[RESEARCH ARTCLE]

The profile and experiences of burn-injured patients in KwaZulu-Natal who received rehabilitation to return to work

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ABSTRACT

Background: Information regarding rehabilitative intervention facilitating return to work in burn-injured patients within the South African context is not well documented.
Aim: The study aimed to explore the demographic and clinical profiles of burn-injured patients and their experiences of intervention for return to work at a private outpatient occupational therapy practice in KwaZulu-Natal.
Methods: This study adopted a mixed-methods design. A retrospective file audit of the rehabilitation records (n=40) and patient interviews (n=10) was conducted. The data were analysed separately, merged, and presented in a joint display.
Results: The majority of patients (72%, n=29) were male and within the age range of 32-41 years old. Four themes emerged from the data, namely, (i) the patients' experience of the burn injury, (ii) occupational therapy interventions, (iii) enabling return to work, and (iv) benefits of return to work.
Conclusions: Burn injuries impact the working-age population in KwaZulu-Natal. For a successful return to work, burn-injured patients require holistic intervention, which includes environmental support and physical and psychological intervention. Patient personal factors, such as resilience, should also be considered. Occupational therapy interventions are effective in facilitating return to work. However, there is a gap in the psychological interventions that are provided to patients. Challenges that patients experience, such as limited access to psychological services due to limited funds and human resources, need to be addressed by the multidisciplinary team.

Implications for practice

- Given the high unemployment rate and poverty levels in South Africa, returning to work is vital for patients to reclaim their roles as breadwinners and contribute to the local economy.
- Adequate social support, both from the family and the employer, plays a crucial role in facilitating the return to work of burn-injured patients. Patients who returned to supportive work environments with assistance from colleagues and modified tasks reported greater success in reintegrating into the workforce.
- Burn-injured patients and their families commonly experience psychological trauma, including fear, guilt, anxiety, depression, and low self-esteem. Pain, fear of re-injury, and post-traumatic stress are significant barriers to returning to work. Occupational therapists should incorporate evidence-based psychological interventions into their treatment plans and make necessary referrals to address these issues effectively.

INTRODUCTION

More than 90% of the burden of burn injuries occurs in low- and middle-income countries (LMICs), including those in Sub-Saharan Africa. Moreover, burn injuries are one of the leading causes of disability-adjusted life years (DALYs)[1]. DALYs are a universal measurement utilised to quantify the burden of disease in a

population[2]. Burn-related injuries are highly prevalent in South Africa, with approximately 3.2% of the South African population injured annually[3]. Anecdotal evidence amongst local occupational therapists suggests a high prevalence of working-age burn-injured patients receiving outpatient occupational therapy rehabilitation, including work-related burn injuries, in the Zululand region of South Africa. Despite some South African research on burns management and rehabilitation in the public sector and the paediatric population[4], there remains a lack of research related to return-to-work (RTW) after burn injuries in LMICs. Most research in LMIC focuses on the epidemiology of burn injuries[3]. One of the aims of this study is to contribute knowledge about the clinical and rehabilitative profile of adult burn-injured patients who received occupational therapy intervention to return to work. This will provide occupational therapists with insight as to what is effective in rehabilitation and how treatment protocols can be improved. This study sought to describe the profile of burn patients and explore their experiences with interventions aimed at returning to work.

LITERATURE REVIEW

Gender and age distribution of burn injuries in the adult population

Globally, a more significant proportion of men are affected by burn injuries than women[5]. Studies suggest that young adult males experience the highest burn injury rate[6,7]. Research in high-income countries (HICs) such as Australia indicated that the most significant proportion of burns patients (30%) is in the 25-44 age group[8]. According to one of the largest private hospital networks in South Africa, men aged between 26 and 40 are the demographic most likely to sustain burn injuries[9]. The age range, 18 to 64 years old, of adult burn-injured patients in South Africa is similar to that of other LMICs 5[5,10]. Similarly, a study profiling adult burn-injured patients admitted at a tertiary-level hospital in South Africa found that most of the cohort were male and middle-aged[4], thus inferring that the working-age population group presents with a high incidence of burn-related injuries.

Causes of burn-related injuries

Thermal burns, including scalding and flames, are common causes of burn injuries both internationally and in South Africa[5]. In a study conducted with adult burn-injured patients admitted to a tertiary hospital in the Free State Province in South Africa, the most common causes of burn injuries were flames (38.8%) and hot liquids (22.5%), which were primarily accidental and related to domestic activities (68.4%)[5]. This aligns with research conducted in the Western Cape Province and other LMICs such as Cameroon, Pakistan, and Ecuador, where thermal burns were the predominant cause of burn injuries[8,11-13].

Occupational performance associated with burn injuries

All burn injuries are considered traumatic and require close management and follow-up, including an outpatient program[14]. Impairments caused by burn injuries, such as scarring, contractures and weakness, can lead to physical and psychological distress, which may cause a lower quality of life[14]. Scarring is one of the inevitable consequences of burns, and hypertrophic or raised scars have aesthetic and physical consequences[15]. Hypertrophic scars result in disfigurement and abnormal pigmentation[16]. The reintegration of burn-injured patients with hypertrophic scars into society can be challenging as they experience body image concerns, which often leads to social isolation[17]. Due to the physiology of burn injuries, oedema may occur throughout rehabilitation due to lack of limb movement, inappropriate compression, and comorbidities[18].Other significant concerns in burn management include reduced muscle strength, reduced range of motion, endurance, balance and coordination, cardiorespiratory reconditioning, and reduced performance in Activities of Daily Living (ADLs)[16].

