# **Rural and Remote Health**



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# ORIGINAL RESEARCH

# The experience of living with a traumatic hand injury in a rural and remote location: an interpretive phenomenological study

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### ABSTRACT

**Introduction:** The aim of this research study was to gain an understanding of how rural and remote residents in North Queensland, Australia, engaged in work, activities of daily living tasks and social activities following a traumatic hand injury. Findings from a previous retrospective survey with these participants revealed that patients experienced difficulties such as pain for many years after their injury; however, because of the survey methodology, the voices of participants were not heard. This study contributes to a larger project that seeks to propose a model of service delivery to rural and remote residents who have sustained a traumatic injury.

**Methods:** Utilising an interpretive phenomenological research design, data were gathered through in-depth, semistructured interviews. Fifteen participants were recruited into this study and questions were designed to explore the experience of having a traumatic hand injury in rural and remote areas of North Queensland.

**Results:** The thematic analysis indicated five major themes: injury and impairment, pain, occupation and activity, and resilience. Participants reported that having a hand injury often caused further injury due to the impairment. The pain experienced could be 'all consuming' yet participants reported 'pushing through' this pain to complete daily tasks. Participants reported that they would 'go mad' if they did not work and highlighted the importance of activity in their recovery. Participants felt grateful at having their hand and thought towards the future. Being self-reliant was important but they were willing to accept support from others when needed. **Conclusions:** Incorporating activity and occupation in rehabilitation programs as opposed to focusing on strict protocols is an important consideration in the recovery process of rural and remote residents. In particular, engaging in activity and occupation was



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an important part of managing the pain associated with the hand trauma. This research also found that participants demonstrated resilient qualities while recovering from a traumatic hand injury. Health professionals who work with people from a rural and remote location with a traumatic hand injury should consider a treatment model that encourages active patient participation, identifying collaborative treatment goals that align with the values of people living in rural and remote locations. Education regarding the high risk of further injury due to the nature of, and exposure to, the type of work and activity in rural and remote locations is also recommended.

Key words: activities of daily living, hand injuries, pain, resilience, work.

### Introduction

Findings from a previous retrospective survey that explored the impact of a traumatic hand injury for people who live in rural and remote locations in North Queensland, Australia, revealed that participants experienced ongoing difficulties such as pain or stiffness for many years after their initial injury<sup>1</sup>. These difficulties resulted in a moderate to extreme impact on their day-to-day lives, with work and leisure activities often the most affected. Work tasks were predominantly manual in nature and considered especially important in rural and remote locations<sup>1</sup>. This previous survey, while highlighting important points surrounding the impact of traumatic hand injuries in rural and remote locations did not explore in detail the issues raised by the respondents. Voices and stories of patients can contribute positively to service delivery improvements for traumatic hand injury in rural and remote locations<sup>2</sup>.

The literature highlights the importance of working in partnership with, and being responsive to, the cultural and specific needs of people who utilise the service when designing rehabilitation programs<sup>3</sup>. There are also concerns that clinical practices and guidelines, which have been developed in metropolitan locations, are unlikely to fit in rural and remote locations as they may not take into account the differing values and needs of residents<sup>4,5</sup>. This issue is particularly relevant for hand therapy rehabilitation programs, which require strict adherence to protocols

through the prescription of systematic movements with specific numbers of repetitions<sup>6</sup>.

The aim of this study was to gain an understanding of the lived experience of rural and remote residents who have a traumatic hand injury. It seeks to understand their experience of engaging in occupation or 'things which people do in their everyday life', which can include work, activities of daily living and social activities<sup>7</sup>. Exploring the lived experience and the meanings attributed to these experiences can assist in the development and evaluation of services and supports required following a traumatic hand injury<sup>8</sup>. This current study contributes to a larger project that seeks to propose a model of service delivery to rural and remote residents who have sustained a traumatic injury.

