

# Acute burns of the hands – physiotherapy perspective.

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## Abstract:

**Background:** Acute burns of the hands are complex and may impact on various aspects of a person's life. Physiotherapy rehabilitation and restoration of hand function is critical for the patient's independence and re-integration into society.

**Purpose:** This study aimed to explore the perceptions and experiences of physiotherapists in the management of patients with their hand burn injuries.

**Method:** Five focus groups consisting of physiotherapists and physiotherapy assistants working with burn injured patients from each of the five selected public hospitals in KwaZulu-Natal were recruited. An explorative qualitative approach was adopted.

**Results:** Physiotherapists emphasised that the acute management of the hand was trivialised due to a primary focus on the survival of the burn sufferer. Therapists identified several factors that determined the patients' level of participation and motivation in therapy one of which was the procedural pain experienced. The role of the therapists' within the rehabilitation framework was found to be critical to their recovery however there appeared to be a breakdown in the collaboration and communication among health care professionals to the detriment of effective intervention.

**Conclusion:** A multidisciplinary team approach is the foundation in the management of acute burn injuries and during the trajectory of the trauma care continuum.

**Keywords:** Burns of the hands, physiotherapy perspective.

**DOI:** <http://dx.doi.org/10.4314/ahs.v16i1.35>

**Cite as:** Dunpath T, Chetty V, Van Der Reyden D. *Acute burns of the hands – physiotherapy perspective. Afri Health Sci.* 2016;16(1): 266-275. <http://dx.doi.org/10.4314/ahs.v16i1.35>

## Introduction

The increased survival of patients with severe burns brings into focus the rehabilitative challenges and recovery that such patients must face. Patients are confronted with a diversity of physical, psychological, social and emotional challenges during their recovery process.<sup>1</sup> Hand burn injuries are very common<sup>2</sup> and despite the fact that the surface area of the hand represents less than 3% of the total body surface area (per hand) an isolated hand burn injury may have major implications on the quality of life of an individual<sup>3,4</sup>. Such an injury may be physically disabling and cosmetically disfiguring to an individual and therefore impact on performance in rehabilitation, behaviour and return to society and professional life<sup>5</sup>. Hands are

the primary means by which we communicate with each other, participate in everyday activities and engage with our environment. In this respect, the International Classification of Functioning, Disability and Health has been employed as a conceptual framework in order to gain a holistic understanding of the impact of a hand burn injury from a physiotherapy perspective with a view of targeting rehabilitation strategies.

Physiotherapy rehabilitation is an integral component of burn care in order to maintain the range of motion, prevent contracture development, to maximise function as well as to promote psychological wellbeing and social integration<sup>6,7</sup>. Physiotherapists caring for patients with burn injuries may face very unique dilemmas and challenges, as they often out of necessity have to inflict pain on an individual that is already traumatised, anxious and fearful in order for that patient to recover<sup>8</sup>. The acute phase of rehabilitation is also critical for the patient and rehabilitation professional, as common psychological responses reported following burn injury include: fear, anxiety, anger

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and emotional distress<sup>9,10</sup> and often require intervention of a supportive or psychological nature.

The effect on appearance and aesthetic complications of a visible burn injury cannot be undermined, as this may have a significant bearing on the individual's body image and ability to return to society and professional life<sup>11</sup>. Disfigurements were found to often result in social stigma and restriction in participation in society<sup>12</sup>. Physiotherapists are in a prime position to facilitate and motivate these patients to return to their communities with a sense of new hope and purpose.

It also emphasises the need for implementation of a specialised and dedicated multidisciplinary team in the holistic management of the burn injured patient to optimise the patients' physical and psychological recovery<sup>4,6</sup>. The perceptions and experiences of physiotherapists represent an untapped reserve of insightful and valuable knowledge about patients with acute burn injuries and the challenges they often face during the rehabilitation journey.