The long-term psychological effects of burn injuries are severe and debilitating[19]. Patients present with anxiety, post-traumatic stress (PTSD), depression, and body image concerns[15,19]. Pain is a significant issue among burn-injured patients. Procedures utilised to manage burn injuries often result in further pain, which affects rehabilitation post-discharge and increases the patient's anxiety levels[19]. Depression is a factor which impacts a patient's quality of life and can result in reduced body functioning[19]. A study done at a tertiary hospital in Pakistan found a depression prevalence of 31.9% in burn-injured patients[20]. Symptoms of PTSD have been evident in burn survivors one year after the initial injury[19]. Patients must now deal with social stressors such as family strain, return to work, sexual dysfunction, and body image changes[21]. Feelings of self-blame, guilt and shame have also been reported as problems which are experienced by burn-injured patients[19]. The feelings of guilt are also felt by the families, who are often affected by the trauma of the burn incident[22]. The families not only have to deal with the emotions of the incident but also have the responsibility of being caregivers, which is physically and emotionally demanding[22]. During the rehabilitation phase educating patients and their families and psychological counselling are essential treatment techniques. Various treatment strategies by an interprofessional team are thus required throughout the treatment process. Treatment techniques described in the literature include outpatient counselling, support groups, psychoeducation, cognitive-behavioural and mood management strategies[22].

Rehabilitation of burn-injured patients

An interprofessional team provides optimal burns management during the acute management of the injury and provides long-term comprehensive rehabilitation[23]. Rehabilitation teams should include occupational therapists, physiotherapists, surgeons, nurses, psychologists, and psychiatrists[16]. Therapists, nurses, and surgeons should communicate the rehabilitation plan of the patients, especially regarding the timing of treatments and the treatment modalities utilised[16]. Physiotherapists play an important role in strengthening, positioning, and restoring mobility[16]. Psychologists and psychiatrists assist burn-injured patients to overcome anxiety, depression, and other psychological issues which they experience[16]. The occupational therapist's role is to improve and maintain range of motion, muscle strength, and endurance through target-oriented activities using splints and scar management modalities and restore activities of daily living, including facilitating return to work[16]. Returning burn-injured patients to work indicates recovery amongst burn-injured patients and healthcare professionals[24].

Being able to work provides a source of income for individuals and is an essential component in shaping the identity of individuals and their social status[25]. Factors such as age, comorbidities, total body surface area (TBSA), burn location, burn severity, and pain are amongst the many factors which affect return to work after burn injuries[8,25]. Internationally, rates of return to work in burn-injured patients also vary from 14%-91%[8]. Research, however, suggests a gap in information regarding existing clinical practices for assisting burn-injured patients in returning to work, challenges in service delivery, and the patients' experience of re-entering the work environment post-burn injury[24,26]. In South Africa, there is a lack of occupational therapy evidence supporting occupational therapists' role in burns rehabilitation[26]. There was thus a need to explore the patients' lived experience receiving rehabilitation for return to work.

METHODS

Study Design

The study adopted a mixed methods design, combining quantitative and qualitative research. In a concurrent mixed methods design, quantitative and qualitative data collection and analysis occur simultaneously and independently from one another[27]. The study was divided into Phase One, a retrospective file audit of the medical/rehabilitation records, and Phase Two, which comprised patient interviews.

Sampling

Phase 1: Retrospective File Audit (Quantitative Phase)

Purposive sampling was utilised in the study as it allowed the researcher to identify participants who could provide rich data on the experience of burns and return to work[28]. The study was conducted in the King Cetshwayo District Municipality on the North-East Coast of KwaZulu-Natal. Phases one and two were completed at a private occupational therapy practice in Richards Bay, providing outpatient and inpatient services to burn-injured patients.

The inclusion criteria for the file audit phase included the files of burn-injured patients who received occupational therapy intervention for returning to work between January 2017 and December 2021, files of patients that were of working age, 18 years and older of all gender and races, files of patients who sustained occupational-related injuries and non-occupational related injuries, and file of patients who successfully returned to work for regular work duties, accommodated or realigned work duties. Occupational therapy files were accessed in hard copy and electronic format. According to the electronic record, 480 burn-injured patients were consulted at the occupational practice between January 2017 and December 2021. A total of 432 files were excluded based on exclusion criteria or because they were lost. A total of 48 files were thereafter identified, and a pilot study was done on ten of these patient files to formulate and trial the data extraction tool. Limitations of the

consent was obtained. Inclusion criteria included burn-injured patients who returned to regular or accommodated duties after receiving rehabilitation at an occupational therapy practice between January 2017 and December 2021.

data extraction tool led to refinement to ensure that only the relevant information was retrieved. More detail was added to the pilot study, which included adding ICD 10 codes, detailing the specific body part burnt, reasons for referrals made to health professionals, length of overall rehabilitation and the occupational therapy treatment modalities were grouped. Eight patients' files were excluded from the 48 as the data extraction tool was refined, thus 40 files (Figure 1, below) were audited using the data extraction tool in the final audit.

Data Collection: Information was retrieved from the 40 files using the data extraction tool. The data extraction tool included biographical details, such as age and gender, and general information, such as comorbidities and the ICD-10 codes. Information related to the injury was included, such as the aetiology of injury, injured body part, degree of depth of the burned body part, and total body surface area involved (%TBSA). Information related to medical and surgical interventions, such as skin grafts and debridement, length of stay in the hospital, and frequency of follow-ups, was retrieved. Return to work for accommodated duties or regular duties was documented. Results were coded, transferred, and organised into an Excel document.

