A qualitative exploration of the uses of the International Classification of Functioning, Disability and Health at an inpatient neurorehabilitation facility in the Western Cape, South Africa

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Declaration

By submitting this thesis electronically, I declare that the entirety of the work contained therein is my own, original work, that I am the authorship owner thereof (unless to the extent explicitly otherwise stated) and that I have not previously in its entirety or in part submitted it for obtaining any qualification.

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December 2018

Abstract

Purpose of the study: The aim of the study was to describe how healthcare professionals at a neurorehabilitation facility currently use the International Classification of Functioning, Disability and Health (ICF) and to identify further possibilities for its future use.

Methods: The study followed a descriptive qualitative approach. Data were collected through four focus group discussions with 21 participants, all health care service providers, at the study facility. Thematic analysis was conducted by coding the transcripts and generating themes.

Findings: The findings showed gaps in use of the ICF. This was especially evident in goal setting practices as goals were generic in nature and did not address participation and the environment. A lack of knowledge, debilitating interpersonal relationships and an unsupportive organisational culture were identified as barriers to ICF implementation. Participants felt that the ICF can assist them to work more patient centred. Three themes were generated: (1) Current use and gaps in use of the ICF, (2) a facilitating environment and (3) using the ICF to facilitate holistic, patient-centred management.

Conclusion: The ICF has the potential to improve service delivery at the facility. The implementation process must be well structured, focus on practical use and be supported through an enabling environment created by management.

Keywords

International Classification of Functioning, Disability and Health, Neurorehabilitation, Interdisciplinary Team, Implementation, Disability

Abstrak

Doel van studie: Die doel van hierdie navorsingsprojek was om te beskryf hoe gesondheidsorg-praktisyns by ’n neurorehabilitasiesentrum die *International Classification of Functioning, Disability and Health* (ICF) gebruik, en verdere moontlikhede vir die toekomstige gebruik daarvan te identifiseer.

Metodes: Die studie het ’n beskrywend-kwalitatiewe benadering gevolg. Data is ingewin deur middel van vier fokusgroep-besprekingsessies met 21 deelnemers – almal gesondheidsorgpraktisyns by die sentrum. Die transkripsies is gekodeer en temas geïdentifiseer, waarna ’n tematiese ontleding gedoen is.

Bevindinge: Die bevindinge het gapings in die gebruik van die ICF uitgelig. Dit was veral duidelik in verband met doelstellingsmetodes, met doelwitte wat generies van aard was en nie sosiale deelname en die rol van omgewingsfaktore aangespreek het nie. ’n Gebrek aan kennis, swak interpersoonlike verhoudings en ’n organisasie-kultuur wat min ondersteuning bied is geïdentifiseer as struikelblokke in die implementering van die ICF. Deelnemers het gevoel die ICF kan hulle help om meer pasiëntgesentreerd te werk. Drie temas is uitgelig: (1) Huidige gebruik van en gapings in die gebruik van die ICF; (2) ’n fasiliterende omgewing; en (3) die gebruik van die ICF om holistiese, pasiëntgesentreerde rehabilitasie aan te help.

Gevolgtrekking: Die ICF het die potensiaal om dienslewering by die sentrum te verbeter. Die implementeringsproses moet goed gestruktureerd wees, op praktiese gebruik fokus en ondersteun word deur ’n bemagtigende omgewing geskep deur die bestuur.

Sleutelwoorde

International Classification of Functioning, Disability and Health, Neurorehabilitasie, Interdissiplinêre Span, Implementering, Gestremdheid

TABLE OF CONTENTS

Introduction

The ICF was developed by the World Health Organisation (WHO) in 2001. It provides a conceptual framework and common language that can be used to construct a holistic perspective of an individual's health and functioning (WHO, 2001; Kristensen, Lund, Jones & Ytterberg, 2015; Stephenson & Richardson, 2008). The ICF targets the enhancement of participation in meaningful activities and is very useful in rehabilitation service delivery (Meyer, Kleineke & Menzel-Begemann, 2018). The challenge of using the ICF in clinical rehabilitation practice, however, lies in its complexity, (Grill, Stucki, Scheuringer & Melvin, 2006). The ICF consists of a lengthy classification system with a large number of categories, qualifiers and specialised linking procedures where existing healthcare measures can be linked to the ICF categories (Stucki, Ustün & Melvin; 2005).

Literature Review

A web-based search strategy was conducted to explore the existing relevant literature on use of the ICF in neurorehabilitation settings. The Stellenbosch University Library was used as a portal to access various electronic databases, such as Google Scholar, PubMed, EBSCOhost and Elsevier. The WHO website was also studied. Key terms included: ICF AND Rehabilitation, ICF AND uses, ICF AND Barriers, ICF AND facilitators. A combination of strategies was used, such as "quick search", "building blocks" and "pearl growing" (SUNLib, 2018). This literature review introduces the ICF and its role in clinical rehabilitation, explores the use of the ICF in rehabilitation settings as well as barriers and facilitators to its use in these settings.

International Classification of Functioning, Disability and Health

The ICF provides a universal framework for understanding functioning and disability and describing the impact of a health condition on a person's functioning (Escorpizo & Bemis-Dougherty, 2015; WHO, 2001). The framework organises health-related information into two parts: "Functioning and Disability" and "Contextual Factors". Each part has two components:

• Functioning and Disability:

  o Body Functions and Body Structures

  o Activities and Participation

• Contextual Factors:

  o Environmental Factors

  o Personal Factors.

The ICF framework views a person's experience of functioning and disability as not only related to a health condition, but to the context in which these occur (Stucki, Reinhardt, Grimby & Melvin, 2007). Therefore, disability is described in the ICF as the complex interaction between a person's impairments, activity limitations and participation restrictions and that person's environmental and personal factors (WHO, 2001) as shown in Figure 1.

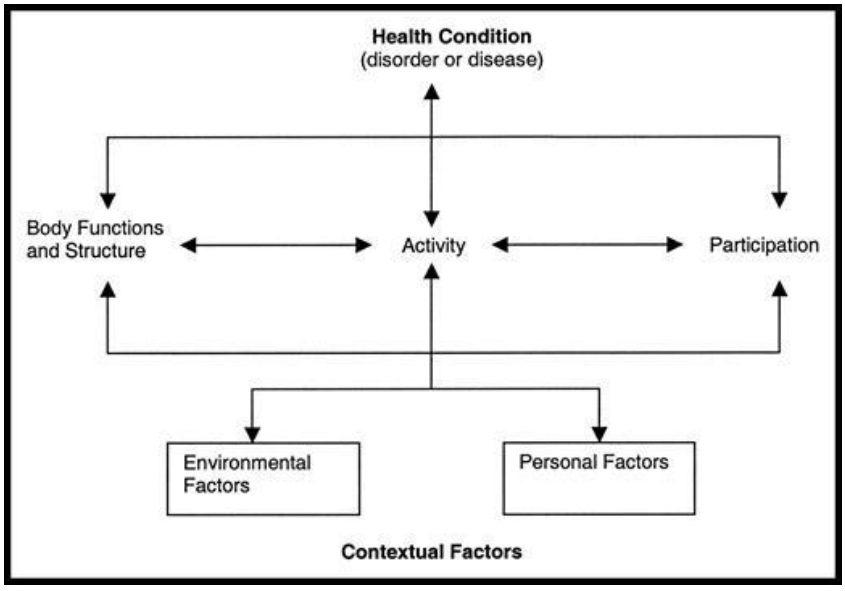

Figure 1. ICF conceptual model (Source: WHO, 2001)

By integrating the biomedical, social and psychological approaches to disability, the ICF offers a conceptual framework for healthcare practitioners (HPs) and researchers to assess and measure health and wellbeing from multiple perspectives (Jahan & Elibidy, 2017) and set comprehensive patient-centred goals (Stucki, Ewert & Cieza, 2002; Constand & MacDermid, 2014). The ICF therefore provides a common language for HPs to communicate with each other, their patients and across sectors (WHO, 2013).

After its initial introduction in 2001, the ICF was almost immediately adopted in the field of clinical rehabilitation, before spreading to other sectors like education and labour (Cerniauskaite et al., 2011). The Western Cape Department of Health has since followed suit and endorsed the use of the ICF to be used in planning patient-centred rehabilitation at various levels of care (WCDoH, 2015).

The ICF has proven especially useful in rehabilitation facilities, like the setting of the current study, that deal with complex chronic disabling conditions and injuries, such as stroke, spinal cord injury and traumatic brain injury (Rentsch et al., 2003). On a conceptual level the ICF fosters a holistic understanding of functioning and disability by guiding HP's to look beyond the impact of the impairments of the body on participation in major life areas and consider the influence that personal and environmental factors may have (Fleming & Leahy, 2014; Jahan & Elibidy, 2017; Kristensen et al., 2015). Tempest, Harries, Kilbride & De Souza (2013) reported that using the ICF made HPs in England understand the complexity of a patient's needs better after stroke and as a result the multidisciplinary team approached the patient's rehabilitation more holistically.

