Older adults' perspectives on fall risk: Linking results to the ICF

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Abstract

The aim of this study is to establish the perceptions of older adults in the South African context regarding falls and to link these perceptions to the International Classification of Functioning, Disability and Health (ICF).

Data was analysed by a summative, conventional and deductive approach. The analysis indicated that the Body Function and Structure codes were most frequently used during the discussions, but the contextual analysis of the most frequently used categories indicated that Activities and Participation were the participants' main focus.

The main focus of fall assessment in older adults should therefore be on Activities and Participation, as this can assist them in decreasing their fall risk, irrespective of whether they had a previous fall.

Contrary to the majority of current literature on falls, this study included both participants who had fallen and those who hadn't, resulting in richer data and themes gathered from the focus groups.

"The people who are most afraid of falling are the ones who fall most.

It's a fact that's been established through biomedical research.

People who are afraid think: As long as I don't move, I can't fall down.

Their physical condition and motors skills decline rapidly,

and so they are bound to fall more often – on their way to the loo, for instance.

That's the fall paradox for you in a nutshell"

(Groen, 2016:269)

1. Introduction

As Hendrik Groen, an 83¼-year-old Amsterdammer revealed, the fall paradox is a tricky "thing" that often starts with a fear of falling, leading to reduced function in those who fall, which in turn results in reduced health-related quality of life (HRQoL) (Álvarez Barbosa et al., 2016). Falls can result in serious injuries, decreased mobility, reduced independence, imbalance and

deterioration of muscle strength. These consequences can increase fall risk in older adults by creating a downward spiral of decline in and loss of activity, causing the older adult to come closer to the critical threshold of functioning needed to perform everyday activities (Florence et al., 2018; Skelton & Beyer, 2003).

Older adults often find it challenging to establish a balance between taking risks and engaging in opportunities to be independent in daily life (Tinetti & Kumar, 2010). On the one hand, older adults might be afraid of falling, which could result in reduced participation in activities inside or outside the house, in an attempt to avoid falling (Haines, Lee, O'Connell, Mcdermott, & Hoffmann, 2015). This can lead to a reduction in the older adult's ability to exercise and interact with others, which in turn can result in physical deterioration that increases fall risk and curtails the older adult's independence (Reinoso, Mccaffrey, & Taylor, 2018). On the other hand, even though falls are the leading cause of injury in older adults (Jin, 2018), they do not necessarily consider themselves as becoming part of these statistics (Gamage, Rathnayake, & Alwis, 2018). They might underestimate their fall risk due to an inflated positive perception of their own state of health and levels of participation (Hughes et al., 2008). Participation entails two dimensions, namely attending (only being physically present) and involvement (which activities the older adult is participating in, while being physically present) (Adair et al., 2018; Imms et al., 2017). Although increased participation is an important part of independence in an older adult's life, it could potentially lead to more falls, injuries and reduced HRQoL (Haines et al., 2015) as both dimensions (attendance and involvement) are at play. Regardless of older adults' perceptions of their own fall risk, they generally consider falls to be an important and preventable issue and will even offer their peers advice on fall prevention (Stevens, Sleet, & Rubenstein, 2018).

Over the past three decades, fall risk research mainly focused on risk factors as well as on prevention and intervention programmes (Park, 2017). These fall risk factors mainly involved medical risk factors relating to the peripheral and central nervous systems which play a major role in mobility and falls (Ambrose, Paul, & Hausdorff, 2013), while the older adults' perceptions about falls and fall risk factors received less attention. However, research has shown that perceptions play an important role in limiting older adults' fall risk (Gamage et al., 2018). Clancy, Balteskard, Perander and Mahler (2015) state that both older adults and practitioners generally assume that appropriate physical and social environments can prevent falls, but that the "symbolic environment" associated with falls (such as spirituality and contributing to society with meaningful activities) might not be considered. Insight into the perceptions of older adults related to fall risk could increase the level of knowledge on falls, related injuries, and preventive measures for both older adults and the practitioners working with them (Gamage et al., 2018).