# Methods

### Interpretive phenomenology

This qualitative study used an interpretive phenomenological research design, where the goal was to increase the understanding and meaning of human experiences and practices<sup>9</sup>. It also explored 'the essence of lived experience' by interviewing people living with a traumatic hand injury in a rural and remote setting<sup>10</sup>. The researcher, using an interpretive phenomenological approach, sought to hear and understand the voice and 'lifeworld' of the participant<sup>11</sup>. In interpretive phenomenology, the researcher's own background and practical knowledge is considered part of the



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perceptual lens<sup>11</sup>. Indeed, it is the researcher's knowledge base that leads to specific ideas about how the inquiry needs to proceed to produce useful knowledge<sup>12</sup>.

### Recruitment strategy

Participants in this study had previously attended the hand therapy service at The Townsville Hospital Occupational Therapy Department and had responded to a retrospective survey<sup>1</sup>. Fifteen participants were purposefully selected according to gender, age group, residential location and injury type from demographic information provided in the surveys<sup>13</sup>. This process ensured a broad representation of rural and remote residents who sustain a traumatic hand injury and receive treatment in a public hospital facility. The number of interviews was chosen to allow for generation of rich and meaningful information<sup>13</sup>. Clients resided in the rural and remote zone according to the Rural, Remote and Metropolitan Areas (RRMA) remoteness classification<sup>14</sup>. Participants were contacted by mail with a follow-up phone call to confirm participation.

### Interviews

Data were gathered through in-depth, semistructured interviews that explored the experience of having a traumatic hand injury in rural and remote areas of North Queensland, Australia. Each interview ran for an average of 60 minutes, which allowed for in-depth exploration of issues<sup>13</sup>. Questions were based upon issues raised in the retrospective survey and the researcher's own experiences of working with rural and remote residents with a traumatic hand injury<sup>1</sup>.

Participants were asked to describe some of the difficulties they experienced because of their hand injury; the activities they no longer did because of the hand injury; the effect of the hand injury on their work life; how having had a hand injury made them feel about their day-to-day life; and its effect on their future.

Interviews were conducted either at the participant's residence or at a location agreed to by participants and

researcher. Interviews were taped with permission and transcribed verbatim from audio files. Pseudonyms have been given to ensure confidentiality.

### Data analysis

Following transcription, the first and second authors individually coded the transcripts, making notes against the transcript. Van Manen's method of isolating thematic statements using the selective highlighting process was utilised<sup>10</sup>. These statements were grouped into themes and subthemes. Meetings were held to ensure consensus with the analysis. During the writing process, the first author reflected on the themes that had emerged, moving between the parts and the whole of the text<sup>10</sup>.

Interviews were sent to participants for member checking to ensure validity of the data<sup>15</sup>. In addition, Leximancer (http://info.leximancer.com) was utilised, which supported the thematic analysis undertaken by the researchers. The use of Leximancer can reveal relationships not previously uncovered by the researcher and can increase reliability in analysis<sup>16</sup>.

### Ethics approval

The Townsville Health Service District Health and Research Ethics Committee (14/07) and James Cook University Ethics Committee (H2697) provided ethical approval to conduct the study.

### Results

The thematic analysis indicated four overarching themes: injury and impairment, pain, occupation and activity, and resilience. These themes and subthemes do not exist as separate entities; they are interrelated and connected in their description of the phenomena under investigation<sup>17</sup>.

### Experience of the injury and impairment

**'A freak event':** Participants discussed that the injury occurred while they were doing routine work or leisure tasks



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that they had been doing for many years. The event that resulted in the injury (eg a bullock getting out of control while being tailed and tagged, a winch on a boat breaking, or a fire occurring) was described as an 'out of the ordinary' or freak event. Two examples are highlighted below.

Kerry reported that she had been:

... putting cattle through the race to tail and tag them before they went on the truck to the sale gate. It was really a freak accident because the gate had been shut and it slid open and I grabbed it and my hand must have been out ... and the bullock hit the gate ... so yeah ... that's a lot of weight behind it, 900 kg bullock hitting it and it just smashed to the bone.