Patient-centred practice is essentially about respecting patients; their individual strengths, knowledge, experience and their right to make decisions concerning their own lives

(Hammell, 2013). HPs should always consider the patient's perspective and actively involve them in diagnostic procedure, goal setting, selecting intervention and prioritising rehabilitation outcomes (Van Dulmen et al., 2015). Goal setting, an important step in patient-centred rehabilitation intervention, will vary between people because of individual, cultural and social differences. Lohmann, Decker, Müller, Strobl & Grill (2011) found the ICF to be a very useful tool for identifying and structuring patients' expressed goals and thus facilitating patient-centred practice. Researchers successfully used the comprehensive ICF core set for post-acute rehabilitation to classify patients' goals according to ICF categories.

The ICF can guide and improve interdisciplinary communication at inpatient rehabilitation settings (Rentsch et al., 2003; Tempest et al., 2013). Overlapping of roles may occur between different members of the interdisciplinary team. Tempest & McIntyre (2006) found that by identifying which team member took the lead for a certain ICF domain, they could clarify each member's role and prevent duplication. HPs also noticed that when using the ICF, feedback during team meetings was more structured, service delivery was more effective, and they were able to identify gaps in their own service, which could then be addressed (Tempest & McIntyre, 2006).

The universal language of the ICF (Konstansjek, 2011) lays the foundation for improved communication, not only between HPs but also the public, including persons with disability and their families (Rentsch et al., 2003; Martinuzzi et al., 2013). A Swiss interdisciplinary neurorehabilitation team achieved this by using the ICF framework as a basis from which to structure their rehabilitation procedures, team conferences and documentation (Rentsch et al., 2003).

The ICF provides, through the checklist, core sets and qualifiers, a choice of assessment tools for identifying problems and needs during initial assessment as well as to assess progress during follow up assessments (WHO, 2013; Rauch, Cieza & Stucki, 2008). The use of the ICF core sets for early post-acute rehabilitation has been validated against other commonly used instruments such as the FIM™ instrument, Functional Assessment Measure and Barthel index (Grill et al., 2006).

In two separate studies, HPs at both a Swiss neurorehabilitation facility (Rentsch et al., 2003) and an English stroke rehabilitation facility (Tempest & McIntyre, 2006) reported that the ICF improved the quality of their rehabilitation services by structuring service delivery, interdisciplinary meetings, documentation and reporting on the ICF. Martinuzzi et al. (2013) stated that in addition to HPs, patients and their families also felt that the rehabilitation service had improved after the ICF implementation programme.

The systematic review by Wiegand, Belting, Fekete, Gutenbrunner & Reinhardt (2012) argues that although the ICF has been successfully diffused on a macro-level, as a term and concept, there is little empirical evidence of its practical implementation in clinical rehabilitation. A lack of appropriate guidelines on practical implementation was identified as a possible cause and puts the ICF at risk of becoming something that is talked about, but not used.

Surveys conducted in different countries have found low rates of ICF use. In India, the ICF is not used often in clinical practice by physiotherapists (Chaturvedi, 2017) and only partial implementation was reported by physiotherapists in Israel (Jacob, 2013). Reported use of the ICF among members of a multidisciplinary team in Austria was below 50% (Salchinger, Aftenberger & Wandschneider, 2015). In a survey of over 1 200 occupational therapists from

60 different countries, more than 70% of participants indicated that they do not use the ICF in practice (Stewart et al., 2013); almost mirroring the results of a similar Canadian survey (Farrell, Anderson, Hewitt, Livingston & Stewart, 2007). Preliminary results from a South African mixed methods study that utilised a semi structured self-administered questionnaire and a focus group discussion, reported minimal use of the ICF by physiotherapists in the Gert Sibande district, Mpumalanga province (Nadasan & Reddy, 2018).

Some examples of successful implementation of the ICF in clinical rehabilitation practice have been reported on. Rentsch et al. (2003) described successful implementation of the ICF in a stroke rehabilitation centre in Switzerland through a carefully structured process that involved training of the interdisciplinary team, integrating ICF terms and concepts into the daily work of HPs (documentation, assessment, interdisciplinary communication, goal setting), simplifying ICF checklists to contain basic relevant items and linking appropriate assessment scales to ICF subcategories.

Tempest & Jefferson (2015) studied the use of the ICF in neurorehabilitation by engaging HPs through action research groups at two centres in England. One group of HPs identified 35 practical ways that the ICF could be implemented at their centre, while the other group compiled practical recommendations for other centres undertaking similar projects. Although participants had a pragmatic approach, the suggested uses may not all be empirically proven or universally applicable. Some relevant uses included ICF as a structure for a multidisciplinary assessment form, goal-setting and discharge report; to guide clinical reasoning, serve as communication tool with patients, teams and agencies and describing rehabilitation status when referring on.

Barriers to using the ICF

Research found that a lack of knowledge, time and resources and the perception that the ICF is complex have hindered its implementation. That HPs may lack in-depth knowledge of the ICF and therefore be sceptical of investing time and resources into learning about the framework or finding ways to implement it clinically is listed as one of the main barriers to implementation (Darrah, 2008; Farrell et al., 2007; Chaturvedi, 2017; Jacob, 2013; Nadasan & Reddy, 2018; Tempest & Jefferson, 2015). It is not uncommon for HPs to still be relatively unfamiliar with the ICF, despite it being included in healthcare education worldwide (Van Dulmen et al., 2015; Stewart et al., 2013).

There is also a general perception among HPs that completing the ICF patient assessment is a long and time-consuming process (Jacob, 2013). Due to high patient loads, HPs then prefer to not use the ICF (Nadasan & Reddy, 2018). Martinuzzi et al. (2013) echoes the sentiments of Rentsch et a l. (2003) that increased time required to learn about the ICF is problematic when it is initially introduced into a rehabilitation service.

Tempest & Jefferson (2015) reported that HPs are reluctant to use the ICF due to its perceived high demands and complexity. Israeli physiotherapists reported that their institutions were not ready to implement the ICF and that the ICF is too complex, thus difficult to integrate with existing computerised systems (Jacob, 2013). Martinuzzi et al. (2013), however, argues that this reflects the complexity of human functioning.

Facilitators to implementation

In response to concerns regarding the complexity and resources, the WHO created a range of more user-friendly tools to train and support HPs in using the ICF. These application tools include the ICF assessment sheet, World Health Organisation Disability Assessment

Schedule (WHODAS 2.0), ICF checklist, qualifiers, linking rules and core sets (Rauch et al., 2008; Kostanjsek, 2011).

Once knowledge increases, attitudes toward implementation of the ICF change (Pless, Ibragimova, Adolfsson, Björck-Åkesson & Granlund, 2009). ICF education is thus of paramount importance when implementing the ICF into a service. HPs expressed the need for accessible, concise information that is relevant and meaningful to the practitioner (Farrell et al., 2007). Methods of preferred learning include online modules, workshops and in-service training based on relevant examples from published literature (Pless et al., 2009). In South Africa, inter-professional education through ICF-based activities have proven to be an effective way of learning about and implementing the ICF in a clinical interdisciplinary setting (Kloppers, Koornhof, Bester & Bardien, 2015). Martinuzzi et al. (2013) showed that the reported, increased time spent on administration returned to normal once HPs gained knowledge and confidence in using the ICF format. Rentsch et al. (2003) reported that they managed to systematically implement the ICF into their service, without adding to the burden of time or administrative workload. Supportive leadership, systems and routines in daily work could motivate HPs and facilitate the implementation of the ICF (Pless et al., 2009; Rentsch et al., 2003).

Rationale

The philosophy of the South African neurorehabilitation facility under study is to provide quality outcome-based rehabilitation services according to the biopsychosocial model (WCRC philosophy, 2006). HPs, working in interdisciplinary teams and in alignment with Healthcare 2030 principles, are encouraged to use the ICF as a conceptual framework to perform their assessments, set goals and plan interventions (Western Cape Position Paper on

Rehabilitation, 2015). ICF training has been presented at the facility and staff members are encouraged to attend ICF conferences (Personal communication, Sammons, H. 10 May 2018).

Local studies have shown, however, that patients discharged from the facility achieved relatively low community integration outcomes (Gretschel, Visagie & Inglis, 2017; Hassan, Visagie & Mji, 2012; Maclahlan, 2012). All three studies emphasised the impact of contextual factors on successful community reintegration and alludes to the fact that HPs might still be paying more attention to impairments during rehabilitation than participation restrictions, including environmental barriers

The ICF has been judged to be an effective base from which to capture the lived experience of health, in terms of functioning, (Stucki, Rubinelli & Bickenbach., 2018) and therefore guide HPs in constructing and implementing appropriate rehabilitation intervention strategies (Lexell & Brogårdh, 2015). However, "to make the ICF 'real' it has to be used in practice" (Darrah, 2008: 150). It is possible that HPs have not yet found ways to use the ICF effectively, beyond a conceptual model.