## **Methodology**

### **Research design**

This study aimed to explore the perspectives and experiences of therapists working with patients with acute burns of the hand and the impact that this may have on their participation in rehabilitation therefore a qualitative research design was employed. Van Manen in 1984 stated that the essence of an experience may be described in language only when the descriptions enhance our understanding of this experience in a deeper and more insightful manner. Thus, an explorative quantitative approach was adopted to pave the way for the study's purpose.

Adopting this approach was further supported by several reports of people who have experienced various types of injuries or illnesses and those attending to them which may inevitably lead to improvements in care<sup>13</sup>.

### **Research setting**

This study was conducted at five public funded, provincial hospitals in KwaZulu-Natal, South Africa which were purposively selected on the basis that they manage burn patients in the acute phase. Four hospitals identified are major teaching institutions situated within a metropolitan

area and provide tertiary services to their respective communities.

One of these provincial hospitals houses the country's only dedicated and specialised adult burns unit. The other four hospitals have no dedicated unit for the treatment of adult burn patients. These patients are accommodated within the surgical unit.

### **Study population and sample**

A purposive sample strategy was used to obtain participants as this was likely to yield the most trustworthy and rich data for this research. The study population included physiotherapists and physiotherapy assistants registered with the health statutory body, all ages, any gender and therapists who had been in direct contact with patients with burns injuries within the past 2 years. The sample size included twenty-four participants (n=24) with five focus groups being conducted.

Physiotherapy Assistants work under the supervision of the physiotherapist who is vicariously liable for all actions or omissions of such staff. Physiotherapy assistants usually implement treatment as prescribed by a qualified physiotherapist. They hence have considerable hands on experience.

### **Data collection**

A pilot study was conducted at the University of KwaZulu-Natal, Physiotherapy Department by conducting a focus group with four lecturers, each participant being a qualified and registered physiotherapist. Based on the feedback provided, areas that needed attention were identified and the interview schedule was revised accordingly. The focus group guide was revised to include therapist's perspectives on the patients' emotional experience of the burn injury and how this may have affected their behavior towards therapy. Data regarding the emphasis of the burn injury within the rehabilitation framework was included to gain a more holistic viewpoint of current practices.

The researcher conducted five focus groups with the physiotherapists and physiotherapy assistants at the physiotherapy department of the respective hospital. After receiving permission from the Department of Health, CEO's, Medical Managers and Heads of the Physiotherapy Departments at the respective hospitals, a formal presentation of the aims of the study was conducted. Partici-

pants who fulfilled the inclusion criteria were invited to participate on a voluntary basis in the focus group discussions. Suitable times were scheduled in collaboration with the head of the physiotherapy department. Each focus group consisted of 3-6 participants and lasted 45 to 60 minutes.

The focus group discussions were recorded using a digital voice recorder. The recording was transcribed verbatim as soon as possible after each discussion. The participants were coded using numerical values to maintain anonymity.

### **Data analysis**

The recorded data from the focus groups was transcribed into electronic form by the researcher in order to conduct the thematic analysis and provide the researcher with the opportunity to familiarise oneself with the data. An expert in qualitative research verified the transcriptions in order to improve the validity of the data.

A six phase guide by Braun et al in 2006 was modified and used as a guideline in the thematic analysis process<sup>14</sup>. The nodes obtained from the focus groups were captured and themes, sub-themes and categories that emerged were noted. The researcher explored individual themes and attempted to determine possible interrelatedness between themes.

Trustworthiness and credibility in this study was ensured by peer de-briefing and member checking<sup>15,16</sup>.

The data obtained from the focus groups was checked by the participants from each focus group by communicating the researcher's interpretation to them directly after the focus group and requesting their input as to the accuracy thereof in order to affirm the accuracy.

Thick, rich descriptions and detailed accounts of the narratives were also implemented to lend to the credibility of the study. The purpose of the use of thick descriptions was to provide as much detail as possible so that the reader may be immersed in the participant's personal

accounts of their experiences working with acute burn injured patients.