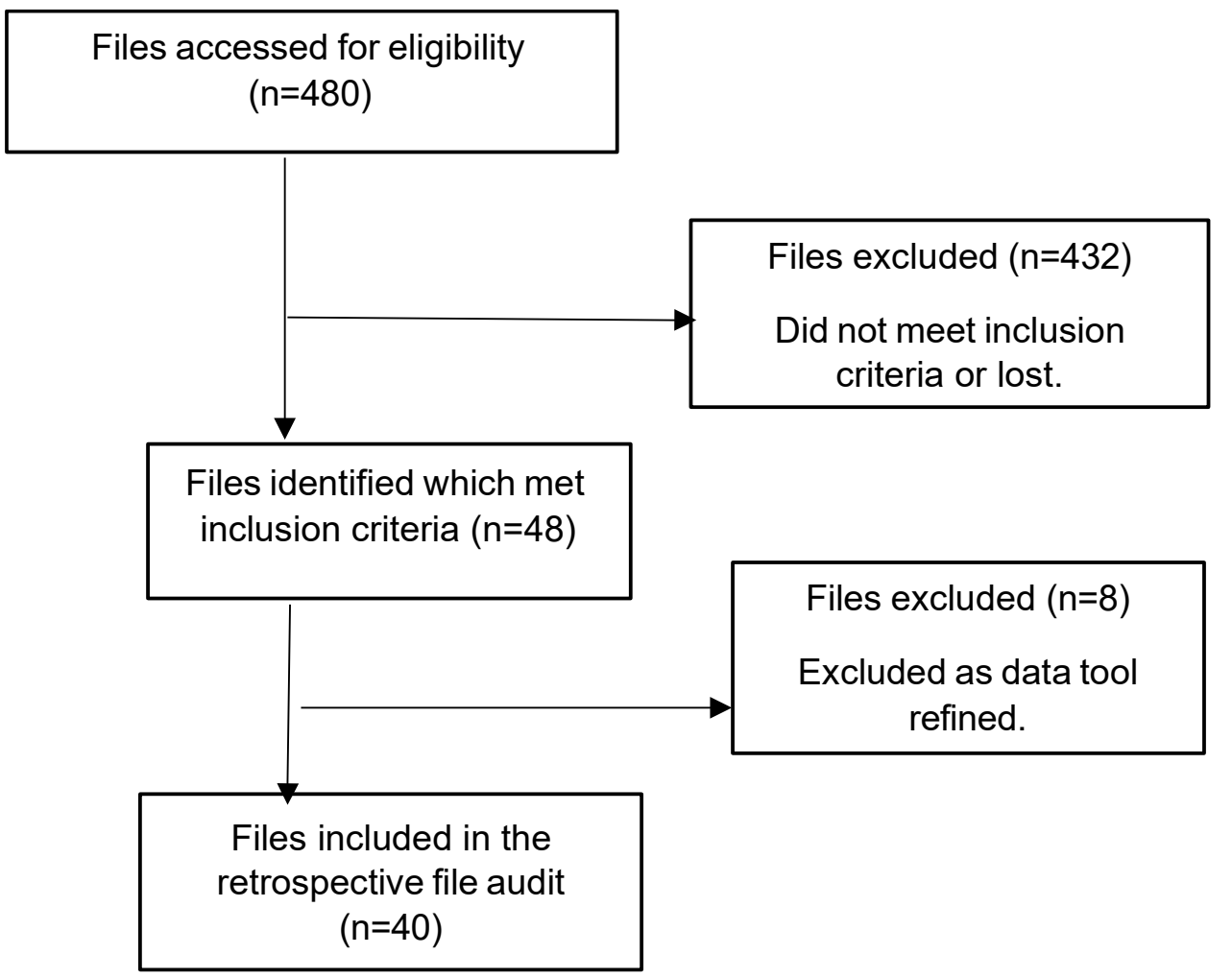

Figure 1: Patient selection for Phase One

Data Analysis: Descriptive statistical analysis was utilised to describe the categorical variables. The data for each variable were analysed on the Excel sheet and represented using bar graphs and percentages.

Reliability and Validity: A pilot study was conducted before data collection to ensure content validity of the data extraction tool. The pilot study allowed for a critique of the data extraction tool to ensure an accurate profile of the burn-injured patient is obtained; thus, construct validity occurs. To ensure reliability, the data extraction tool was utilised with each file audit, and one designated researcher performed the file audit.

Phase 2: Patient Interview Phase (Qualitative Phase)

Data Collection: The first author conducted individual interviews with ten patients, with some interviews done in person and some telephonically for approximately 30-60 minutes after informed

The interview questions were piloted with two of the ten participants, and thereafter, the questions were refined. The semi-structured interviews included open-ended questions about the patient's experience of occupational therapy and rehabilitation, and return to work. The interview questions were based on the ICF framework as it provides a client-centred, holistic approach to analysing health conditions and their effect on activity and participation and considers personal and environmental factors[29].

Data Analysis for Phase 2: Interviews were audio recorded and transcribed verbatim by the first author and analysed thematically[30]. An inductive analysis approach was adopted, and each transcript was read, and initial codes were generated. The codes were grouped to form sub-themes prior to reducing the data to themes. The analysis was completed utilising the ICF framework.