Research on ICF use in South Africa, a low-resourced country, is scarce. A project that sets out to describe how HPs currently use the ICF and to identify possibilities for future use could be used as a case study for other similar institutions in South Africa.

Therefore, the aim of this study was to describe how HPs at the facility currently use the ICF and to identify possibilities for future use.

The study objectives are:

- To describe how HPs at the facility are currently using the ICF;
- to identify strategies for improving current use;
- to identify additional areas for future use;
- to identify barriers of use; and
- to identify facilitators of use.

Methods

Design

This study followed a descriptive qualitative approach (Lambert & Lambert, 2012) as it attempted to comprehensively summarise HPs' views on the use of the ICF at the facility. The qualitative approach was used since it can capture various perspectives and perceived realities of participants in depth (O' Leary, 2017).

Research setting

The study took place at a 156-bed specialised in-patient neurorehabilitation facility in the Western Cape province of South Africa. Comprehensive rehabilitation services are offered to patients with a variety of medical and surgical conditions with a focus on stroke and spinal cord injuries (Joseph, 2012; WCRC website). The average length of stay varies between 28 days (usually patients with stroke or traumatic brain injury) and 90 days or longer (typically for patients with a high-level spinal cord injury) (Gretschel et al., 2016).

The facility comprises of three units, each with their own interdisciplinary team. Patients are individually interviewed and assessed by their assigned team members. A patient-centred interdisciplinary goal-setting meeting then takes place. The progress of goal attainment is monitored and discussed by the team at weekly patient meetings. Each patient has a case coordinator that is responsible for managing the rehabilitation programme. The facility also offers daily outpatient services provided by a doctor, occupational therapist, physiotherapist, professional nurse and social worker.

Population

The study population consisted of the 66 HPs and middle managers that worked at the facility at the time of data collection. This included doctors (4), professional and registered nurses

(18), physiotherapists (11), occupational therapists (11), social workers (7), a psychologist (1), a dietician (1), speech therapists (2) and middle managers (11). Middle managers, who are also HPs, include chief physiotherapists, chief occupational therapists, a chief social worker and nursing operational managers.

Professional nurses that worked night shift during time of data collection were excluded as groups were run during the day. Nursing, physiotherapy, and occupational therapy assistants, students, volunteers and locum staff were excluded from the study as they usually do not participate in goal-setting meetings and do not act as case coordinators.

Sampling strategy

Fifteen HPs with knowledge and experience of using the ICF were purposively sampled. The researcher approached the interim CEO of the facility, to assist with purposive sampling of participants. The interim CEO has worked at the facility since its 'birth' from the amalgamation of two rehabilitation units in 2004 (WCRC, 2007) and has a good understanding of the ICF and the underpinning philosophies and policies on which service delivery at the facility is based. Volunteer sampling (O'Leary, 2017) was used concurrently with purposive sampling, to allow HPs who were not purposively sampled but were interested, to participate in the study.

Research study invitations (Appendix A) were sent to all members of the study population via e-mail. Professional nurses, however, do not have access to e-mail accounts at work and were handed printed invitations (Appendix B). The study invitation informed HPs about the research purpose, method and timeline. Recruitment duration was 1 – 5 October 2018.

The 15 people who were purposively sampled all agreed to participate in the study. A further six participants were recruited through volunteer sampling. Thus a total of 21 people participated in the study.

Data collection

Data was collected through focus group discussions (FGDs), as gathering ideas simultaneously from more than one person allowed for various interpretations as well as similar and opposing ideas to come to the fore and be explored (Liamputtong, 2011). Four FGDs were held at the facility over the course of three weeks in October 2018. Each group was facilitated by the researcher and a co-facilitator. Discussions were held in English, as this is the language that HPs use for official communication at the facility. Groups were held in a private conference room at the facility. The setup of the room was arranged to create a relaxed yet professional environment. Each discussion lasted two hours.

Middle managers were separated from other HPs to encourage participants to speak openly without feeling inhibited by the presence of their managers or vice versa. The composition of the groups is shown in Table 1, on the next page. Information on the ages and years of experience of participants were not included in this table as that will make some participants identifiable and infringe on their right to confidentiality. Participants were also asked about their exposure to the ICF. This information is also presented in the table.

Table 1. Composition of Focus Groups			
Focus group 1			
Participant nr	**Profession**	**Gender**	**Exposure to ICF**
1	Occupational therapist	Female	Undergraduate learning In-service training at facility
2	Physiotherapist	Female	Undergraduate learning In-service training at facility Supervising university students
3	Physiotherapist	Male	Undergraduate learning In-service training at facility Lecturing university students Reading articles
4	Speech therapist	Female	Undergraduate learning Postgraduate learning
Focus group 2			
Participant nr	**Profession**	**Gender**	**Exposure to ICF**
1	Occupational therapist	Female	Undergraduate learning Postgraduate learning
2	Dietician	Female	In-service training at facility Lecturing university students
3	Occupational therapist	Female	Postgraduate learning Working overseas (England)
4	Physiotherapist	Female	Undergraduate learning Attended ICF-course
5	Physiotherapist	Male	In-service training at facility
Focus group 3			
Participant nr	**Profession**	**Gender**	**Exposure to ICF**
1	Occupational therapist	Female	Undergraduate learning In-service training at facility
2	Physiotherapist	Female	In-service training at facility Postgraduate learning
3	Professional Nurse	Male	In-service training at facility
4	Medical Doctor	Female	In-service training at facility
5	Physiotherapist	Female	Undergraduate learning
6	Social Worker	Female	In-service training at facility
7	Occupational therapist	Female	In-service training at facility Supervising university students
Focus group 4			
Participant nr	**Profession**	**Gender**	**Exposure to ICF**
1	Chief Occupational therapist	Female	Working overseas (England) In-service training at facility

2	Chief Physiotherapist	Female	Undergraduate learning Working overseas (England) Postgraduate learning
3	Chief Physiotherapist	Female	Undergraduate learning Postgraduate learning Attended ICF course
4	Operational manager: Nursing	Female	In-service training at facility Postgraduate learning
5	Medical Doctor	Male	In-service training at facility

The first FGD was initially designated to be a pilot study. However, since the sampling frame and methodology remained unchanged, the FGD was included in the main study to increase its efficiency (Thabane et al., 2010).

Prior to the FGDs, participants signed a consent form (Appendix C), which included consent to audio record the discussions, and completed a basic demographic information sheet

(Appendix D). A focus group discussion guide (Appendix E) was used to provide direction during the discussions. The main points in the discussion guide focused on:

- Current use of the ICF;
- Improved and/or additional ways for use; and
- Barriers and facilitators to use.

Participants entered into a group contract, where they agreed to confidentiality, respecting one another's opinion and giving everybody a fair chance to speak by not interrupting. The researcher attempted to neutralise his role as a colleague and subordinate (in management group) during the FGDs. Some strategies included facilitating the group to interact with one another instead of with the researcher, actively managing his own perceptions, responses and

prompts to not follow a predetermined direction and asking for feedback from the co-facilitator after each FGD.

Data analysis

All FGDs were audio recorded. Recordings were transcribed verbatim by the researcher. Thematic analysis was done by the researcher, in conjunction with the study supervisor, according to the step-by-step guide from Braun and Clark (2006) whereby themes or repeated patterns of meaning were identified from the data and reported, using both a deductive lens, based on the study objectives, and an inductive one. Inductive thematic analysis was appropriate because little was known about the use of the ICF at the facility and it analysed both the manifest and latent content of data (Vaismoradi, Turunen & Bondas, 2013).

Rigour

To improve its credibility, the findings and discussion of the study were shared with the co-facilitator of the FGDs for appraisal. Consensus on themes was reached by the researcher and supervisor. This should assist in improving credibility of the findings. Credibility was further enhanced through using recognised research methods and debriefing with the co-facilitator. A detailed description of the research setting and methods, inclusion of participants from all professional groups at the facility and acknowledgement of study limitations should help others with transferring of the findings to similar settings and to determine the dependability of the findings. All documentation, including the researcher's journal and interview notes were maintained, and an audit trail index is included in the final report (Appendix F) (Mabuza, Govender, Ogunbanjo & Mash, 2014).

Researcher reflexivity was striven for throughout the research process to improve confirmability. Researcher bias is not totally avoidable but clarifying the researcher's

background and relationship with participants could improve credibility (Tong, Sainsbury & Craig, 2007). Being a colleague of the participants might have had benefits but also present challenges (Berger, 2015). Participants possibly shared deeper and more openly about the use of the ICF at the facility to a colleague that understands the context about the use of the ICF at the facility on the one hand but on the other a feeling of comparison or competition might have been created by the shared experience with the researcher.

Ethical considerations

Ethical approval was granted by the Health Research Ethics Committee of Stellenbosch University (Reference number: S18/05/115) (Appendix G) and the Western Cape Department of Health (Appendix H). Permission to carry out the study was received from the facility.