One of the challenges to building knowledge relates to the lack of a holistic, universal categorisation to describe and understand the perceptions of older adults related to falls and fall risk. In this article we propose the use of the International Classification of Functioning, Disability and Health (ICF) as a framework for this purpose. A framework such as the International Statistical Classification of Diseases and Related Health Problems (ICD), in contrast, focuses on classifying diseases and other health problems associated mainly with bodily disfunctions (World Health Organization, 2004). The ICF views functioning and disability as outcomes of interactions between the health condition (in this case, falls) and the contextual factors (in this case, fall risk factors), which include physical environmental risk factors such as natural or human-made products or environments (de Clercq, Naude, & Bornman, 2020). This framework has allowed us to code the older adult's perception of fall risk factors into three categories, namely (i) Body

Function and Structure; (ii) Activities and Participation; and (iii) Environmental Factors. Using the ICF provides a scientific basis for understanding older adults' perceptions of fall risk factors and yields a holistic model and universal language for healthcare practitioners to describe and classify these perceptions. This increases the possibility of early identification of fall risk factors in older adults (World Health Organization, 2002).

As a qualitative approach, focus groups generate excellent data on the group's views, beliefs and perceptions. Fall risk and fall risk assessment are multi-dimensional constructs and should include not only clinical and research perspectives, but also the perspective of the target population. Currently, healthcare practitioners (HCPs) approach fall risk assessment and the development of prevention strategies from their own perspective (Yen et al., 2014). In order to guide multidisciplinary assessments and daily clinical practice, ICF code sets are proposed as a framework, as they are purpose orientated and clearly demarcate the areas of assessment (Yen et al., 2014). In clinical practice, ICF code sets allow for precise and detailed descriptions of a person's health status, allowing for comparison and agreement between healthcare practitioners (Tate & Perdices, 2008). Currently, no such code set exists for fall risk assessment in older adults. By including the older adults' perspectives in the development of a code set that could be used as an assessment tool, a comprehensive ICF code set could be developed. This will equip healthcare practitioners to assess this population in a holistic manner and not merely based on their own subjective perspectives. The study therefore provides insight into the perceptions of older adults in the South African context with regard to falls and links these perceptions to the ICF (Desai & Potter, 2006).

2. Method

2.1 Study design

A focus group methodology was used. Focus groups have the potential to elicit and bring to the fore new information through the continuous exchange of experiences. This triggers new thoughts and associations that provide the researcher with an in-depth understanding of the relevant research constructs (Nyumba, Wilson, Derrick, & Mukherjee, 2018).

2.2. Participants

Participants were selected based on criteria related to age, literacy, corrected vision and hearing, intelligible speech, as well as the self-reported absence of any neurological diagnoses (Table 1).

Table 1: Focus group participant selection criteria

Criteria	Method	Theoretical Justification
65 years or older	Biographic questionnaire	This study focused on older adults as they are at a higher risk of falling (World Health Organization, 2015).
Basic English literacy skills	Biographic questionnaire	The questionnaires were administered in English, as it is one of the most frequently spoken languages in Tshwane (South African Government, 2018).
Corrected vision and hearing within the normal limits	Participant selection screening questionnaire	Best corrected hearing within normal or near-normal limits was required to actively participate in the focus groups, while best corrected vision was required to complete the questionnaires (Trujillo Tanner et al., 2018).
Basic communication skills	Participant selection screening questionnaire	Basic communication skills ensured all participants had equal opportunities for verbal engagement during the focus group discussions (Carey & Asbury, 2012).
No self-reported neurological diagnosis, excluding dizziness or vertigo	Participant selection screening questionnaire	Falls could occur due to neurological diseases and for the purposes of this study any additional neurological contributing factors, other than vertigo or dizziness, were excluded (Homann et al., 2013).

Participants were recruited from multicultural "senior citizen" church community groups in the greater Tshwane area to allow for optimal heterogeneity of the selection criteria. These groups

were representative of the local residents from all over the area. The focus group discussions were held in both urban and rural areas to include different contexts and be representative of different ethnicities. Thirty-six participants met the selection criteria, including no self-reported neurological diagnosis, other than dizziness or vertigo, and all consented to participate in this study. Each of the three focus group discussions, lasting 60 to 90 minutes, contained a mixed sex group (males and females) of 10 to 15 participants (Stewart & Shamdasani, 2014).

2.3. Materials and equipment

Table 2 summarises the materials and equipment used to conduct the focus groups, and includes the aim, rationale and method.

