‘the multidisciplinary team (MDT) approach’. The first subordinate theme is now analysed.

Participants provided independent comments that were in synergy in regards to support of early detection of risk factors – the TGP spawning DFD⁴ if they remain unchecked.⁴⁶

‘Identify their risk factors’ (Aroha).

‘We see patients at the early stages’ (Clyde).

‘He didn’t have to go too long without a diagnosis’ (Drew).

‘The community podiatry programme is picking up people earlier’ (Fran).

One participant also highlighted risk in a different light, that of a prognostic indicator.

‘Yeah if you are looking at the risks that’s all a predictor isn’t it so ulcerations predict amputation’ (Betsy).

These statements provide a focus on assessing risk during early intervention as this measure reduces absolute risk for development of DFD such as ulcers and development of Charcot foot.⁸⁷

When interpreting this analysis in a collective sense, there was a visual theme of confidence from a body language perspective in relation to this surveillance aspect of podiatry care, as all participants were open and relaxed in their disposition.

At a deeper level of interpretation, all participants share a concern, and as such hold a high awareness that this is one aspect of care that needs to be undertaken with diligence and competence, which is the minimum standard of care required by podiatrists.⁸⁸ This may be related to the greater severity and number of the TGPs a patient has and may accord a greater risk not only for amputations, but also for premature death.⁸⁹

The second subordinate theme is the 'multidisciplinary approach'. This is a centralised model of care, as the MDT provides integrated diabetes care in one place.⁹⁰ This is considered to be the gold standard of care due to the complex needs of patients with DFD and in terms of how podiatry services are delivered^{91,92} as it is seen as the most effective method of delivering podiatry care in diabetes care settings.⁹³

'Where we work here we have team of clinicians, we had this team before we had our actual more targeted multidisciplinary team.' (Betsy)

'I am really lucky to be a part of an awesome interdisciplinary team.' (Aroha)

'I feel lucky that we're in a multidisciplinary setting because if you're in isolation you'd be very limited in what you could do.' (Drew)

'Also, the diabetes team we do work with. I guess in the hospital you have all the specialists.' (Ethan)

'It's not just podiatrists but other team people working for us.' (Fran)

Intervention using the multidisciplinary approach can reduce amputation rates by 50–85%.⁹⁴ A MDT approach is also considered to be the most appropriate form of podiatry involvement as this consists of each profession interfacing with the patient contributing unique skills and perspectives to treat DFD.^{4,95,96}

In two recent studies, the researchers stated improvements in mortality, quality of life and reduction in the frequency of major amputations as important beneficial findings.^{97,98}

Due to the increase in the New Zealand population and people living longer the health burden of diabetes is growing^{99,100} meaning costs of providing this care are increasing, which can become prohibitive when set against the needs and expectations of the New Zealander population.¹⁰¹

Two participants reported feeling lucky to be part of the MDT team. They also independently concluded this is the correct approach to render diabetes podiatry care, this perspective was also in synergy with the views of the other participants.

A sense of propriety on the part of the participants emerges from analysis where podiatrists feel proud to be delivering care in alignment with the evidence,^{91,94,97,98,102} particularly as it is often not possible to commit to this in smaller New Zealand community settings.¹⁰¹ This may also add to the feeling of luck reported by two of the participants as they can potentially be acting as role models by demonstrating they are providing services which meet international standards of care.^{91,98,103}

Journalling Analysis

During each interview, a parallel focus was placed on non-verbal body language and changes in voice dynamics as this dual approach aids in developing the participant's interpretations in regard to the TGP. These observations were recorded and marked in a journal (Table 1) so they could later be identified in the transcriptions taken from the Dictaphone. This was dealt with on a case by case basis. From this, descriptive coding was produced. Descriptive coding produced from close Journalling analysis is also considered good practice when using an IPA methodology.¹⁰⁴

As can be seen in Table 1 the use of quietly spoken words is interpreted as stressing the gravity of the subject being discussed which may be due to fear and anxiety evoked when efforts by podiatrists are 'not rewarded' and poor outcomes occur.¹⁰⁵ Also, the use of hand gestures may be a means to allay fear or for hope of better times ahead.¹⁰⁶ Participants also visibly relaxed when reflecting on interventions that went well, such as discharging a patient whose foot ulcer resolved. Some cases of the TGP are complex; when considering these treatments, some participants used long pauses in speech whilst gazing momentarily into the distance, which may have been due to thoughtfully searching for words to negotiate a difficult topic. Three participants also used humour to deflect a negative experience associated with the TGP which may have been a coping mechanism.

Finally, the journalling entries also recorded body language such as lowering of the head by participants when they dealt with the sadness of deaths of patients in their care.

Conclusions

The lived experience of treating and managing patients in diabetes secondary podiatry care has been analysed and interpreted. The enquiry revealed the following findings: a lack of diabetes-specific postgraduate courses, that a renewed commitment to Maori healthcare be addressed, tighter surveillance programmes be established to increase the opportunity for early detection for risk factors of diabetes and

maintaining a focus on patient education to improve self-care. These are best approached using a multidisciplinary team. This suggests renewed focus, with new priorities for dealing with diabetes-related complications by setting an agenda for podiatrists and hospital managers to aspire to, in order to, once again, put the patient at the centre of care.

Limitations of the Research

The recruitment of participants was undertaken from large urban hospitals amidst MDTs with whom there is a strong team culture in place. Targeting this group can potentially skew the findings which may be more relevant to similarly sized hospital MDT's, rather than attributable to MDTs should they exist at smaller centres. In spite of this perceived difference, this homogenous sample is considered of 'good fit' for sampling in IPA.²⁴

It is sometimes difficult to know when a participant is becoming side-tracked rather than talking of issues relating to the TGP, as both events allow participants to express their lived experience in a way that is important to them. If a participant does become side-tracked it can limit the data as the interview moves away from the research question.

The methodological approach adopted for this research is IPA. The findings cannot be generalised to all populations. However, they may have some applicability to podiatrists in other centres.

There is also potential for the lived experience of the researcher to 'interfere' with their interpretation of the data, as the researcher is also a podiatrist. To limit potential bias, the role of reflexivity aims to separate the stances of the researcher from those of the participants.

Suggestions for Future Research

When reviewing and reflecting on the emergent themes, one of the main elements of the TGPs is the apparent difficulty podiatrists are tasked with, which is made more difficult by the poor lower limb health status of patients receiving their care. The findings of this research suggest that current treatments and knowledge of the TGPs can be improved.

This is not to say current interventions do not make a difference, but ways to improve diabetic foot disease outcomes may prove to be more effective and efficacious with improvements in knowledge by patient and podiatrist. To meet this challenge, there is a need to focus on improving knowledge through improved collaboration within the MDT and the educational opportunities for podiatrists noted previously is also seen as essential.

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Appendix

Abbreviations

- DFD: Diabetic Foot Disease
 IPA: Interpretative Phenomenological Analysis
 MDT: Multidisciplinary Team
 TGP: Three Great Pathologies