Participation in the study was voluntary and informed consent was sought before data was collected. Confidentiality will be maintained and participants will not be identifiable in the dissemination of findings. Participants negotiated a confidentiality group contract at the start of each FGD. The verbal contract stipulated confidentiality and additional agreements (use of cellphones, turns to speak etc.) as decided on by the group. The study holds potential benefit for participants in that findings and recommendations will essentially give a ‘voice’ to HPs and might assist the institution in aligning its policies and philosophies with what practically works for and benefits its employees and patients.

Findings

From the data gathered during the FGDs, three themes were generated. Theme 1 describes how participants currently use the ICF in daily clinical practice and the gaps that they identified. Theme 2 highlights some suggestions that participants made on how the use of the ICF could be facilitated in their setting, and Theme 3 looks at how participants suggested the ICF could be better used in future to improve holistic, patient-centred management. These themes and corresponding sub-themes are summarised in Table 2.

Table 2. Findings: Use of the ICF at facility

Themes	Sub-themes	Components
1. Current use and gaps	Use	Assessment Developing documentation Incidental
	Gaps	Goal setting Focus on impairment and activities
	Non-use	Not using Not standardised
2. Facilitating environment	Institutional	Culture Time
	Interpersonal	Communication Respect
	Individual	Knowledge Attitude Buy-in
	Moving forward	Training Mentoring Practical
3. Holistic patient-centred management	Teamwork	Communication Collaboration Including the patient
	Assessment	Combined Core sets Qualifiers
	Intervention	Participation Environment Extend into the community

Theme 1: Current use and gaps in use of the ICF

Participants could provide a few examples of current use of the ICF:

> "…if we look at our subjective interviews, we often touch on all these domains of the ICF, but we don't bring it back together and integrate it to try and make it applicable to our patients and set goals according to it…" [FGD2; P4]

> "…for the doctors from a medical point of view there was like a checklist compiled at the end of the patient's clerking book…that's the ICF checklist just to see that you've covered everything…" [FGD3; P4]

At times the use of the ICF was found to be incidental. Participants expressed the notion that the ICF was integrated into their general approach to patient assessment, however, the use of the ICF was not a conscious element of their assessment.

> "…we do use it without even being aware of it because I mean we were also taught to do a very holistic approach you know, you ask about the environmental things you ask about personal things, you do a diet history, you look at everything. So, I think a lot of things anyway incorporate the ICF, but it wasn't something that we were knowingly doing…" [FGD2; P2]

Participants described various aspects of rehabilitation service delivery in which the ICF was not used to its full potential at the facility. They expressed the idea that there is untapped potential in the ICF that could lead to a more comprehensive and holistic service, if it is used more effectively. This was specifically identified in the context of goal setting. Participants said that goals at the facility were currently too generic:

> "I think the way that we set goals is very generic and even though we say we're client-centred... it's all generic and it lands up being very like physical like functional things…" [FGD2; P1]

> "It's [the ICF is] a framework of how we assess our patients and set goals for our patients and see where the gaps are and where we need to fill in and what's working well for them… because the reality is that is the person's environment... how they participate and their culture and religion or whatever dictates is the norm. So, you can apply it to everyone and that's why…our goals *should not* look the same for everyone it should look completely different for everyone…" [FGD2; P4]

> "…*if* you follow the ICF... you won't miss anything... I think it contributes to almost like a better approach management of your patient, especially when we actually have to think about our goals and especially in a situation where we have to be very specific… the patient needs to be able to go home... *into his house*…" [FGD3; P5]

Goals are documented and tracked on a Client Management Plan (CMP); a form that was based on the ICF. The CMP seems to be contributing to recipe type planning rather than individualised goals:

> "…actually, everyone's form [CMP] looks the same...it's selfcare and it's domestic tasks… there's nothing really about community reintegration or real meaningful participation…" [PGD3; P7]

Participants felt that the focus at the facility was on impairment and activity limitations and that patient goals were not targeting participation in previous life roles:

> "…I always feel guilty about community reintegration because we get so stuck on umm… like dressing and washing and suddenly it's the end of their time and you don't really know what you're discharging... the person to… in terms of how do they fill their day... how do they have meaning? How do they have purpose? And that's the kind of things that makes or breaks the person and unless you fix that, it doesn't matter whether they're washing or dressing or sitting properly…" [FGD3; P7]

> "All the focus is on treatment and not on like living a fulfilled life." [FGD2; P4]

Another integral aspect of the ICF that did not receive adequate attention during rehabilitation was contextual factors. It seems that the environment was not regularly considered in team deliberations, which points to a gap in the use of the ICF:

> "I'm seeing a patient now that functionally she is fine here... activities and the participation is fine here, but her environment is such a problem... and I think that is a big thing that sometimes we miss here as well... if I was a bit more aware of my environmental factors... now… I woke up too late. I feel very bad about it. I think if the whole team had been a bit more aware about it, we all could have sorted it out a bit earlier..." [FGD2; P3]

Strong arguments were also made to show that the ICF is not used at the facility:

> "…we're not using the ICF. We like the idea of using the ICF but we're not using the qualifiers, we not setting our goals according to the ICF, we're not coding. What are we actually doing? We're actually using a biopsychosocial approach. Sometimes. And sometimes we are actually just using a medical approach. We say it's [the ICF is] part of our philosophy here but I think it's something we say and not something we do or

> actually really use… it's something we talk about a lot and say a lot, but I'm not convinced we actually use it properly." [FGD2; P4]

> "I must admit the doctors don't actively use it anymore…it's there and we know about it but we actually still using our biopsychosocial approach…" [FGD3; P4]

Across the FGDs, however, participants agreed that the use of the ICF could and should be improved on at the facility to the benefit of patients and teams:

> "…it's not being used to its full potential." [FGD1; P3]

> "...I think we could use it so much more, but I really think it is fantastic." [FGD3; P7]

> "…we use it, but we actually don't use it well and I think we can use it better." [FGD4; P2]

Theme 2: A facilitating environment

To increase the use of the ICF, a conducive environment is needed. Participants described the prevailing culture at the facility as reactive and lacking outward focus.

> "…that whole culture of chaos control or crisis control instead of being pro… we are not proactive, we are very reactive. We are rehab, so we are working post-insult... our whole mindset is already a reactive umm… treat the problem not prevent the problem… I also think our culture of our institution is... rushed. We've got so little time… bed-time, you know, money... get it done, get the patient out. There's never really an emphasis on not getting the patient back in... making sure that this patient doesn't end up somewhere else in the healthcare sector related to a problem that you

> could maybe have solved. I think our culture is very… small, maybe? Small and focused right here." [FGD2; P4]

As alluded to by the participant above, HP`s are under continuous time pressure due to large caseloads.

> "…we are so overburdened with everything we are stretched to the end." [FGD1; P3]

> "…because of the work pressures we are tending to kind of focus on 'I've got to get this person seated in a wheelchair', doing that, doing this, doing that, and nobody is really able to take a step back and see the bigger picture. So, it's almost like we kind of miss out on the participation side of things because we're all so focused on getting everything done, trying to see this patient as much as you can and in the amount of time that you've got here." [FGD1; P1]

Implementing the ICF in full would require more time. However, some participants see the value of investing time in the ICF:

> "It is time, but is it not important time? Bringing the person into their own rehab… and now we don't have time to… because we want to go back to the gym and work on impairment, but an impairment really isn't going to help them back in... so it takes time, but it's important time." [FGD3; P2]

> "… I think if there's enough time spent on it [ICF] to start off with and you do it well enough, then it ends up saving time in the long run because then you have goals planned and make sure that you don't miss things and then have to go back and do it." [FGD4; P2]

Participants were also frustrated by what seems like a lack of direction:

> "…after 10 years we're still afloat… and we're floating where to? …so, after 10 years that's what we have… the same roundabout. My problem is monitoring and evaluation. You put things in place, there we drop it and there's no follow-up… follow through." [FGD4; P4]

Another aspect that was discussed at length and which can hamper ICF implementation, according to participants, was the detrimental effect of debilitating interpersonal relationships:

> "I hear little whispers from people. I have heard that some of the team meetings have become like courtrooms like interrogation areas… people are feeling attacked. So, it's not actually about the check-in and let's make it a problem-solving approach... people are becoming very sensitive and they [are] finding it to be like people are attacking them ...and that's stopping people from actually thinking big picture." [FGD1; P2]

> "I think it very much goes wrong sometimes in the way people communicate… and that it is misinterpreted... it can be so easily misinterpreted as you're interrogating or questioning or climbing into somebody else's turf so to speak or that you're trying to dictate…" [FGD4; P1]

Participants recognised that open communication and mutual respect are necessary to implement the ICF:

> "I think a very important thing is communication but also then team interaction and relationships in teams. I've seen where just because two people have a bad relationship in a team that they actually just derail everything… that's one of the

> starting points… for people to be at a maturity level that they can interact in a mature way…" [FGD4; P2]

> "… there is an absolute... interdependence... and the communication... that people talk the same language… we all should have the same picture." [FGD4; P5]

Poor communication could be the result of not having the necessary skills or proficiency in the universal language of the ICF in order to share information:

> "... the trouble I think comes in communicating that information... and I think the ICF tries to make a universal language that you can understand and use the same terminology when you're talking about something, when you're talking about function or you're talking about body functions or you're talking about participation, and I think they try to create an umbrella language under those headings that we should be using, and I don't think anybody is very skilled at that at the moment." [FGD4; P1]

When participants started working at the facility, they all had different levels of exposure to and knowledge of the ICF. Limited focused efforts were made to ensure that all staff develop the same understanding:

> "I think the difficulty is exposure... that the exposure to this [ICF] has been on so many different levels that people have not caught on to it... the principles…I think the knowledge thing is probably your biggest challenge..." [FGD4; P5]

It seems that the ICF is not consciously taught as an institutional operational framework at the facility and people are not introduced to its role at the facility during induction:

> "…but it's not like I arrived and I was told about the ICF…" [FGD3; P7]

> "Ja, for me I didn't know anything about ICF. I haven't even heard about it... not even when I started here in 2011." [FG3, P4]

Not sharing the same understanding of the ICF could mean that HPs view the ICF and their roles in its implementation from different perspectives:

> "…we use it and understand it in different ways... and we speak different languages. I think that's the difficulty, especially if you work in a team and the one person looks at the picture like this and the other one just looks from here and just sees this one thing… and it clogs your understanding of the rest... then you end up focusing just on that and then you forget the other stuff..." [FGD4; P5]

It seems that knowledge and understanding are not the only factors that influence the use of the ICF, but that implementation is linked to the perceptions and attitudes that participants have towards the ICF. In this study, participants did not share the same attitude towards the ICF.

Some felt very positive about the ICF:

> "…when I started working in a setting like rehab… you see the value of it [ICF] and it actually makes more sense to you and it doesn't… it didn't become like a blanket… formula for patients that we would just go to but it became more personal and actually really valuable in looking at where are they actually going…" [FGD3; P5]

Other participants held a much more sceptical view of the ICF. In this discussion, resistance to use was identified:

> "...the words like 'severe' and 'minor' doesn't really cut it for me. There's nothing objective about it... sometimes the words mean nothing really to someone else, 'cause in actual fact it's very subjective... it's your personal view of how that barrier is... there's a limitation... immediately that changes the accuracy of the system and therefore, I need to stress that, unfortunately, I don't see this ICF as the be all and end all." [FGD2; P5]

A colleague countered the argument:

> "I think when it comes down to the environment, it's always going to be subjective. The environment will always be the person living there, their perception… it is really important that it must be their perception." [FGD2; P2]

Participants' attitudes towards the ICF became more positive as their understanding of it increased:

> "... I started doing the medical student facilitation… so I read up quite a lot on it [ICF] now this year and now it's actually nice because the practical use of it, how the students have to use it, is actually now becomes very clear…" [FG2; P2]

> "…when I actually did the diploma [postgraduate diploma in human rehabilitation studies] … and properly got exposed to it [ICF]… we had assignments on it and just then realising the practicality and how you can like actually use it…" [FG2; P3]

Past implementation strategies might have increased negative attitudes towards the ICF:

> "…I really think unfortunately the ICF has a bad rap at [the facility] … I think there's been lots of people in top management that's saying people don't use it and they

> question people over it for a long time and people are sort of tired of hearing like it has to be ICF... the idea of ICF wasn't sold to people the right way for a long time... there's lots of people here, you talk to them about ICF, they immediately get their backs up…" [FGD4; P2]

Participants expressed the opinion that for the ICF framework to be implemented, it must be feasible and buy-in from all team members is essential:

> "I always question when the hierarchy wants to put frameworks into place, I immediately don't look in terms of what they said I basically go in terms of how is it possible to implement? And unfortunately... when we actually... conceptualise a framework, we always have that theoretical aspect to it, but when it comes to the implementation then it breaks down. You can have a fantastic idea, but in reality, if it's not done implementationable [sic] then it's not going to work…" [FGD1; P3]

> "…you have to have the buy-in of everyone on that... if you don't, it's going to take one person not doing it that's going to make it fail." [FGD4; P2]

However, this remains a challenge as some participants view the ICF as optional:

> "Well, it's just a framework... it's just there to be used or not used..." [FGD2; P1]

> "…it comes on the onus of the therapist in that team to apply it or not to apply it." [FGD1; P2]

Participants clearly expressed their belief in the usefulness of the ICF. However, at a clinical level, implementation seems to be lacking. To improve this situation, participants suggested

that all staff should receive training and that this training should be practical with clear outcomes of what needs to be achieved.

> "If we as an institution say we're going to use the ICF, I think we need to be trained better in the ICF… be trained properly." [FGD2; P4]

> "I think the physios have a nice mentoring programme… I think it's imperative that new therapists are… almost shadow an old therapist" g1p4

> "Make it workable." [FGD1; P3]

Furthermore, implementation should occur at a tenable level with a strong monitoring and evaluation process:

> "…we need to know that the patient has reintegrated better… If we follow up in 6 months… did using the ICF... did that have a better effect?" [FGD2; P4]

> "…it needs drivers... so the driver needs to be very clear on what he would like to achieve." [FGD4; P4]

It was suggested that one unit or team should trial the ICF implementation first and that the outcomes of this trial be assessed.

> "We can make an experiment. Let's say two or three people that are willing can take it and then we see what comes out of there for a period of time..." [FGD3; P6]

> "I wonder if an idea is not to start just working with a few people… and see because a lot of times if you can show the positive effect of the way of working, that's a much

better way of getting people to work in a… maybe not work in a different way but thinking about it in a different way…" [FGD4; P2]

Theme 3: Using the ICF to facilitate holistic, patient-centred management

Participants want their patients to lead happy and healthy lives:

"…in the end what is the success in ICF and in any rehab philosophy? A well patient long post discharge." [FGD4; P5]

Participants felt that the ICF can provide a framework that facilitates teamwork and collaboration, with these elements being essential for patient-centred management. Participants conveyed the idea that this was specifically linked to clear communication between team members and sharing of valuable information:

"The other thing that the ICF then does well…is the sharing of information using a universal language…" [FGD2; P4]

"That is one of the reasons why they created the ICF, so we can have a common language… but it is a working process and we need to avail ourselves and open ourselves up..." [FGD4; P3]

Every team member has a role to play in constructing a holistic patient picture. Good communication between team members is essential for this to transpire.

"…it's a team document so you can't sort of focus on your thing and I'll focus on my physio things… so I won't know all that maybe the personal factors or the environmental factors the way the social worker would know. That's why it's a team

> document and to get the full potential it needs... we need to build from each other's strengths…" [FGD3; P2]

Participants felt that holistic, patient-centred management does not only involve good communication, teamwork and collaboration within the team, but must extend to the patients and their families. The ICF must be explained to patients to increase their understanding of disability and assist with goal setting.

> "... maybe it [the ICF] will just also enable them [patients] to take a little bit more… more active in their journey through the ICF philosophy and then going home into their participation… so, it almost seems like we have this philosophy and we're doing this *to* them and where's their role?" [FGD3; P5]

At the facility, patients are expected to set their own goals in conjunction with the team. However, the lack of understanding of disability, lack of life experience post injury and the shock of the insult hampers this process:

> "I often think in the CMP where the client needs to come up with their goals, but they didn't really have the knowledge to make goals, they are not in that position yet and this thing has just happened to them. But if you took them through the process that we go through, they would maybe choose fewer goals for now, but they would have an idea where they were going as a long-term goal…" [FGD3; P7]

Currently, patients are only developing these insights after they have been discharged:

> "…since being in outpatients department [OPD] … I'm very privileged… I actually have patients who now understands participation… I actually have participation

> conversations where I found at inpatients you have impairment and activity conversations." [FGD1; P2]

Participants explained that the effective use of the ICF can assist with comprehensive assessment, that should provide a holistic picture of the patients and how the domains interact.