### **Ethical considerations**

Ethical approval was obtained from the University of KwaZulu-Natal, Humanities and Social Sciences Ethics Committee. Permission from the Chief Executive Officer, Medical Manager's and Heads of Physiotherapy Departments at the respective hospitals was obtained following the line of protocol. Participants were informed of the nature of the study and invited to participate on a voluntary basis in focus group discussions. Participants were made aware of their right to terminate their participation at any time. Confidentiality was preserved by assigning codes to each participant. Focus groups were, for reasons of confidentiality and privacy, conducted within a private and quiet venue within the respective hospitals.

### **Results**

A total of twenty-four therapists consented to participate in the focus group discussions (FGD). The sample consisted of twenty-one physiotherapists and three physiotherapy assistants. One focus group was conducted at each of the five institutions which included the therapists based at that institution.

There were only two male and twenty two female therapists with ages ranging from 24 to 51 years. The therapists had varying years of experience in the physiotherapy profession; sixteen therapists had between two to ten years of experience whilst eight had over eleven years of experience. Therapists reported that most of the cases of acute hand burn injuries treated often involved other areas of the patient's body.

Three thematic nuclei emerged whilst exploring the perceptions of physiotherapists and physiotherapy assistants with regards to the effect of burns of the hand on an individual's participation in rehabilitation. Table 1 demonstrates the three themes comprising of therapy experiences, the multidisciplinary approach and the hospital environment.

*Table 1: Themes, sub-themes and nodes*

Sub-Theme	Nodes
<b>1. Therapy Experience</b>	
Participation and compliance in therapy.	<p><i>"These are patients that don't want to be touched; they don't want to be touched; they just want to be left alone. In the acute phase you are so sore, you so painful why would you bother. You would only bother if somebody manages to decrease your pain level." (1).</i></p>
Psychological and emotional challenges	<p><i>"He continually said, it was very bad, it was very bad, all he was thinking of was what happened, it's the emotional aspect surrounding the whole event, it's part of the patients healing " (1)</i></p>
"Put yourself in their shoes"	<p><i>"Most of your rehab session with a particular patient is spent talking or trying to motivate and give them that grief counselling before your rehab actually starts. You've got to break down that barrier yourself. There's bigger things they worried about so I think you've got to take that into consideration." (5)</i></p>
Motivational factors	<p><i>"If you do not put yourself in their shoes and feel what they're feeling you won't understand, listen to them and give yourself some time. Empower these patients, ensure independence, acceptance for what they look like". (3)</i></p> <p><i>"The patients come from different backgrounds, if you have more support from home you will be more motivated to comply with therapy. The family tends to feel sorry and do everything for the patient while they should be doing it for themselves. Independence is important. Education to the family members is very important." (3)</i></p>
Living with scars	<p><i>"It's cosmetic as well, the truth is they never going to look the same, their hands are never going to look the same, they can have the best grafts in the world, the scars will be there. They may be ostracised by their communities." (5).</i></p>
<b>2. Multidisciplinary Team Approach</b>	
<p>Survival is a priority</p> <p>Poor communication, collaboration and teamwork.</p> <p>"They in boxing gloves"</p> <p>Critical period for counselling.</p>	<p><i>"They (burn team) focus more on saving the patient's life physically, they don't focus on the whole picture, They seem to not tackle the hands although we all are claiming it's such an important part of the body, they don't see it as an emergency." (1)</i></p> <p><i>"We all function in silos, you do your bit and the other person does their bit, one of the conditions where you need the whole team to come together is with burns patients."(1)</i></p> <p><i>"In the acute phase it's the pain and you aren't able to do much with the hands or they in boxing gloves or they are completely bandaged and you can't do much."(5)</i></p> <p><i>"Burns, the very nature of burns, it is very traumatic and violent, violent. Their lives change drastically, literally within a split second and to adjust to it is a huge, huge thing for them. I don't think we readily offer to the burns patients our psychological counselling." (5)</i></p>
<b>3. Hospital Environment</b>	
Environmental challenges	<p><i>"We don't have a designated treatment area, if we had a nice treatment area to work with them then you wouldn't have another patient who has a laparotomy laughing at the patient with the burn."(2)</i></p>

## Theme 1: Therapy experiences

This theme contextualises the therapist's personal experiences of the physiotherapy rehabilitative process and the factors affecting the patient's level of participation and compliance in therapy.