Table 2: Materials and equipment for focus groups

Materials and equipment	Aim	Rationale	Method
Participant selection screening and biographic questionnaire	To ensure that participants meet the selection criteria and for descriptive purposes.	A quick and easy way to ensure participants meet the selection criteria and to increase the validity of the study (Sargeant, 2012).	Participants completed the screening questionnaire prior to commencement of the focus group discussions.
Focus group script (see Table 3 for more detail)	To explore the areas deemed important by the participants regarding fall risk.	Method to structure the group and ensure that the discussion remains focused. Ensures procedural consistency across the three groups to heighten the data integrity (Hennink, 2014).	During the focus group discussions, the script was followed to ensure that all areas and questions were addressed in a similar manner across the three focus groups.
Voice recording	To document all verbal discussions with the participants during the focus groups discussions.	Reviewing recorded data increased the validity of the data and the study (Gregory & Radovinsky, 2012) and assisted with transcriptions.	All focus group discussions were recorded for verbal interactions.
Field notes	To document all relevant non-verbal information obtained during the focus groups discussions.	Reviewing notes on non-verbal interactions can increase the validity of the recorded data and provide context to the data (Gregory & Radovinsky, 2012).	Field notes were made of relevant non-verbal interaction in the focus groups.

The custom-designed materials enabled the researcher to gain a rich and clear understanding of the perceptions of the older adults during the focus group discussions. The focus group script (Table 3) contained specific steps to conduct the focus groups to ensure that the discussion remains focused, ensures procedural consistency and heightens data integrity.

Table 3: Focus group script used during the discussions

Focus group script item	Procedure
Welcome and introduction	The researcher welcomes everyone to the discussion and introduce herself and her colleague. All the participants introduce themselves
Housekeeping rules	The following housekeeping rules are discussed: *Everyone is encouraged to participate *No one will be forced to participate *All answers / opinions are encouraged – there are no 'dumb' questions or comments *Everyone's opinion is important *No one is to laugh at or dismiss another person's opinion / comment *Only one person should talk at a time and give everyone equal opportunity to participate *The researcher will ask a few questions, but you are welcome to go back to a previous question if we have already moved to the next question *All participants should have completed the informed consent form and the biographic questionnaire before we can continue the discussion
Ice breaker	The ice breaker question is discussed "If you had to give up one of your senses (hearing, seeing, feeling, smelling, tasting) which would it be and why?"
Short introduction of the research aim	The researcher explains the aim of the study to the participants: "This research study focuses of falls in older adults and aims to develop a list of factors that can influence an older adult's risk of falling."
How can participants help to achieve these aims	The researcher explains that the aim of the focus group is to identify the factors older adults (participants) consider to be facilitators (decrease your chances of falling) and barriers (increase your chances of falling) to the identification of fall risk in older adults. The participants can assist by giving their input on these factors.
Discussion questions	1. Which factors do you think can increase your chance of falling? (Prompts if needed: Prompt about specific factors related to (i) body functions & structure level, (ii) activities & participation level and (iii) environmental factors.) 2. Which factors do you think can decrease your chance of falling? (Prompts if needed: Prompt about specific factors related to (i) body functions & structure level, (ii) activities & participation level and (iii) environmental factors.)
Member checking	The participants' responses are summarized and read back to them. They are invited to make changes, add information or clarify their contributions.
Closing	The researcher thanks everyone for their time and contribution and the session is closed.

The two specific questions asked to the groups were: "Which factors do you think can increase your chance of falling?" and "Which factors do you think can decrease your chance of falling?" Since the questions were broad enough to ensure a wide variety of answers, prompts were used only to gather specific information from the participants related to ICF categories. This ensured that the aim of the paper was achieved by gathering the older adults' perceptions regarding fall risk.

2.4. Data collection procedure

Our research team consisted of audiologists and speech-language therapists who are well versed in fall risk, disability and the ICF. The current study constitutes the initial part of a larger research project aimed at developing an ICF code set for assessing fall risk in older adults.

Ethics permission was obtained from the relevant university's Ethics Committee. Participants were recruited via local church groups in the greater Tshwane municipality. The contact persons of five church groups were contacted, and their groups were invited to participate in the study. Three responded. The first author visited two of these contact persons and had a telephonic conversation with the third group's, explaining the purpose and selection criteria of the study. A time and date to conduct the focus group discussion was arranged at the venue where their weekly meetings take place. This made the participants feel comfortable in familiar surroundings and no additional logistical arrangements and costs (e.g. travel) had to be incurred.