Trustworthiness: Credibility was established in the study by purposive participant sampling. The interviews were audio-recorded and transcribed verbatim, with results analysed and thick descriptions of the interview provided where possible. Confirmability and dependability were considered by using a reflexive journal to identify and eliminate biases. A reflexive journal allows for self-reflection and documents how personal bias and personal beliefs influence each phase of the research process[24]. Dependability was further established by describing the inclusion and exclusion criteria of phases one and two. Triangulation of quantitative and qualitative data further strengthened trustworthiness.

Merging of analysed data from Phase One, Phase Two

The results of quantitative data (Phase one) and qualitative data (Phase two) were analysed separately and merged for comparison (triangulation). The findings were represented in a joint display, with data represented in bar graphs and tables and explored under themes and subthemes.

Ethical Clearance and Considerations

Ethical clearance was obtained from the University's Biomedical Research Ethics Committee (BREC) (BREC/00004104/2022). Gatekeeper permission was received from the owner of the occupational therapy practice. Informed written consent was sought from all participants in Phase 2. They were aware that their participation was autonomous and voluntary, with the right to withdraw from the study at any point, with no adverse consequence to themselves. Throughout the study, principles of confidentiality were upheld, pseudonyms were utilised when providing verbatim transcriptions, and no identifying information appeared on the biographical questionnaire.

RESULTS

Demographics of the patients attending occupational therapy for return to work

The mean age of participants in the quantitative phase of the study was 37 years (standard deviation [sd] of 10.3 years), 72% (n=29) were male as compared to 28% (n=11) who were female. The highest age range of patients was within the age bracket of 32-41 years old (40%, n=16) (Table I, below)

Table I: Age range of patients receiving occupational therapy intervention (n=40)

Age-range	Number	Percentage
22-31	14	35%
32-41	16	40%
42-51	6	15%
52-61	3	7.5%
61-71	1	2.5%
Total	**40**	**100%**

Comorbidities

7.5% (n=3) of the files did not indicate if the patient presented with comorbid conditions, and 37 did (n=37, 92.5%)., Only 8.1% (n=3) of participants were diagnosed with pre-morbid conditions, namely hypertension (5.4%, n=2), diabetes (2.7%, n=1) and high cholesterol (2.7%, n=1).

Injury and Surgical Details

The majority (90%, n=36) of the patients sustained partial thickness burns, which extend into the lower dermis of the skin[31]. Burn injuries to the right arm were most often recorded (34% of participants). The most injured body parts are depicted in Figure 2 (below).