For Mark, who lives on a large cattle property, fencing was one of the many tasks required for maintaining the property and was done on as regular basis:

I was fencing and I had a cut-off saw on the back of the car ... I deliberately work on the back of the car and I had cleared an area and just a freak ... somehow a spark got flipped over the back, got the grass going and because I run a generator to run the saw with the noise and the fumes of the generator, I didn't smell the smoke ... by the time I'd realised that it was going, I had a shovel and I nearly got it out ... just then a freak of wind came out, so then I thought 'Well, OK, I'll jump on the tractor. I'll use the bucket of the tractor to scrape a fire break' which was very slow and ... I nearly beat it ... all the time the flames were just there and basically what I was doing was steering with ... my right hand but shielding my face with my left hand and that's why ... my hand ... and my face and my two elbows ... that's what got burnt.

**Impairment:** As a result of their injury, issues such as loss of strength and movement in the hand were noted. For the participants, this was significant due to the implications the impairment had on their day-to-day tasks. Some examples of the impact of their injuries follow.

I used to get bottle tops and crush them ... instantly, and I can't do that anymore, no way in the world, I've been trying and trying. (Adam)

You pick up a piece of timber without thinking ... you think you've got it and it goes plunk ... it sounds stupid but you feel like an idiot. The strength is in the wrong place when you grip. (Harry)

I can't vacuum because the vibration would send me off my head and I have not got the strength to pull the mop back and forwards. (Leanne)

If I am looking at handling someone ... usually people won't lash out at you but they will just struggle to be arrested, resist or whatever so ... you know if you're holding them and having to put a cuff on or whatever you just haven't got that strength in there. (Dean)

It's still really sensitive like, especially where the finger's gone ... it's still really sensitive to touch. (Nancy)

**Further trauma:** As a result of the initial injury and the impairment, there were often subsequent accidents. Many returned to work with less strength or movement in their hand and caused further difficulties. The nature of their work also meant that they were placed at greater risk of further injury. The following examples highlight this issue.

If I could've hung onto that rope like I should've been able to ... once a horse would drag me from here to Timbuctoo before I'd let go but ... I could not hold it and ... because I tried, it just smashed it straight into it. (Iris)

I fell over out here one day, I tripped ... and I was in so much agony and I was screaming out to [husband] and he come out and he knows I can't get up because I can't push down on my wrist ... I've just got to stay there. (Edna)



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### Pain

Not only did participants discuss the issue of pain in the interviews, some were in visible discomfort and admitted that they were in pain. The presence of pain was closely linked with reduced strength and range of motion, which limited engagement in occupation and activities. Descriptions from participants are highlighted below.

**All-consuming pain:** Participants discussed how the pain was constant and would occur from the smallest knock, when doing a task, either work or personal care, or even while they were not doing anything.

Leanne injured her arm following a fall from a ladder while working as a shop assistant in a rural town. For her, the effect of the ongoing pain was 'just like your whole system just shuts down ... it's almost like when the pain is too much'. Leanne was also unable to breastfeed following the birth of her second child as she could not hold her son.

He breastfed really well except that at night if my arm was sore I would tense up and he couldn't feed so he was pretty distressed through the night. I would have loved to have breastfed him ... it [the pain] has robbed me of that. (Leanne)

Changing nappies also caused pain.

I had him on the change table and he brought his legs up and brought them down and he must have hit me where that screw is ... I just flaked it on the floor ... I kind of, just slid myself over and then just got him by the feet as he was sitting up by that stage and I kind of just pulled him down on the floor to me. (Leanne)

**Managing the pain:** Participants discussed inventive ways in which they managed the pain, or when they did not want to take medication.