Therapists perceived patients to be withdrawn and reluctant to participate in the therapy process. In the acute phase of the burn injury, therapists believed that pain was one of the focal points in the patient's daily life. The anticipation of pain and the subsequent anxiety experienced by the patient appeared to create barriers to physiotherapy intervention which would normally include mobilisation, passive stretching and exercises of the fingers and hand. It became apparent that therapists believed that by establishing a trusting relationship with the patient and ensuring adequate pain relief prior to commencing the therapy session the level of participation and compliance may be enhanced.

*"These are patients that don't want to be touched; they don't want to be touched; they just want to be left alone. In the acute phase you are so sore, you so painful why would you bother. You would only bother if somebody manages to decrease your pain level." (1).*

One of the fundamental experiences of the therapists was addressing the psychological and emotional challenges of the patient as therapists felt that patients were still coming to terms with the trauma of the burn incident. As a result, patients appeared to be inclined to mood changes, depression and an overwhelming sense of fear of survival or of death. Patients seemed to be so traumatised by the event that this affected their willingness to participate and engage in therapy.

*"He continually said, it was very bad, it was very bad, all he was thinking of was what happened, it's the emotional aspect surrounding the whole event, it's part of the patients healing"(1)*

Focus groups members expressed deep feelings of compassion and empathy towards the burn injured patients throughout. The therapists demonstrated an understanding of the pain, agony and the trauma experienced by the patient and felt that pain and distress should be to a greater extent taken into consideration when treating a burn injured patient. Therapists felt they were in a prime position to provide a listening ear, empower the patients by

education and motivation and provide basic counselling. Physiotherapists felt that since they were the patient's first line of contact, patients often expressed their feelings and emotions about the burn trauma during the therapy session. Therapists also indicated that they would refer to the social worker or psychologist where necessary.

*"Most of your rehab session with a particular patient is spent talking or trying to motivate and give them that grief counselling before your rehab actually starts. You've got to break down that barrier yourself. There's bigger things they worried about so I think you've got to take that into consideration." (5)*

*"If you do not put yourself in their shoes and feel what they're feeling you won't understand, listen to them and give yourself some time. Empower these patients, ensure independence, acceptance for what they look like". (3)*

Therapists felt that family support was important as this empowered and motivated the patient to overcome their fears and participate in therapy. Although therapists expressed the importance of family participation in the rehabilitation process they however identified overprotection and encouragement of the sick role, even with the best of intentions from families, were hindering the progress of the patient by assisting them to perform everyday tasks. Therapists expressed the need to advise and educate family members so that they would provide the patient the opportunity to gain his/her independence and thus reach his/her goals.

*"The patients come from different backgrounds, if you have more support from home you will be more motivated to comply with therapy. The family tends to feel sorry and do everything for the patient while they should be doing it for themselves. Independence is important. Education to the family members is very important." (3)*

Living with scars, disfigurement and disability caused by contractures and deformities of the hand appeared to have an adverse effect on the patient's body image. Therapists felt that patients are susceptible to feelings of rejection and isolation within their social circles and community due to changes in their physical appearance.

*"It's cosmetic as well, the truth is they never going to look the same, their hands are never going to look the same, they can have the best grafts in the world, the scars will be there. They may be ostracised by their communities." (5).*

## Theme 2: Multidisciplinary Team Approach

This theme explored the challenges experienced by the therapist working within a multidisciplinary team environment. Therapists expressed that they felt that the impact of the acute hand burn injury on patients particularly those with extensive burns, was trivialised and marginalised by the burn team. Therapists stated that the management of the hand was addressed only after medical procedures such as resuscitation, stabilisation of the patient and the large surface area burns were grafted. The hand was not seen as an emergency despite the importance of the use of the hand for function as verbalised;

*“They (burn team) focus more on saving the patient’s life physically, they don’t focus on the whole picture, They seem to not tackle the hands although we all are claiming it’s such an important part of the body, they don’t see it as an emergency. (1)*

A sense of frustration and despair was evident due to the poor communication and limited collaboration amongst the multidisciplinary team.