> "I think when you do your assessment using the ICF and the core sets and you can sort of look where's the barriers and facilitators. Here are the activity limitations this and this and this and then you have a good picture. Then you can sort of see okay, this will improve if you sort out the wheelchair, then this will improve if you give this product. If you get this assistive device, then the activities will be better, so you sort of have goals already sorted out." [FGD2; P3]

> "…and from there our plan must evolve for this person… but for me I see then perhaps we won't miss something... it's like we will get to address the patient holistically… We're working patient-centred and it will give us a whole picture of the person." [FG4; P3]

Using the ICF will help to ensure that every member of the team has access to all relevant information:

> "I often feel like they (social workers) have so much information and then they say it's confidential… they often hold critical information to the discharge environment. It would be interesting to hear from them how much is shareable and how much could they put in the framework… it would change, I think, a lot of our pictures…" [FGD2; P4]

Beyond this, participants expressed the possibility that combined assessments would further support a comprehensive approach:

> "…we all do assessments separately in general, so there's a lot of time wasted, where the client literally repeating the same… So, I do feel that we need to be innovative in ways in how we can maybe do an interdisciplinary assessment and then already set goals... together." [FGD2; P1]

Concern was raised about the size of the full ICF framework and how that will impact the assessment:

> "…imagine the time it would take for all of those specific tasks in the ICF if you'd have to go through all of that and code, so I think that's the one obviously big limitation." [FGD2; P2]

A colleague responded with a suggestion:

> "…just about you had said that the ICF takes so much time and coding there is [ICF] core sets being developed now… brief and comprehensive. And they have saved so much of my time in my life… it's like the same things we actually use here, it's just set up so nicely and you just don't miss something that you thought you would have missed with our assessment forms that's so generalised." [FGD2; P3]

Participants also touched on the importance of using qualifiers during coding and assessment:

> "I do think we need to look at qualifiers because we say this is a barrier and then we say something else is a barrier and how much of a barrier is it? And can we change

> that barrier and then it can be part of our goals, 'cause if it's a barrier that we can't change, we need to acknowledge it. It needs to be there…" [FGD2; P4]

In addition, team members should all have specific roles allocated for achieving the goal:

> "…we don't break the goals down into where each member should form a part, so it all lands up being the responsibility of one team member… instead of saying what is each person's role in getting to that goal…" [FGD2; P1]

The ICF helps to identify environmental and personal factors that influences participation, which is an essential step in successful rehabilitation**:**

> "…the ICF brings out more that environmental factors... so there's physical barriers and when it comes to that participation it's almost like taking it a little bit further like from a physical reality." [FG2; P2]

> "…the personal factors... that's also very important, because no matter how much you taught the patient to do pressure relief, their personality or their motivation is of such a nature that they're not going to do it, so I think that's where we can make better use of the ICF." [FGD2; P2]

However, participants recognise that they cannot facilitate the reintegration process alone. The use of the ICF needs to extend into the community for true participation to take place:

> "So, it's great to identify because obviously what the ICF is doing is basically just identifying the problems, then the actual work or management has to start. And I mean sometimes that is just that we can't make miracles happen. So, we have the ICF and it's great to be able to identify the barriers but can we actually really…how do

we… we can obviously do our best in the things that we can do, but I mean we know that referring patients out into the community... it's like a jungle out there." [FGD3; P2]

"... if we really wanted to follow the philosophy of the ICF and make sure that we actually complete it in its fullness we need to then link to community stuff to make sure that the participation is actually happening… There needs to be this bridge to close that gap between the community and us as an institution." [FGD3; P5]

Discussion

This study highlights that the ICF is used to some extent at the facility during assessment and identification of interventions. These aspects are integral to the process of rehabilitation and supported by the ICF framework (Kristensen et al., 2015). However, challenges regarding the use of ICF were also identified. Intervention strategies were generic in nature, with the focus being primarily at the level of impairment and activity. This meant that in-depth exploration of life roles, the environment and personal factors were neglected.

Current participants felt frustrated by the gap between acknowledging the ICF as a theoretical model and using it as a practical framework. These frustrations support the theory by Wiegand et al. (2012) that there is a lot of 'talk' about the ICF but little 'action' due to insufficient guidelines on practical implementation. Most participants displayed an eagerness to improve the use of the ICF in their daily clinical practice as they felt it could improve communication, collaboration, assessment and intervention practices (Tempest et al., 2013; Rentsch et al., 2003).

Participants agreed that the use of the ICF can enhance service delivery at the facility by improving teamwork and communication, structuring comprehensive assessments and guiding appropriate patient-centred intervention strategies. However, they were cautious and unsure of how this could be effected. They strongly emphasised the time challenges faced by the team. These time pressures often result in a stressed, reactive response whereby HPs fall back into known patterns of treating impairments and trying to cope from day to day. The pressure to keep beds occupied and turn over patients was so strong and so ingrained, that even while realising they are missing out on participation, HPs could not break out of the set mould. Kristensen et al. (2015) identified that holistic rehabilitation practices are challenged

by a focus on self-care and basic household activities in the face of time pressures, big workloads and organisational structures and policies.

Kristensen et al. (2015) showed that Danish therapists focused on remedial interventions, impairments and activities early in the rehabilitation process, with adaptive and compensatory strategies following later, often at community level. Leach, Cornwell, Fleming, & Haines (2010) and Lüthi et al. (2011) agree that it is not uncommon for therapists and patients to set goals aimed towards the ICF levels of impairment and activity in the initial stages of rehabilitation. HPs in the current study treated patients early in their rehabilitation process i.e. directly after the incident. This partly explains their focus on impairments and activities. However, as they mentioned, and other South African studies have shown (Scheffler, Visagie & Schneider, 2015; Maart & Jelsma, 2014; Hassan et al. 2012; Sherry, 2015; Gaede & Versteeg, 2011), once discharged, patients have little if any follow-up rehabilitation in the community. Thus, participants felt the onus is on them to include adaptive and compensatory strategies as well during inpatient rehabilitation.

By using ICF core sets and qualifiers, specific to the facility, participants felt that they can do more comprehensive assessments and build a more holistic picture of the patient from which to then set goals and plan interventions. According to Playford et al. (2000), impairment-focused goals might be the result of using impairment-focused assessment tools. Participants in the current study did not mention the use of any standardised formal assessment tools. However, participants did express the idea that patient-centred goal setting could be facilitated by using the ICF to conduct a comprehensive team assessment, as described by Lexell & Brogardh (2015).

The use of relevant ICF core sets was suggested by participants as a base from which to structure a comprehensive team assessment document. The use of qualifiers was also seen as important, as participants explained that they need to prioritise interventions, allocate roles to team members and assess the patient's progress. This should, however, be kept to the minimum to decrease the complexity and length of the assessment.

It is essential to include the patient and family in shared decision-making when setting goals and planning interventions (Kristensen, Tistad, Koch & Ytterberg, 2016; Hammell, 2013), as also suggested by current study participants and practiced at the facility. According to the findings of this study, patients often struggle to explore participation and contextual factors in the initial stages of rehabilitation, because they have not experienced life with a newly acquired disability. They also struggle with decision making, as they are still dealing with the emotional turmoil of the insult to their bodies. This finding is supported by Laver, Halbert, Stewart & Crotty (2010) who revealed that patient 'readiness' to set goals after stroke is often delayed by insufficient knowledge about their new health state and recovery potential.

Patients' and their families' increased understanding of their health status and interventions available empowers them to participate more actively in goal setting and helps all involved to set more realistic and achievable goals (Constand & MacDermid, 2014; Laver et al., 2010; Leach et al., 2010). The current study found that the ICF could be used to assist patients in understanding their new complex health profile. Neubert, Sabariego, Stier-Jarmer & Cieza (2011) described how the ICF core sets for stroke can be used to provide patients with an education programme, focused on increasing their understanding of their own functioning. Their participants found this education helpful and valued the opportunity to reflect on their rehabilitation process in a peer group.

The current study highlighted that patients were able to engage in "participation conversations" only once they had been discharged. This is supported by Lüthi et al. (2011) who found that patients only tend to shift focus from their bodies towards the impact of the environment on participation after they have lived in their communities for some time. Based on this, outpatient services at the facility together with links in the community play a critical role in facilitating community integration of patients. Especially as community-based rehabilitation services in South Africa are scarce (Scheffler et al., 2015; Maart & Jelsma, 2013; Hassan et al., 2012; Sherry, 2015; Gaede & Versteeg, 2011).

The ICF framework carries the view that functioning happens against continuous interaction with the environment (Solli & Da Silva, 2012; Algurén, Lundgren-Nilsson, & Sunnerhagen, 2009; Boger et al., 2015). This means there is a need for more attention to environmental factors than what is currently the case at the facility. Previous research, focused on community integration at this same rehabilitation facility, pointed out the importance of addressing contextual barriers (Gretschel et al., 2017; Hassan et al., 2012 & Maclahlan, 2012). However, the limited interaction with this domain was not unique to the current setting as Kristensen et al. (2015) identified a similar trend at their facility in Denmark.

A lack of knowledge of the ICF was identified as one of the main possible underlying barriers to the use of the ICF. Participants were all exposed to the ICF at different levels and as Farrell et al. (2007) proposed, therefore do not share a common view on its usefulness or importance. Training on the ICF is an aspect that will need careful consideration and planning at the facility if further implementation of the ICF is to be successful. Reed et al. (2008) has shown that face-to-face, instructor-led teaching of the ICF is important as it increases knowledge retention when compared to self-study, stimulates interest in the ICF and nurtures positive attitudes on its usefulness (an issue that is especially important in the

current setting, as negative attitudes have been identified). *How to use the ICF: A practical manual for using the ICF* (WHO, 2013) is an existing resource that can be used to structure training programs at the facility. Furthermore, mentoring assists new users of the ICF with clinical reasoning and practical implementation of the framework (Nguyen, Fayed, Gorter & MacDermid, 2016). Martinuzzi et al. (2013) reported success with annual ICF training for newcomers and utilises mentoring by more-experienced HPs.

Poor ICF knowledge also contributes to poor communication between team members because there is not a sound understanding of the universal language and nomenclature and thus no common ground or framework from which to share knowledge (Kostanjsek, 2011). Suddick & De Souza (2007) warns that ineffective team communication has negative implications for the team, patients and rehabilitation service delivery.