I've even tried rubbing chillies on it to ease the pain. (Chris)

It's like somebody's driving needles ... knives in your hand there ... honestly I just feel like getting it out on the anvil with a hammer and just banging or cutting it off. (Chris)

**Avoidance and protection:** Participants described being protective or conscious of their hand injury and avoiding situations that could potentially cause pain and further injury.

If people come up to shake hands I stick out my other hand ... because I am very protective of it. (Fiona)

Once you got comfortable you didn't move, not even to go to the toilet ... you'd hold on as long as you could because you knew it would take you another 3 hours to get it so that it did not hurt. (Leanne)

**Pushing through the pain:** Participants talked about having to put up with the pain or push through in order to get tasks done. For many, the importance of completing tasks or work was important, so not allowing the pain to overtake their day was vital.

Yeah it hurts whether it's holding something heavier and just doing the sweeping. I just flex one hand while I've got it in the other hand and just sort of push through it. (Iris)

I look at pain like this ... if it's not going to kill you, then you should be able to do it. (Iris)

I used to think about it because it hurt if it got bumped but then you just get used to it ... now I don't worry. (Kerrie)

### Occupation and activity

Loss of roles/loss of independence: The importance of independence and returning to prior roles were highlighted, particularly when participants discussed their distress at not being able to do the things they used to do. From the participants themselves:

I've lost my independence; that's the main thing ... and everything I did is just memories. (Edna)



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I couldn't go back to work because ... trying to look after this, trying to do exercises, doing everything ... it's impossible so they put me on the disability pension. I loved my work. I miss it. I do. I still feel like I see myself out there ... it's part of your life that you've no longer got. (Fiona)

I don't have a bath unless someone's home and I always say it's like a little kid 'Oh I'm going to the bath now; I'm going to the bathroom, to the toilet now.' (Leanne)

**Feeling useless and frustrated:** For participants who could not do what they wanted, it became a frustrating and unsettling experience.

Working makes me feel as though I am doing something and now I feel like I am just hopeless. (Edna)

When you are brought up in the bush, you can turn your hand to anything and everything ... if you can't, well ... you get left behind and ... we were taught right from little fellas cos the old man he could do anything, do all your own mechanics and your own welding and everything you know and now you're back to sort of one and a half hands ... oh my oath I feel frustrated not being able to do that work. (Chris)

**'1'd go mad if I wasn't working':** The ability to work or be productive was vital to people. Work gave purpose and meaning to their lives and provided an important distraction from their injury. These sentiments are highlighted by the following quotes.

Yeah (I went to) hospital and had an X-ray but ... I still continued to work with just one hand. (Iris)

My whole life has changed and if I didn't have a garden ... to keep me busy it would be a lot harder to manage. (Fiona)

I was worried that I'd be stuck in an office or ... have to have an inside job. I put it off for a while to recover and then I got back into riding horses because you lose your confidence so quickly. (Kerrie) Work helps me not think about stuff. It keeps my mind busy and when I come home I've got stuff to do so I'm not sitting around thinking about it. (Gertrude)

Role of activity in recovery: Participants felt that being involved in meaningful activity helped with the return of movement and strength in their injured hand. Importantly, feeling as though they were doing something and being 'occupied' was vital to their emotional wellbeing.

I probably wouldn't have gotten this far without doing the fishing and stuff in the first place. If I stayed at home and wasn't a keen fisherman ... and let it go I wouldn't end up with the flexibility I have today. (Adam)

If I had sat at home and not gone back to work, it would have hurt more. I would have had more pain. I always say if you sit around and you've got an injury, you feel the pain a lot more than if you can get out. (Iris)

It is fantastic ... I suppose you could call it my own career my own business that I do... that keeps me happy as well as going out and riding horses ... it gives me something to do. (Kerrie)

Having something to do all the time ... like as we are travelling I can thankfully hand-sew, which is good ... keeps my mind occupied. (Nancy)

### Resilience

The major theme of resilience was identified after analysis of subthemes. Resilience is defined in the literature as a person's ability to adapt and grow despite being exposed to significant stressors<sup>18</sup>. Possessing a positive outlook, being determined, having supportive families, getting on with life and adaptation are considered to be important qualities that contribute to resilience<sup>18,19</sup>.