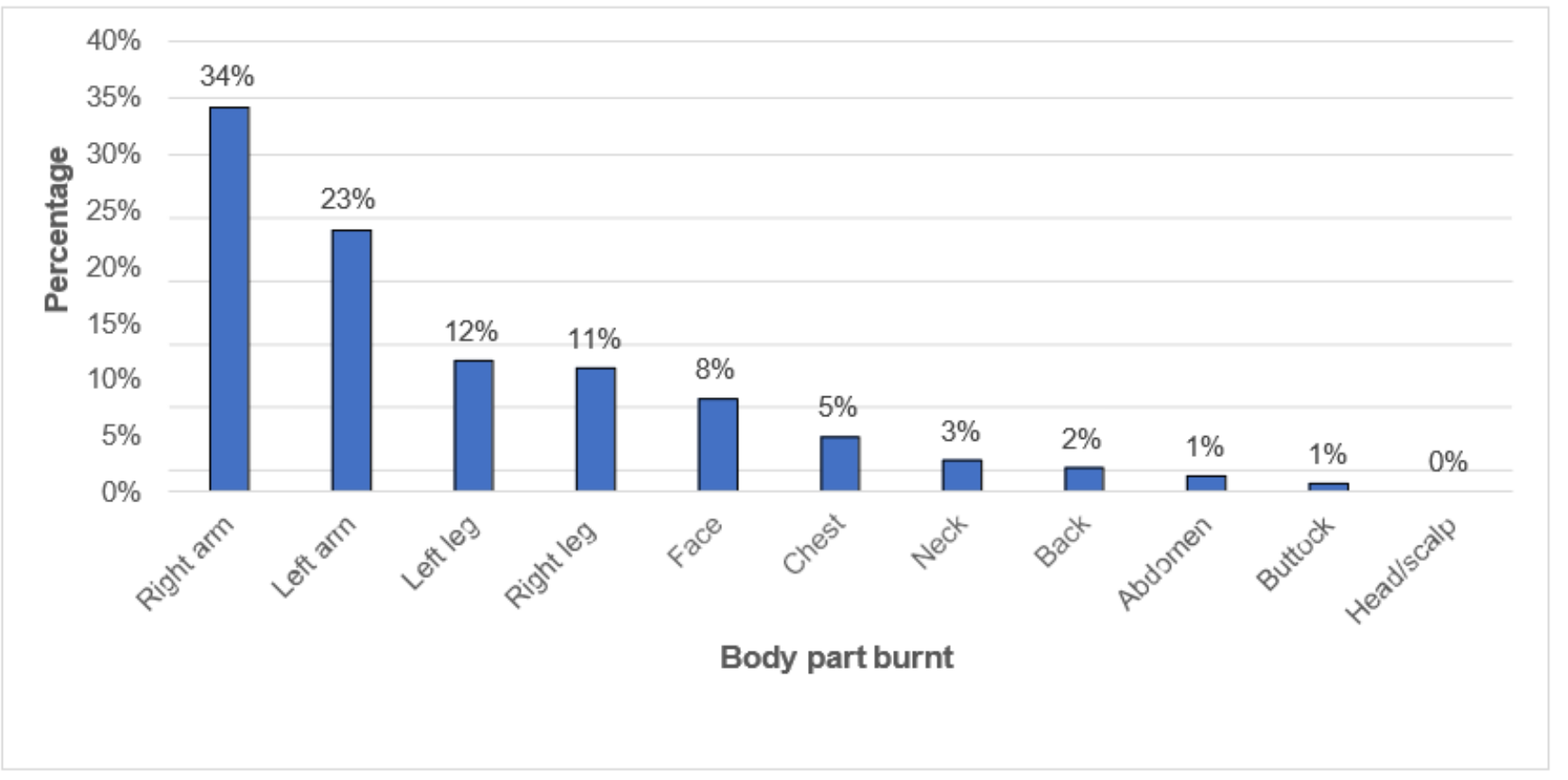

Figure 2: Body part burnt (n=40)

Half (n=20) of the patients' files did not indicate the total body surface area (TBSA) that was injured. Of the 50% that indicated the TBSA, the highest TBSA percentage recorded was 45%. This correlated with the highest number of occupational therapy sessions attended by a patient (n=142). The average TBSA of participants in this study was 12.61%. Work-related injuries accounted for the majority (n=29, 72.5%) of the burn injuries sustained by the patients, and 27.5% (n=11) were non-work related. The most common mechanism of injury (75%, n=30) was thermal burns, followed by chemical burns (15%, n=6) and electrical burns (10%, n=4), with no patients (0%, n=0) sustaining radiation burns, sunburns, or cold burns. Results revealed that 97.5% (n=39) of the patients underwent surgical intervention, such as debridement, skin graft or keloid injections. Each patient underwent an average of six debridement procedures.

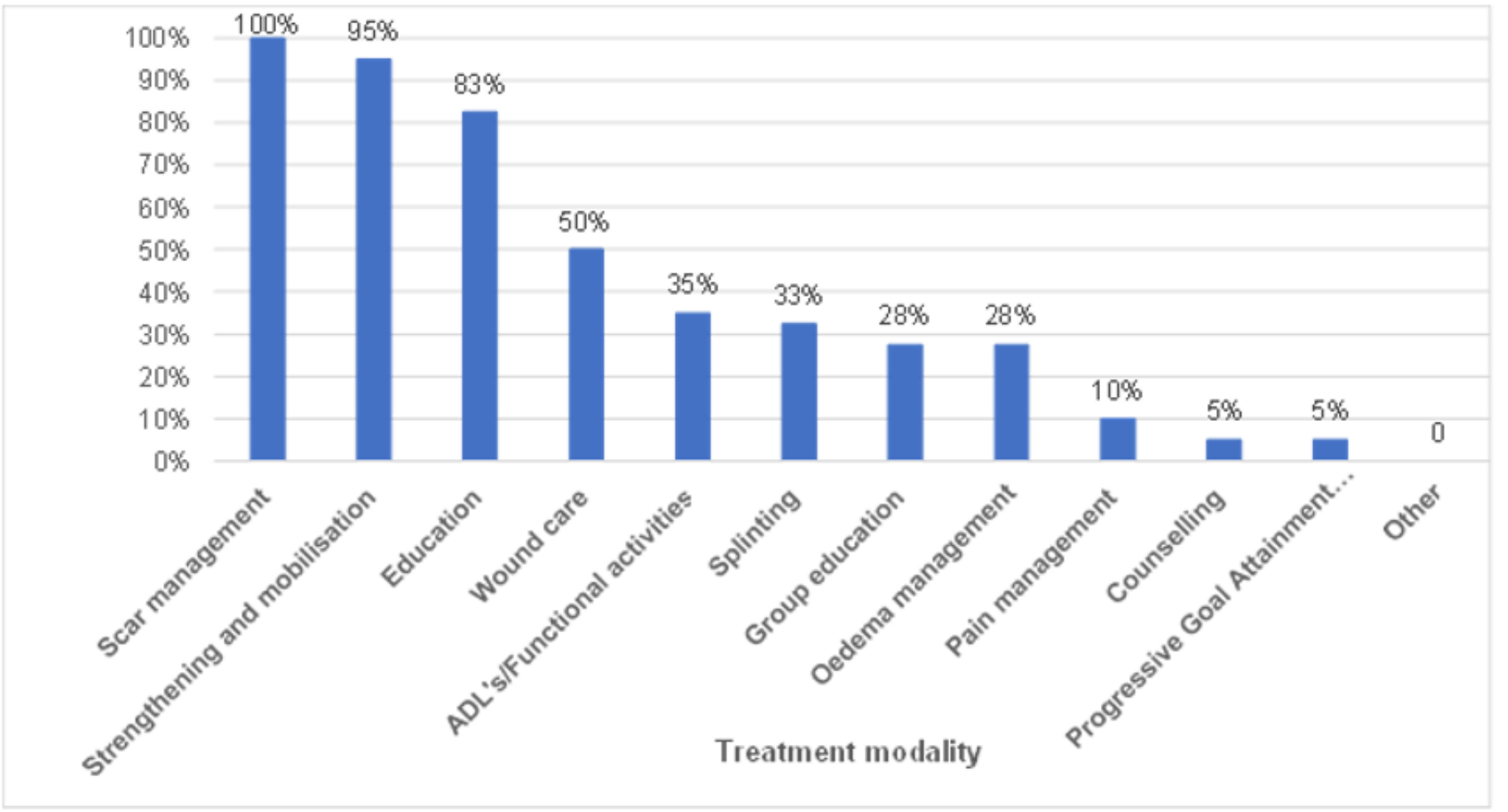

Figure 3 Frequency of occupational therapy treatment modalities (n=40)