*“We all function in silos, you do your bit and the other person does their bit, one of the conditions where you need the whole team to come together is with burns patients.”(1)*

Therapists verbalised that due to the poor referral system between the medical team and the physiotherapist, patients were often referred late to therapy or once complications such as contractures had set in, and by this time it was often too late.

Therapists expressed their frustration and despair working as a team with nursing staff due to high workloads and rapid patient turnover. Wound dressing times and therapy sessions werenot scheduled appropriately and often it appeared that nurses and physiotherapists displayed a poor sense of teamwork and co-operation with each other. Bandaging the fingers and thumb in a fist limited active and passive mobilisation of the fingers and thumb during physiotherapy rehabilitation.

The following quotation illustrates this challenge:

*“In the acute phase it’s the pain and you aren’t able to do much with the hands or they are in boxing gloves or they are completely bandaged and you can’t do much.” (5)*

Therapists acknowledged and empathised that the burn injured patient had endured a traumatic and often violent experience and therefore they felt that patients would benefit from psychological and social work intervention. Therapists believed that psychological counselling at an acute stage was crucial in preparing the patient mentally and emotionally for the challenges that they were to face during the rehabilitation process. However, it appeared that an ineffective referral basis existed between psychologists, social workers and therapists.

*“Burns, the very nature of burns, it is very traumatic and violent, violent. Their lives change drastically, literally within a split second and to adjust to it is a huge, huge thing for them. I don’t think we readily offer to the burns patients our psychological counselling.” (5)*

A mutual and collaborative relationship appeared to exist between the physiotherapist and occupational therapist (OT). Therapists felt that patients benefited from this relationship as treatment was often reinforced by one or the other as verbalised; “double treatment, double the effect” (4). In addition to this physiotherapists and occupational therapists appeared to complement each other whilst working together towards a common goal.

## Theme 3: Hospital Environment

This theme contextualises the challenges faced by the therapist within the hospital environment. Therapists felt that as the hospital was a busy institution with a steady flow of patients being admitted, there is constant pressure to discharge patients as soon as they were stable so that hospital beds were available for the next intake. Although therapists showed an understanding of the situation and the pressure placed on the medical team, they nevertheless experienced on-going frustration as their services could often not be provided at an adequate level.

Other frustrations expressed were a shortage of pain medication, limitations for patients to access the rehabilitation facility, poor infrastructure and lack of specialised units for burn injured patients. Patients were often treated in the surgical wards in institutions where there were no specialised units or within the physiotherapy gym where they had very little privacy. Hence therapists were concerned that the therapy environment was not conducive to ensuring the dignity and privacy of the patient.

*"We don't have a designated treatment area, if we had a nice treatment area to work with them then you wouldn't have another patient who has a laparotomy laughing at the patient with the burn."* (2).

A closer look at the emerging themes emphasises that apart from the physical challenges such as pain during therapy, the impact of coping with the psychological and emotional impact of the trauma was a significant component from the therapists' perspective. These challenges were further impacted upon by the practical and institutional barriers to effective and holistic management of the burn injured patient.

## **Discussion**

This study endeavoured to explore the perspectives and experiences of therapists working with patients with acute burns of the hand and the impact that this may have on the rehabilitation process. Therapists expressed their frustration at the emphasis on acute burn care which was focused primarily on survival of the patient whereas the implications of the hand burn injury were perceived as insignificant. According to Falder et al the main priority of treatment in the acute phase of a burn injury is preservation of life by consideration of physiological parameters crucial to the patients' morbidity<sup>17</sup>.