**Getting support:** Participants reported that being able to accept help to get tasks achieved was an important part of living with a hand injury in a rural and remote location. Many



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noted that the isolation and lack of services meant that it was important to ask for help, particularly with domestic chores. Participants provide examples of this phenomenon.

When I first got out of hospital I had strangers coming up to me 'Are you all right love ... let me open the door for you ... here I'll help you with that'. There were total strangers helping me and I mean that was good. (Fiona)

He [husband] sees me and he'll grab it off me and do it and ... I just go 'Yeah I know my stinking hand' ... no I don't mind being helped at all. (Iris)

If the kids are there, I'll call the kids out to come and help me ... the kids help me a lot with things. (Julie)

My parents came out and just looked after our domestic animals and Dad's pretty good. They come in the holidays quite a bit so he checked the waters and then my two neighbours ... a neighbour in the east and a neighbour to the west and whenever dad did find a couple of things that were wrong he rang them and they'd come up straight away so you rely a lot on your neighbours out here. (Mark)

**'I am grateful':** Despite pain, physical impairment and, for some, a loss of independence, participants were able to think positively and be glad for what they had and not focus on what they had lost.

I guess I'm pretty lucky in how it ended up. I've got movement. (Dean)

It's disappointing I can't work anymore; it's something you've got to live with. It's not a death in the family. I mean I've always got my hand and I am grateful, extremely lucky that I am alive but it's something that I have to learn to live with. (Fiona)

I've still got my arm and I've still got at least three fingers that can do something. (Leanne)

I am alive and as I say to doctor and everybody 'there's more meat on a brisket bone than there is on my hand' ... I'm lucky I'm alive. I've got my hand; that's a big bonus. (Fiona)

**Adaptation:** Participants reported how they and their family had adapted to their injury to maintain independence and remain productive. Some specific examples to demonstrate this process follow.

No one in this house should ever eat pumpkin cos it's travelled a kilometre and a half before it goes in the pot. I've got a cleaver and I just hit it like that and you go and get that bit and then you cut it again and it flies off and it's the most travelled pumpkin in Queensland ... they don't kind of watch too closely what I do luckily. (Leanne)

One of my boy's mates put motorbike handles on the end of the broom and the mop and it actually helped. (Julie)

I can mow the yard, I've learned ... I push the mower up against the post or a rock or something out there where it won't go anywhere and I put my left foot on it and I start it with my left hand and I just pull ... sometimes I swear at it. (Fiona)

Instead of the ordinary rope reins ... about as thick as your little finger ... ones I've got now probably about as thick as your thumb. I've gone double so I've got double the thickness to hang onto when you ride. (Chris)

My son is 11 months but from about 4—5 months he would grab his feet and pull his bottom up cos I couldn't ... change the nappy ... I had no chance of holding his legs up with that hand so I just say 'help mummy' and he lifts his legs up. (Leanne)

**Self-reliance and management:** A strong sense of 'being able to do it themselves' was evident in the interviews. Participants reported that although they were happy to accept help initially, it was important for them to be able help themselves.



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You've got to ride with the punches, otherwise you'll go down. If I can't do something I will sit and mull over it, I don't just turn around and say I can't ... I'll get someone else to do that. I'll work something out that I can do it. (Harry)

I'm a very determined person and nothing will stop me ...
I've been like it all my life and nothing will pull me up from
something I've got to do or I want to do. (Iris)

Chris, a contract musterer, lives alone in a town of 100 people in remote North Queensland. His story really highlights this issue:

I don't want to rely on anyone. If you do that in the bush, you'll go down, you'll just disappear ... when I come home people said 'oh yeah we'll come and help you'. If I can't do it, nobody else is going to do it and you work out ways of getting around it ... City folks, if you tell them they can't do something well then they say 'I have been told I can't do that' and give up. They've got no ticker. You live out in the bush. You learn to improvise.