Scar management and education were recorded as occupational therapy interventions, which significantly assisted their recovery and return to work (Figure 3, page…). Scar management was done in 100% (n=40) of cases, followed by 95% (n=38) for strengthening and mobilisation and 83% (n=33) for education (Figure 3). Educating patients on burns and their treatment developed their insight and, thus, their compliance in therapy. The Progressive Goal Attainment Program (PGAP), which is a 10-week rehabilitation programme designed to target psychosocial risk factors such as fear avoidance, catastrophising and depression[27], was utilised in 5% (n=2) of cases. The average number of occupational therapy sessions attended by patients was 25.5 days, with 25% (n=10) of patients who missed an average of 1.4 therapy sessions. The average length of stay in the hospital was calculated as 25.8 days.

Findings from qualitative methods

The mean age of patients interviewed was 42 years (sd = 8.9 years), of which five were male and five were female patients. Nine interviews were conducted in person, and one telephonically, and each patient was interviewed once. Four themes with subthemes emerged from the data and are discussed within the ICF framework (Table II, page…). Verbatim quotes are included to present the participant's voice in the four emerging themes.

Table II: Themes and subthemes

Theme	ICF Component	Sub-theme
THEME 1 | The patients' experience of the burn injury	Body functions and structure	"Pain, absolute pain."
		"Fearful and traumatised": The psychological effects of the burn injury.
	Environmental factors	Limited services and support
THEME 2 | Occupational therapy interventions	Body functions and structures	"It was effective, it helped a lot": Positive experience of interventions.
	Environmental factors	"I used to duck and dive you": Negative experience of interventions.
THEME 3 | Enabling return to work	Personal Factors	Patient personal factors
	Environmental factors	Social support
THEME 4 | The Benefits of returning to work for burn-injured patients	Body functions and structure	Psychological Benefits
	Personal factors	Financial

THEME ONE: The Patient Experience of the Burn Injury

The body function and structural impairments experienced by burn-injured patients include both physical and psychological components. Pain was a significant challenge experienced by participants with burn injuries. Additionally, the participants with burn injuries and their families experienced psychological trauma associated with the injury, and there was often limited access to psychological support. Other challenges included environmental factors such as a lack of support from work and patients' difficulty with being compliant with therapy due to access challenges.

Table III: Patient challenges in engaging in rehabilitation and return to work.

Subthemes	Participants views
Pain: Patients voiced pain as a significant obstacle for engaging in rehabilitation.	*"Pain, absolute pain"* **(Mark, male, 48 years' old)** *"...let's say you are taking a shower with hot water, you can still feel, even now...you can still feel like you burning."* **(Gina, female, 37 years' old)**
Psychological trauma for the patient and their families Both the patients and their families experienced psychological trauma associated with the burn injury. Feelings of fear, anxiety, guilt, and poor self-esteem were expressed. These symptoms often persisted long after the traumatic event occurred.	***Fear*** *"It wasn't easy, because I was afraid, because this that that was happening, it was happening at the place where I work too."* **(John, male 36 years' old)** *"They were not happy. It was bad. They actually had a trauma."* **(Sipho, male, 52 years' old)** ***Guilt*** *"Why is this happening to me?* **(Vusi, male, 38 years' old)** ***Anxiety*** *"I was anxious and nervous."* **(Mavis, female, 48 years' old)** ***Post-traumatic stress*** *"I've got nightmares sometimes. I can't explain. I've gone through difficulties...so the trauma is still there."* **(Mavis, female, 48 years' old)** ***Poor self-esteem*** *"Especially my body, I used to love my body, I don't like it as much."* **(Mavis, female, 48 years' old)**
Lack of work support Patients reported that the lack of support from their employer negatively impacted their ability to successfully re-integrate into their work environment.	*"The worst part, my boss was not even interested."* **(Cindy, female, 39 years' old)** *"...they [colleagues] were laughing at me now because I can't finish the job"* **(Cindy, female, 39 years' old)**
Limited resources services Patients experienced psychological trauma in the acute phase and long after discharge from the hospital; however, participants reported that access to psychological services was lacking due to limited human and financial resources and the patient's location.	*"There's no psychologist I know around where I am staying."* **(Mavis, female, 49 years' old)** *"Also, the medical aid didn't want to pay for it all the time, because its expensive."* **(Sarah, female, 58 years' old)**

THEME TWO: Occupational therapy Interventions

Burn-injured patients reported positive and negative experiences with occupational therapy interventions and medical services received.

"She [occupational therapist] *actually showed me how to safely carry a load and how to drop it now that my legs were injured…That was absolutely helpful."* **(Mark, male, 43 years old)**

The patients reported a positive experience of occupational therapy interventions related to functional outcomes they experienced from engaging in therapy. Moreover, positive experiences were related to the attitude of the therapist and their engagement with the employer.