Pain was identified as a crucial factor affecting the patients' performance and participation. Therapists felt that pain was a barrier to physiotherapy intervention as patients were reluctant to comply due to the anxiety and anticipation of pain. Therapists found that by developing a trusting relationship with the patient and ensuring adequate pain relief participation and compliance with therapy would improve. This was supportive of a prospective survey research conducted in Tygerberg Hospital, South Africa in 2010 which showed that the majority of adult burn injured patients actually experienced severe levels of pain and anxiety during physiotherapy, correlating with international studies conducted in developed countries<sup>18</sup>. These patients reported that the traditional pharmacological analgesics were inadequate to alleviate procedural pain, caused by physiotherapy management and wound dressings. Although burn injured patients were aware of the benefits of therapy they may become discouraged from complying with the physiotherapist as a result of the pain and subsequent anxiety<sup>18</sup>.

Yohannan et al (2012) conducted a retrospective survey research focusing on 164 burn survivors' perceptions of rehabilitation. In this cohort the most commonly affected areas of burn were represented by the arm and hand (81% and 77% respectively)<sup>19</sup>. The fear of pain during therapy was cited as the primary reason for anxiety in most of participants during the acute phase. Burn pain remains a major clinical challenge and research continues to report that often pain remains undertreated<sup>20</sup>. The research on the psychology of emotion and pain is substantial and there is increasing evidence that emotional stress is associated with greater pain experience<sup>21</sup>.

Family support and care were said to be significant components to facilitate the therapy process and re-integration to their home environment. Family support was identified as a crucial factor that empowered the patient to progress in therapy however therapists also expressed the need to ensure that family members were aware of the treatment goals and encouraged independence in everyday tasks. Blakeney et al (2008) expressed that in some cultures family tend to overprotect individuals with disfiguring conditions in order to express their care, concern and support but this may unintentionally serve as a hindrance to progression in therapy again this emerged as a subtheme in this study<sup>9</sup>.

Therapists acknowledged that the psychological and emotional impact of the traumatic event seemed to affect the patients' willingness to participate in the therapy process as patients were still coming to terms with their burn experience. Therapists felt that they were in a prime position to establish a rapport with the patient by providing the patient an opportunity to ventilate their feelings. Participants expressed that they felt comfortable to provide basic counselling and would refer to the psychologist or social worker if further psychological intervention was warranted.

Richmond and Aitken (2011) proposed a Trauma Outcomes Model, based on the Quality Health Outcomes Model (QHOM), to provide a framework in the management of patients across the trauma continuum<sup>22</sup>. Three priority long term outcomes have been identified in this model which incorporates firstly early phase interventions (pre-hospital, emergency and critical care) to promote survival and reduce morbidity; secondly that humanity and individual dignity is maintained during care

and thirdly to ensure that the physical, psychological, functional recovery and quality of life is maximised. This model takes into consideration the burn injured individual in the context of the physical, psychological, social, economic and cultural environment from the time of the injury through to recovery.

The therapists agreed that the impact of the burn incident was extremely traumatic and a significant experience for the patient which they felt required a compassionate and empathetic approach. This was in keeping with Peck et al 2009 who reported that much of the impact of the burn injury is psychological and patients' young and old experience significant emotional challenges which include; shock, horror, pain, and helplessness<sup>12</sup>. It is common for the individual to re-experience some aspects of the event after a traumatic incident<sup>23</sup>.

According to Blakney et al 2008 emotional lability and anger may be observed in patients during this trying time and often it is the family or therapist who are at the receiving end of angry outbursts which are best understood as necessary ventilation by the patient<sup>9</sup>. It is the actual threat of death which often produces feelings of overwhelming fear or helplessness and this forms the emotional basis for an individual's response to trauma<sup>23</sup>.

A systematic review by Tocco et al (2011) emphasised that a hand injury represents a change in the body image of an individual which is often accompanied by psychological and emotional challenges<sup>11</sup>. The cosmetic acceptance of the hand is highly subjective and can depend on various factors such as age, gender, personality, one's own perception of the hand injury and how one believes others perceive it<sup>24</sup>.

Dahl et al (2012) found that the burn injured patients often attempted to conceal their scars using clothing and some used avoidance of the disfigured part of the body by not looking at or acknowledging that part of their body<sup>25</sup>. The changed appearance is a reminder of the personal history of the burn experience. Re-integration and returning the individual to their role in society is regarded as one of the most significant goals in the treatment of patients with burn injuries<sup>17</sup>. Therapists identified that complications such as stiffness, contractures and deformities of the hand could possibly affect the patient's body image and self-esteem.