A report written about Chris's future work capacity stated he would never ride again, which infuriated him:

She said I would never ride horses again and that's the worst thing you can ever tell me that you can't or never will be able to do anything, cos I'll just prove them wrong.

He was keen for all the treatment and reports to conclude:

Once you know everything's up to me, then it's up to me ... to make the decisions whether I sink or swim. I want to be in charge of me ... be home in me own space ... If I want to do something I can do it.

**The future:** Thinking of the future and making changes for the future was an important part of the recovery process. For some, the injury was a life-changing event that forced them to reassess their priorities.

All I want to do, I don't care if it's the last thing I do ... to do calf roping and team roping at the rodeos. (Chris)

I have to get off the tools sooner. I think it's going to get worse when I get older, you know, and I can see that now ... well, I am financially moving into other options where there is a lot less movement and physical strength used in those sorts of areas. (Adam)

### Rural and remote context

Participants talked of occupations traditionally associated with rural and remote locations: tomato shed graders, graziers, musterers, cattle station managers and tannery workers. They mentioned the difficulty faced when trying to perform important tasks, such as riding horses, when living in a rural and remote location.

Leanne discussed the limited takeaway food options in her town when she felt unable to cook for her family.

... don't worry about it ... why don't you buy tea? Well, for a start ... you could have pizza one night, a Chinese another night, you've got McDonalds and a Subway ... what else are you going to do?

Having to drive long distances to get to appointments caused pain for Chris.

Well, you just imagine driving from here to Georgetown in that old rig of mine ... It's made of the good stuff that old girl ... and it's just torture driving from here to Georgetown.

Despite the difficulties of living in an isolated area with a traumatic hand injury, participants still preferred living in a rural location and often accepted these limitations in return for the benefits.

I don't worry about it much because I suppose this is our lifestyle and we've chosen this ... this is our choice and ... I've grown up with it, we're used to it ... you don't know much different. (Kerrie)



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In the bush ... clean air and there's no phones. Here you're at ease. (Chris)

# Discussion

The aim of this study was to gain an understanding, through the exploration of lived experience, of how rural and remote residents who have a traumatic hand injury engage in work, activities of daily living tasks and social activities.

The themes that emerged from this current study were the experience of the injury and impairment, pain, occupation and activity, resilience and rural and remote context.

Participants believed that *injury* was a 'freak' or out-of-the-ordinary event that occurred while engaging in routine tasks. *Rural and remote* residents, however, are exposed to higher risk of injury from large animals, equipment or poor occupational health and safety practices<sup>20,21</sup>. Participants reported that *impairments* previously noted in the retrospective survey had not resolved, which reflects research outlining that people in remote areas are more likely to report a long-term condition due to injury<sup>1,22</sup>. Education surrounding risk exposure and likelihood of further injury due to the nature of work and ongoing impairment is recommended.

Being productive by being able to return to work or a chosen activity was considered a significant part of recovery and should be an important consideration for health professionals when planning rehabilitation programs for people in rural and remote areas who have had a traumatic hand injury. This finding concurs with research that highlights the particular importance of productivity for people who live in rural and remote locations<sup>4,23</sup>. The emphasis on strict guidelines and protocols associated with hand therapy rehabilitation may need to be re-evaluated when considering the importance of productivity and the difficulties with being able to adhere to these protocols when faced with the needs of rural life. Hand therapy research shows that factors such as the physical environment, societal attitudes, patient lifestyle, coping

styles, education and life experience need to be considered when prescribing exercises<sup>24</sup>. Not being able to drive, often a precaution outlined following hand surgery, may result in a person not attending appointments or affect their ability to be self-sufficient in this environment where alternative forms of transport are limited or non-existent<sup>25</sup>.