"…the occupational therapists, they have a way of calmly and very supportively and sympathetically taking you through the entire healing process, without you focusing on the negative aspects…" **(Thandi, female, 33 years' old)**

"But the most perfect and 100% thing that makes me think of going back to work, it was my last therapy, the way she was attending my boss." **(Cindy, female, 39 years' old)**

The occupational therapy treatment modalities reported by patients and those reflected in the file audit as seen in Figure three focused explicitly on physical body functions and structure as well as activity engagement in activities of daily living (ADL's), while intervention to address psychological trauma was not prominent.

Patient Education

The patients reported the value of the patient education they received from the occupational therapists regarding the treatment protocols and possible complications of burn injuries, which improved their understanding and compliance with therapy.

"...everything was work-related, so there was nothing I couldn't understand why are we doing this." **(Mark, male, 48 years old)**

"…it was a picture, if you don't wear your pressure garments, you don't do your stretching…what the outcome is going to be." **(Cindy, female, 39 years old)**

Scar Management

The benefits of the various techniques for managing scars, such as pressure garments and scar massage, were evident in the burn-injured patients. The burn-injured patients experienced the benefits of following the scar management programs.

"Massage my skin…it was effective, it helped a lot." **(Sipho, male, 52 years old)**

"The one thing I do miss about therapy is my compression tights because they were very good…but for now, I still keep myself out of the sun and make sure that my burns are not in sunlight." **(Thandi, female, 33 years old).**

Strengthening and Mobilisation

Burn-injured patients realised the positive impact of the strengthening exercises by observing how specific performance components and their function improved. Rehabilitation was specific to their impairments.

"The theraband was working very good and the ball, where I had to hit it…It worked for me. It worked for me very well." **(Cindy, female, 39 years' old)**

"While I am holding the weight, I would twist my hand. Some of the exercises, some of them I had to squeeze…it helps me get the muscles stronger and your hand too." **(Bheki, male, 31 years old)**

There appeared to be a common association between occupational therapy and pain, as reported by patients, which contributed to a negative experience of therapy.

"I used to duck and dive you, the first couple of weeks…Pain, absolute pain. I used to run away from you all [occupational therapists] *literally."* **(Mark, male, 48 years' old)**

"I really hated it when I saw an occupational therapist walk inside…because I knew this person was going to make me feel pain… **(Bheki, male, 31 years' old)**

THEME THREE: Enabling return to work

As evident from data in phase one, most of the participants (82.5%, n=33) returned to regular duties and 17.5% (n=7) returned to the accommodated duties in the workplace. The burn-injured patients voiced contextual factors as facilitators to activity engagement and participation in work. These contextual factors included their positive and resilient attitude; their determination to overcome the negative effects of this injury and support from their family and work colleagues.

"My biggest motivation was that I refused to sit still. I refused to let his hold me back." **(Thandi, female, 33 years' old)**

"Because I'm not a loser, I wanted to pass that phase and be okay and be back to be fit again. That was the drive." **(Cindy, female, 39 years' old)**

"It was for my kids and my family and the plans I had for my future." **(Vusi, male, 38 years' old)**

THEME FOUR: The Benefits of Returning to Work for Burn-injured Patients

Burn-injured patients expressed that returning to work had a positive impact on their psychological functioning and resulted in positive financial outcomes. Returning to work for burn-injured patients provided them with a sense of purpose and fulfilment.

"I have to wake up and go and study so I can earn extra cash again or earn more again." **(Cindy, female, 39 years' old)**

"Normalcy…to get back to normal…It really was for me to get back to my normal life as soon as possible, and work was part of that." **(Sarah, female, 58 years' old)**

"My biggest motivation was that I refused to sit still. I refused to let this hold me back." **(Thandi, female, 33 years' old)**

These patients could now provide financially for their families, reducing the burden of care on the family and enabling the patients to resume their role as breadwinners. This improved their self-esteem as they engaged in tasks which are meaningful to them.

DISCUSSION

According to the International Classification of Functioning Disability and Health Framework (ICF), work is essential to the participation construct[32]. In this study if we examine the patient personal factors, there was a male predominance of 72% who sustained burn injuries, with the majority being of working age, which aligns with worldwide trends[33-35]. Furthermore, most of these burn injuries (72.5%) were work-related. Working-age adults are most likely to be financially productive members of their families and responsible for caring for their dependents[3]. Returning to work was important for these patients to regain their life roles as breadwinners and contributing members to the province's economy. This is significant considering the study was conducted in a region in Northern Kwa-Zulu Natal (KZN) with a rising unemployment rate (31.7%), and more than half of the population is below the poverty line[36]. Apart from the financial benefits experienced,

returning to work gave the patients a sense of purpose, fulfilment, and normalcy as they re-established their routines and roles. For the patients in this study, returning to work improved their psychological functioning and enabled them to resume their life roles. They did not associate work with an opportunity to engage physically and improve their physical strength and endurance, but rather valued the psychological gain. Returning to work for burn-injured patients indicates a milestone in the recovery process[3].

Factors such as the %TBSA, depth of burns and length of hospital stay are seen as major predictors for return to work in burn-injured patients[33]. Burn injuries that affect more than 40% of TBSA often require prolonged hospitalisation and rehabilitation and lead to significant physical, psychological, and functional complications for the patient[25]. Although half of the patients' files did not indicate the %TBSA, the average %TBSA for the other half was 12.61%, which is considered low and is thus a facilitating factor for these patients to return to work. Apart from indicating the severity of the injury, the %TBSA can be used to predict a return to work. Thus, it should be part of record keeping by occupational therapists for all burn-injured patients. Quinn et al's[37] systematic review on factors which affect return to work after a burn injury indicated that burn-injured patients with a hospital stay of longer than 30 days did not return to work for up to 24 months. In this study, the average length of hospital stay was 25.8 days, a positive factor for return to work. The most common body part injured in this study was the hands, which does not predict or delay RTW; however, it is the common body part injured in the employed population[37].