Therapists verbalised the poor involvement of the multidisciplinary team in the holistic management of the patients with the hand burn injury. There appeared to be a breakdown in the collaboration, communication and referral system among health care professionals.

A holistic approach incorporating the physical, psychological, social and emotional needs of the individual was considered paramount to the patients' successful recovery and future.

Comprehensive burn management and collaboration amongst health care professionals is a central tenet to provide the best possible care to an individual<sup>26</sup>. It is therefore not surprising that therapists emphasised the fundamental role of the multidisciplinary collaboration in the management of the burn injured patient.

Although therapists emphasised that this acute phase was a critical period for counselling which prepared the patient for physical rehabilitation, patients were not being referred to the psychologists at this stage as well as in the burn unit. This is warranted in the management of the hand burn injured individual so that not only are the physical manifestations of the trauma managed but also the associated psychological trauma of the incident<sup>27,28</sup>.

Physiotherapists and nursing staff often did not function as a team but rather autonomously with limited collaboration usually due to institutional factors, such as workloads and patient turnover. Dressings of the hand were often inappropriate and not conducive to physiotherapy intervention, future recovery of range of motion and functional use of the hand however Long et al (2003) explored nurses' perceptions of their role within a MDT. Nurse's perceptions of their contribution to rehabilitation differed considerably<sup>29</sup>. Nurses working in acute settings appeared to lack awareness of their potential role in rehabilitation thus many opportunities to promote patient's independence and well-being were missed<sup>29</sup>. In contrast, nurses that were guided by rehabilitation principles reported to be more confident about their role in the multidisciplinary team.

A successful relationship was however found to exist between physiotherapists and occupational therapists that seemed to share collaborative and complementary roles in the management of hand burn patients were staff ra-



tios allowed. Physiotherapists and occupational therapists that often “co-treat” are required to establish an effective communication basis and coordination of care with joint responsibility for outcomes<sup>30</sup>. A study by Suddick et al (2007) that may have implications in this study found that the type of communication that could facilitate effective teamwork included having regular meetings, updates, discussions with team members and communicating with the patient and family<sup>31</sup>.

One of the means of fostering and enriching inter-professional practice identified in the literature is through inter-professional education (IPE)<sup>26</sup>. This occurs when health professionals from different disciplines learn about each other specific roles in the care of the patient and has been shown to enhance inter-professional practice amongst health care professionals<sup>26</sup>. This was further supported by Chetty et al in 2012 who emphasised that awareness and understanding into the scope of practice of the various members of the team is a means of promoting collaboration and holistic support<sup>32</sup>. Although implementation of inter-professional practice may pave a way forward for health professionals this transformation is also dependent on environmental factors of the institutions such as the availability of resources, basic infrastructure, workloads and time constraints which pose a challenge to effective and efficient service delivery<sup>32</sup>.

## Conclusion

This study endeavoured to explore the perceptions and experiences of physiotherapists in the management of patients and their hand burn injuries. The findings reveal that a multidisciplinary team approach is the foundation in the management of acute burn injuries and during the trajectory of the trauma care continuum. This therefore needs to be given greater attention in training and ongoing practice in an effort to facilitate effective teamwork and collaboration. An interdisciplinary referral system with the psychologist and social worker is paramount so that patients are psychologically equipped to overcome the emotional disarray often experienced. As burn injuries are a very complex and challenging phenomenon to manage health care professionals need to be aware of the myriad of problems associated with burn injuries in order to provide a comprehensive and collaborative approach to maximising quality health care.

## Acknowledgements

The authors would like to extend their appreciation and gratitude to all the physiotherapists and physiotherapy assistants who willingly participated in this study. Your individual experiences and input has enriched and generated knowledge in the field of burn injuries.

## Conflict of interest disclosure

The authors report no conflicts of interest.

The authors alone are responsible for the content and writing of this article.

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