Designing a treatment program that incorporates and acknowledges engagement in *occupation and activity* as well as prescriptive exercise protocols can also address the pain associated with a traumatic hand injury. Participants in this study described moments when the pain was all consuming and interfered in their daily functioning. Frequently, activities that had the potential to cause pain were avoided. Engaging in activity and occupation, however, was important in dealing with the ongoing, sometimes all-consuming *pain* that occurred as a result of these injuries. These themes reflect research exploring rural and remote residents' experience of living with chronic pain and the impact of occupation on chronic pain<sup>26,27</sup>. In these studies, participants kept active to help focus on issues other than pain<sup>26,27</sup>.

Rural and remote residents have been described as stoic when dealing with adverse events or issues, such as pain<sup>4,28,29</sup>. Stoicism refers to the quiet endurance of adversity and setbacks with courage and grace, without the display of feelings or complaint<sup>28</sup>. Not wanting to burden family, not wanting people to feel sorry for them and keeping silent about the pain are indicators of stoicism<sup>28</sup>. While there were stories from participants that reflected stoicism in this study, such as not wanting to burden family, we found that participants also discussed coping mechanisms that reflected a sense of positivity and hope.

Resilience refers to effective coping and adaption in the face of adversity<sup>18,30</sup>. The subthemes identified in this research of getting support, thinking of the future, feeling grateful and adaptation have been discussed in the literature as being the qualities of a resilient person<sup>18,19,30</sup>. Participants in this study also reported that they were frustrated at losing their independence — a quality often associated with rural and remote residents<sup>31</sup>. Despite this desire for independence,



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they were willing to accept support from their family and adapt to the change in their circumstances. This flexibility and ability to change to circumstances can provide a greater sense of control<sup>26</sup>. For health professionals working with rural and remote clients with a traumatic hand injury, this willingness to adapt, think of the future and accept support when required can be vital in facilitating collaborative treatment planning and realistic goal setting.

### Study limitations

A possible limitation of this study was that the first author had previously been involved as the treating clinician with a number of the participants - it may be argued that this influenced questions and subsequent responses. Interpretive phenomenology, however, requires the researcher to engage with the phenomenon and bring to the research inquiry past experiences, prior knowledge and opinions<sup>32</sup>. The knowledge base of the researcher guides and directs the questioning to produce useful information about the lived experience of a traumatic hand injury<sup>33</sup>. It is felt that these interviews benefited from this previous relationship as it led to richer responses and enhanced opportunity for the participants to have a voice. The use of memos and member checking clarified and validated the interview data. The reliability of the thematic data analysis occurred through intercoder agreement with the first and second authors and the use of computer-based data analysis (Leximancer) verified the thematic analysis<sup>34</sup>.

### Conclusions

This current study explored the lived experience of a traumatic hand injury for people in a rural and remote location in North Queensland, Australia. The interpretive phenomenological methodology used in this research has allowed the voices of patients to be heard and will contribute to the enhancement of service delivery for traumatic hand injury in rural and remote locations. The themes that emerged from this current study were the experience of the

injury and impairment, pain, occupation and activity, resilience and rural and remote context.

Findings highlight that incorporating activity and occupation in rehabilitation programs, as opposed to focusing on strict protocols, is an important consideration in the recovery process of rural and remote residents. In particular, engaging in activity and occupation was an important part of managing the pain associated with the hand trauma. This research also found that participants demonstrated far greater resilient, as opposed to stoic, qualities while recovering from a traumatic hand injury in that they had a willingness to adapt, think of the future and accept support. Health professionals who work with people with a traumatic hand injury from a rural and remote location should consider a treatment model that harnesses this adaptability and active participation, identifying collaborative treatment goals that align with the values of people living in a rural and remote location. Education regarding the high risk of further injury due to the nature of, and exposure to, the type of work and activity in rural and remote locations is also recommended.

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