The challenges experienced by burn-injured patients were related to physical and psychological impairments and the lack of support from the employer in their RTW endeavours. Without adequate support, the complications experienced by burn-injured patients are exacerbated[39]. Burn-injured patients require support from the rehabilitation team, employer and their families when returning to social and work participation[28]. Increased social support improves the patient's overall quality of life and self-esteem[39]. Return to work is successful when burn-injured patients return to supportive work environments with assistance from colleagues and task modification[37]. Burn-injured patients voiced that occupational therapists were key role players in providing feedback to the employer and being the liaison between the employer and the patients. Katsu et al[8] stated that occupational therapy, which is focused on return to work, is valued by burn-injured patients. Receiving sufficient care and support thus promotes RTW Personal factors such as the patient's resilience and positive attitude were instrumental in assisting patients in returning to work, which has also been identified in research[8].

A challenge prevalent within the private sector of South Africa is the limited financial resources available for patients to access psychological intervention, such as attending psychology and their geographical location. The patients and their families experienced psychological trauma due to the burn injuries. Symptoms such as PTSD, anxiety and fear impact work integration and employment outcomes[38]. Pain was also identified as one of the major barriers for patients to return to work, and one which they strongly associated with occupational therapy. For patients who were injured at work, there was fear of re-injury, and the post-traumatic stress manifested itself through nightmares and flashbacks for many of the patients. As supported by literature, this study found that family members are faced with various challenges, such as role changes (breadwinner), psychosocial concerns, and financial stressors[40]. There was no evidence of psychological support provided for the families of the burn-injured patients. Prolonged hospitalisation due to burn injuries results in loss of income and can result in debt due to hospital expenses incurred for injured individuals and their families/households[41]. In KZN, the financial burden is increased due to the cost of travelling to attend rehabilitation, which is often far from rural areas. Many of the psychosocial issues experienced by burn-injured patients manifest at a later stage, and thus, psychological intervention is only initiated then[41].

The occupational therapy interventions most frequently utilised in therapy correlated with what burn-injured patients reported as being most effective: education, scar management, and strengthening and mobilisation[26]. Yohannan et al.[42] on burn-injured patients' perceptions of rehabilitation found similar findings. Research further asserts that engaging in rehabilitation, which involves scar management, mobilisation, and strengthening, improves burn-injured patients' exercise tolerance, reduces complications such as contractures, and improves the mental state of burn-injured patients[43]. This results in an overall improved quality of life for these patients[44] and thus, easier reintegration into the work environment. Patient education provides patients with a better understanding of their condition and the treatment approach and improves their overall experience of rehabilitation[45]. By improving the insight of burn-injured patients, compliance with therapy is also enhanced. Burn-injured patients in this study attended frequent occupational therapy, an average of 25 sessions. Although patients reported that the positive and encouraging attitude of occupational therapists was a form of support, there was no clear indication of the treatment strategies used to address psychological trauma, such as anxiety and low self-esteem, and PGAP was only used in 5% of the cases in the file audit. Occupational therapists are thus advised to provide more specific and evidence-based treatment approaches regarding psychological intervention and make the necessary referrals.

Limitations

Poor record keeping and missing information from patient files, such as the percentage of total body surface area burnt, depth of burns and length of stay in hospital, was a limitation in this study. The surgical and medical information was not consistently documented for all patients, and thus, this limited the sample size and the results. The research setting was conducted at a private practice, which limits the population of research participants. Thus, future research could involve patients in the public sector.

CONCLUSION

Burn injuries affect the working-age population in KZN, for whom return to work is an integral part of rehabilitation and recovery. Burn-injured patients identified scar management, strengthening, education, and the positive attitude of the therapist in engaging with the employer as significant factors that aided in their recovery and the return-to-work process. Although the role of the occupational therapist is holistic in addressing physical and psychological impairments and providing environmental support, there is a gap in the psychosocial and psychological intervention provided to burn-injured patients and their families. Burn-injured patients experience doubts regarding their ability to return to work and cope with a change in work demands. Receiving psychological support affirms their self-confidence and motivation to re-enter their work environment[19]. It is important that a multidisciplinary approach is applied, and that burn-injured patients have access to all healthcare professionals, including psychologists. Healthcare professionals need to prioritise the psychological needs of these patients and advocate for funding to address these issues in the acute and rehabilitation phases and the return-to-work phase.

Future studies utilising objective, standardised assessments and outcome measures, which include physical and psychological domains, are required to monitor patients' progress in occupational therapy. The role of occupational therapists is holistic, and thus, they should not limit their treatment approach to addressing physical impairments alone, but also psychological and psychosocial impairments, as well as environmental factors. They play a role in providing social support to burn-injured patients and facilitating return to work through effective communication with the employer.

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Author contributions

Nadé Adonis completed the study towards a postgraduate degree and was responsible for the conceptualisation, design, acquisition, analysis and interpretation of data, and in drafting the manuscript. Pragashnie Govender and Deshini Naidoo, as supervisors of the study, were responsible for co-conceptualisation, design and reviewing the analysis and interpretation of the data and critical review and revision of the manuscript.

Conflicts of interest

The authors declare no conflict of interest.

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