Communication and information sharing can further be obstructed by debilitating interpersonal relationships. The current study shows that interdisciplinary teamwork, communication and holistic management of the patient suffers when the environment is not conducive to free-flowing, open discussions between interdisciplinary team members. A safe environment, where people trust and respect one another, can facilitate broader, transdisciplinary communication and thinking (Van Dongen et al., 2016). Such an environment is created when HPs know each other well, both personally and professionally, and speak the same ‘language’ or share the same approach to both teamwork and patient-centredness. Professional territoriality (Baldwin, 2007) currently prevents such an environment from being created. On the topic of territoriality, Tempest & McIntyre (2006) mentioned that the complex issue of role overlap between professions could, if not understood and managed well, impact on interprofessional teamwork. The ICF can be used to clarify team roles (Tempest et al., 2013).

The ICF is indeed a team document as participants suggested. The ICF can help to develop a culture of interdependence amongst team members (Stephenson & Richardson, 2008). Once team members understand their own value in the team and appreciate the influence that they have on one another, an environment might be created where conversation flows more easily. Understanding the approach and seeing the benefit of it will increase buy-in from team members and help HPs to value the strength of the team above their own personal differences.

It will require concerted efforts to break down the stigma that surrounds the ICF. Nadasan & Reddy (2018) have found that negative attitudes towards the ICF results in minimal to no use of the framework. Careful consideration needs to be given on how to approach the way forward. Examples from literature provide guidelines on ICF implementation (Rentsch et al., 2003; Martinuzzi et al., 2013) but the process must be tailored to the facility's needs. Rentsch et al. (2003) reported that an ICF project team, consisting of members from each discipline and trained on the concepts of the ICF, simplified the ICF to contain only the aspects that was applicable to their patients. Moreover, they redesigned each main component of their rehabilitation process (assessment, goal setting, planning and rehabilitation conferences) according to the ICF and in such a way that it does not require additional time compared to their previous practices. The authors emphasised the importance of knowledge and training and getting everyone on board.

Similar to the project by Rentsch (2003), current participants suggested that a small ICF task team should develop an ICF implementation plan for the facility of which the outcomes must be measured. The implementation should be trialled by one of the teams to assess the feasibility of the project.

The role of organisational culture and management in the implementation of the ICF cannot be overstated. It seems that HPs at the facility are expected to use the ICF, but that management does not provide clear guidance on how this should be done. Participants felt that they were not given appropriate training and support on using the ICF and that there is a lack of guidance in terms of practical implementation strategies. Monitoring and evaluation of ICF implementation were not in place and time pressures along with expectations placed on participants at the facility, were very high.

Study Limitations

The richness of the information that was shared by participants during the FGDs could have been affected by the presence of the researcher and co-facilitator. The researcher is a colleague of the participants and not a manager.

The researcher is inexperienced in interviewing and facilitating a group of professionals and this may have affected the quality of the data collection during FGDs. A co-facilitator assisted with data collection to improve the quality of data and reflexivity.

Few social workers and professional nurses participated in the study due to the facility being short-staffed at the time of data collection. This may have left some perspectives unexplored due to a mismatch in representativeness of disciplines in the FGDs. Volunteering and purposive sampling as recruitment strategies could have resulted in the research being conducted with HPs that are more positive towards the ICF and interested in its implementation, thus not generating a true reflection of the entire population's perceptions of the topic.

Conclusion

The ICF is used to some extent at the facility but numerous gaps were identified. A lack of knowledge, debilitating interpersonal relationships and an unsupportive organisational culture were identified as barriers to ICF implementation. Participants felt that the ICF had the potential to improve service delivery at the facility and made suggestions as to how current uses could be improved, such as using ICF core sets for assessment; using the ICF framework to help patients understand their disability and using the ICF in goalsetting and intervention planning. Using the ICF could facilitate more holistic patient-centred rehabilitation service delivery.

Recommendations

Recommendations for ICF implementation

If the ICF is to be used at the facility, a facilitating environment must be created by management for it to flourish. Ongoing staff training programmes on the ICF presented by a certified ICF-trainer and supported by mentoring programmes is recommended. It is further recommended that the ICF core sets and qualifiers are incorporated in a comprehensive team assessment document and that the information is used to guide goal setting. These strategies can be trialled by one team. Monitoring and evaluation procedures must be established to assess the outcomes of this process.

To empower patients to engage appropriately in aspects like goal setting, ICF education programmes should be developed for patients at the facility.

It is recommended that options be explored for optimising services at the OPD.

Recommendations for further research

Further research is needed to develop measurable outcomes to monitor the effect of the ICF implementation process on the various aspects of rehabilitation and the different stakeholders.

Due to reasons beyond the control of the researcher, few professional nurses participated in the FGDs. It would be interesting to gain more insight on how nursing as a profession sees their role in the implementation of the ICF at the facility and how it could be developed.

Acknowledgements

I would first like to thank the healthcare practitioners from the facility for sharing their time and insights. Without your passionate participation in the discussions, this project could not have been successfully conducted. Special thanks to the management of the facility for supporting this research project.

I would also like to thank my study supervisor Dr Surona Visagie of the Centre for Rehabilitation Studies. Your dedication to your students holds no office hours and your guidance throughout this project is sincerely appreciated.

I would also like to thank Michelle Barbera for assisting me to facilitate the focus group discussions and reflect on this process. You have been an invaluable asset to the findings of this research project.

Lastly, I want to thank all those who supported me throughout this project. In particular my wife, Suzaan and my parents, Joe and Gerda Hall.

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Appendixes

Appendix A: Research study invitation (e-mail version)

RESEARCH STUDY INVITATION

Dear …….

You are hereby invited to participate in my research project at WCRC!

Please continue reading for more details:

What are the aims of the study?

To describe how healthcare practitioners at WCRC currently use the International Classification of Functioning Disability and Health Framework (ICF) and if we can identify other potential uses. This could assist in guiding interdisciplinary teams to find practical ways of implementing the ICF to ultimately reap the benefits that the ICF promise.

Who is the Researcher?

This study forms part of the research assignment by Mr Réhan Hall in his undertaking of a master's degree at the University of Stellenbosch, under the supervision of Dr S. Visagie and Dr M. Geiger.

What does it involve?

Informal group discussions will be held at WCRC in mid-October 2018 where we will discuss the use of the ICF. The discussion will not take more than 2 hours. Participants will be notified of time, date and place in advance.

This Research Project has been granted ethics approval by Stellenbosch Health Research Ethics Committee and the Western Cape Provincial Health Research Committee. WCRC Top Management have also given their approval and support to this project.

What are my rights as a participant?

Participation is completely voluntary, and you may decide to withdraw from the study at any time. The researcher will maintain strict confidentiality.

How does this benefit me?

By participating in this study, you are assisting the researcher to gather rich new data about the use of the ICF within the interdisciplinary team at WCRC. Sharing your view on the ICF and its uses (both positive and negative) will provide valuable assistance in developing more practical ways of improving the quality of the clinical rehabilitation services offered at WCRC.

So, would you be interested in participating?

Please respond to this e-mail with either "**YES**" or '**NO**'

Thank you for taking the time to read this invitation.

If you said YES, I will be getting in touch with you soon.

Feel free to contact me if you have any questions.

Réhan Hall Tel: 021 370 2445 | Email: Rehan.Hall@westerncape.gov.za

Appendix B: Research study invitation (print version)

RESEARCH STUDY INVITATION

Dear …….

You are hereby invited to participate in my research project at WCRC!

Please continue reading for more details:

What are the aims of the study?

To describe how healthcare practitioners at WCRC currently use the International Classification of Functioning Disability and Health Framework (ICF) and if we can identify other potential uses. This could assist in guiding interdisciplinary teams to find practical ways of implementing the ICF to ultimately reap the benefits that the ICF promise.

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How does this benefit me?

By participating in this study, you are assisting the researcher to gather rich new data about the use of the ICF within the interdisciplinary team at WCRC. Sharing your view on the ICF and its uses (both positive and negative) will provide valuable assistance in developing more practical ways of improving the quality of the clinical rehabilitation services offered at WCRC.

So, would you be interested in participating?

Please mark the applicable box:

☐ YES ☐ NO

Thank you for taking the time to read this invitation.

If you said YES, I will be getting in touch with you soon.

Feel free to contact me if you have any questions.

Réhan Hall Tel: 021 370 2445 | Email: Rehan.Hall@westerncape.gov.za

Appendix C: Participant consent form

TITLE OF THE RESEARCH PROJECT: A qualitative exploration of the uses of the International Classification of Functioning, Disability and Health at an inpatient neurorehabilitation facility in the Western Cape, South Africa

REFERENCE NUMBER: S18/05/115

PRINCIPAL INVESTIGATOR: Mr Réhan Hall

ADDRESS: 18 Burnwood Bend, Parklands North, 7441

CONTACT NUMBER: 0723497047

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask me any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. Also, your participation is **entirely voluntary,** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

This study has been approved by the **Health Research Ethics Committee at Stellenbosch University** and will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.

What is this research study all about?

- *The study will be conducted only at WCRC. All WCRC healthcare practitioners are invited to participate in this study.*
- *This project aims to create a space for healthcare practitioners to reflect on the use of the ICF at WCRC, evaluating its success and exploring new ways that it could be used.*
- *Healthcare practitioners are invited to volunteer for the study, but certain individuals will be invited due to their specific knowledge or experience with the ICF. Three group discussions will be held, each with 4-8 participants. Discussions will be recorded using a digital voice recorder.*
- *Groups will be facilitated by me and a focus group facilitator. The compilation of the group will be determined by the research team.*

Why have you been invited to participate?

- *You have been invited to participate because of your knowledge and experience in using the ICF, developing or championing the patient-centred philosophy of WCRC or because you have volunteered and shown interest to be involved in this project.*

What will your responsibilities be?

- *We want to hear your opinion on how the ICF is being used and talk about ideas for possible future uses at WCRC. All you have to do is arrive, drink some coffee and share in the conversations.*

Will you benefit from taking part in this research?

- *The findings of this study will be shared with the institution and if implemented could assist both practitioners and clients at WCRC to reap the benefits that the ICF promises and achieve even better rehabilitation outcomes.*

Are there in risks involved in your taking part in this research?

- *There are no risks involved.*

If you do not agree to take part, what alternatives do you have?

- *Participation is voluntary.*

Will you be paid to take part in this study and are there any costs involved?

No, you will not be paid to take part in the study. There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

- You can contact Réhan Hall (Tel: 021 370 2445; e-mail: rehan.Hall@westerncape.gov.za) if you have any further queries or encounter any problems.
- You can contact the Health Research Ethics Committee at 021 938 9207 if you have any concerns or complaints that have not been adequately addressed by your study doctor.
- You will receive a copy of this information and consent form for your own records.

Declaration by participant

By signing below, I ……..……. agree to take part in a research study entitled: A qualitative exploration of the uses of the International Classification of

Functioning, Disability and Health at an inpatient neurorehabilitation facility in the Western Cape, South Africa.

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

Signed at (*place*) .....…..…….. on (*date*) ……...…….. 2018.

....

Signature of participant **Signature of witness**

Declaration by investigator

I *(name)* ……..…… declare that:

- I explained the information in this document to ……..
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I did not use an interpreter.

Signed at (*place*) .....…..…….. on (*date*) ……...…….. 2018.

....

Signature of investigator **Signature of witness**

Appendix D: Participant demographic information sheet

Please provide the following information to be used in data analyses.

Please note that these details will remain confidential.

Name:	
Age:	
Gender:	
Profession:	

For official use

Group number:

Appendix E: Interview schedule

- Welcome with tea/coffee
- Collect signed consent forms or ask them to sign the forms
- Explain aim and objectives of focus discussion group
- Explain participants' rights and confidentiality
- Enter into group contract
- Start discussion (using prompts if needed):
    1. How are we currently using the ICF?
    2. Is it working for us?
        - Prompt: why?
    3. Can we improve?
        - Prompt: how?
    4. Are there additional ways in which we can use it?
        - Prompt: how?
    5. What could be the barriers?
    6. What would help? i.e. facilitators

- Close and thank participants

Appendix F: Audit trail index

1. Raw data
    - Transcriptions
        - Transcription of focus group discussion 1
        - Transcription of focus group discussion 2
        - Transcription of focus group discussion 3
        - Transcription of focus group discussion 4
2. Procedures and researcher's reflections
    - Data collection
        - Recruitment
        - Group construct – power imbalances
        - Pilot study
        - Sourcing co-facilitator
        - Field notes
            - Researcher notes
            - Co-facilitator notes
        - Post group data dump
            - Data dump focus group 1 (audio recording)
            - Data dump focus group 2 (audio recording)
            - Data dump focus group 3 (audio recording)
            - Data dump focus group 4 (audio recording)
    - Data Analysis
        - Transcript documents (FGD 1-4) with level 1 coding completed
        - Coding strategy adapted – level 1 according to objectives (inductive to deductive)
        - Thematic analysis – level 2 coding (excel mind-map)
        - E-mail trail between researcher and supervisor

Appendix G: HREC ethics approval notice

UNIVERSITEIT
STELLENBOSCH
UNIVERSITY

Health Research

Ethics Committee

(HREC)

Approval Notice

New Application

05/07/2018

Project ID : 7389

HREC Reference #: S18/05/115

Title: A qualitative exploration of the uses of the ICF framework in an inpatient neurorehabilitation centre in the Western Cape, South Africa

Dear Mr RéHAN Hall,

The **Response to Modifications** received on 05/07/2018 10:08 was reviewed by members of **Health Research Ethics Committee 2 (HREC2)** via **expedited** review procedures on 05/07/2018 and was approved.

Please note the following information about your approved research protocol:

Protocol Approval Period: **This project has approval for 12 months from the date of this letter.**

Please remember to use your **Project ID [7389]** on any documents or correspondence with the HREC concerning your research protocol. Please note that the HREC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

After Ethical Review

Please note you can submit your progress report through the online ethics application process, available at: Links Application Form Direct Link and the application should be submitted to the HREC before the year has expired. Please see *Forms and Instructions* on our HREC website (www.sun.ac.za/healthresearchethics) for guidance on how to submit a progress report. The HREC will then consider the continuation of the project for a further year (if necessary). Annually a number of projects may be selected randomly for an external audit.

Provincial and City of Cape Town Approval
Please note that for research at a primary or secondary healthcare facility, permission must still be obtained from the relevant authorities (Western Cape Departement of Health and/or City Health) to conduct the research as stated in the protocol. Please consult the Western Cape Government website for access to the online Health Research Approval Process, see: https://www.westerncape.gov.za/general-publication/health-research- approval-process. Research that will be conducted at any tertiary academic institution requires approval from the relevant hospital manager. Ethics approval is required BEFORE approval can be obtained from these health authorities.

We wish you the best as you conduct your research.

For standard HREC forms and instructions, please visit: Forms and Instructions on our HREC website https://applyethics.sun.ac.za/ProjectView/Index/7389

If you have any questions or need further assistance, please contact the HREC office at 021 938 9677.

Yours sincerely, Francis Masiye,

HREC Coordinator,

Health Research Ethics Committee 2

(HREC2).

National Health Research Ethics Council

(NHREC) Registration Number: REC-

130408-012 (HREC1)·REC-230208-010

(HREC2)

Federal Wide

Assurance Number:

00001372

Office of Human Research Protections (OHRP) Institutional Review Board (IRB) Number: IRB0005240 (HREC1)·IRB0005239 (HREC2)

*The Health Research Ethics Committee (HREC) complies with the SA National Health Act No. 61 of 2003 as it pertains to health research. The HREC abides by the ethical norms and principles for research, established by the*World Medical Association (2013). Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects;*the South African* Department of Health (2006). Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2nd edition); as well as the Department of Health

(2015). Ethics in Health Research: Principles, Processes and Structures (2nd edition)

The Health Research Ethics Committee reviews research involving human subjects conducted or supported by the Department of Health and Human Services, or other federal departments or agencies that apply the Federal Policy for the Protection of Human Subjects to such research (United States Code of Federal Regulations Title 45 Part 46); and/or clinical investigations regulated by the Food and Drug Administration (FDA) of the Department of Health and Human Services.

Appendix H: Western Cape Government research approval letter

Western Cape Government
Health

Health impact Assessment
Sub-Directorate: Health Research
Health.Research@westerncape.gov.za
tel: +27 21 483 0866: fax: +27 21 483 9895
5th Floor, Norton Rose House,, 8 Riebeek Street, Cape Town, 8001
www.capegateway.gov.za)

REFERENCE: WC_201807_028
ENQUIRIES: Dr Sabela Petros

Stellenbosch University

Francie Van Zijl Drive

Parow Valley

Cape Town

7305

For attention: Dr Rehan Hall, Dr Surona Visagie, Dr Martha Geiger

Re: **A qualitative exploration of the uses of the ICF framework in an inpatient Neurorehabilitation Centre in the Western Cape, South Africa**

Thank you for submitting your proposal to undertake the above-mentioned study. We are pleased to inform you that the department has granted you approval for your research.

Please contact the following person to assist you with any further enquiries in accessing the following site:

Western Cape Rehab Centre	**Dr Helen Sammons**	**021 370 2459**

Kindly ensure that the following are adhered to:

1. Arrangements can be made with managers, providing that normal activities at requested facilities are not interrupted.
2. By being granted access to provincial health facilities, you are expressing consent to provide the department with an electronic copy of the final feedback (**annexure 9**) within six months of completion of your project. This can be submitted to the provincial Research Co-ordinator (Health.Research@westerncape.gov.za).
3. In the event where the research project goes beyond the *estimated completion* date which was submitted, researchers are expected to complete and submit a progress report