In the first group, on average twelve to fourteen adults attended the meetings; in the second group, twelve adults usually attended; and in the last group, the average number of attendees was twenty. On the day of the meeting of the first focus group, fourteen potential participants attended and all of them met the selection criteria and agreed to participate. When the second group met,

ten adults complied with the selection criteria and agreed to participate. Due to the weather, only twelve adults attended the meeting of the third group, and all of them met the selection criteria and agreed to participate. The meetings of the first and second focus groups were conducted in Afrikaans and the third group in English. All the participants were conversant in the specific language used in the focus group and this language was also used for their weekly meetings.

The aim of the focus groups and research study was explained to the participants at the beginning of the gathering, as per the focus group script. All participants completed a biographical questionnaire. Questions that arose about the study were discussed and the participants were alerted to the fact that the discussion would be audio recorded for data analysis. The researchers and participants were introduced to one another and housekeeping rules were discussed. As the participants knew each other, rapport was quickly established. During the discussion, the researchers also made notes of the discussion to assist with member checking.

The focus group commenced with an ice breaker question This served as an interactive and engaging start to the session to create a sense of familiarity among the participants and the researchers, strengthen group cohesion and to lay a foundation for discussing fall risk and its consequences in older adults. Although participants were encouraged to participate and freely share their thoughts and ideas about falls and fall risk, they were not forced to interact. At the end of the focus group meeting, the participants were encouraged to add their final thoughts and ideas on the topic until no further information was given, signalling data saturation. Member checking was done by reading a summary of the main discussion points back to the participants, thereby providing them the opportunity to clarify their contributions or add additional information. In all

three focus groups, minimal clarification or additions were made and all participants agreed that the final script was reflective of the discussions.

2.5. Rigour

Three groups were recruited from diverse backgrounds to ensure that multiple perspectives were obtained. A focus group script was used to ensure consistency between the groups and participant verification (member checking) was done. Member checking, or response validation, is one of the most crucial techniques for establishing credibility in qualitative studies (Birt, Scott, Cavers, Campbell, & Walter, 2016). This also facilitated a shared understanding, which further improved the accuracy of the data collected (Harper & Cole, 2012).

2.6. Data analysis procedures

Verbatim transcripts of the three focus group discussions were collapsed into one data source for analysis. In order to determine the perceptions of older adults regarding their risk of falling and to link these perceptions to the ICF, data analysis consisted of three approaches to content analysis, namely a summative, conventional and directed approach.

Firstly, in the summative approach, a latent content analysis procedure was used by transcribing the three focus group discussions and then analysing the data by using ATLAS.ti 8, a workbench for the qualitative analysis of large bodies of textual data (http://atlasti.com).

Thereafter, a conventional content analysis approach was used by following an inductive thematic data analysis procedure, as suggested by Braun & Clarke (2012), which entailed (i) familiarisation of the raw data by exploring the transcribed data of all three focus groups; (ii) creating a coding manual to code the data, making sure to capture both the semantic and conceptual

meaning; (iii) searching for themes by grouping codes with a similar meaning together; (iv) reviewing themes independently and grouping related themes together in domains that reflected the most prominent ideas; (v) defining and naming the themes and reaching consensus between the researchers on the themes; (vi) writing up the data to reflect the themes identified in the focus group data.

Next, a directed content analysis approach was followed and a deductive data analysis was made to link the identified themes to the ICF, using the ICF linking rules (Cieza, Fayed, Bickenbach, & Prodinger, 2019). This allowed the researchers to categorise the older adults' perceptions.

All three researchers were familiar with linking qualitative data codes to ICF codes and therefore independently reviewed the themes and linked them to the ICF. A 96% agreement score between the authors were obtained and, after discussion, 100% consensus was reached on all themes and ICF codes. This resulted in a total of 298 ICF codes.

Lastly, a summative content analysis was made in the form of a word frequency count.This determined the amount of times specific words were used during the focus group discussions, resulting in a word frequency list with a total of 2250 unique words. Summative content analysis identifies and quantifies certain words in a text with the purpose of understanding the contextual use of the words or content and to explore usage.

3. Findings

Our three focus groups included a total of 36 participants, illustrated in Figures 1 and 2.
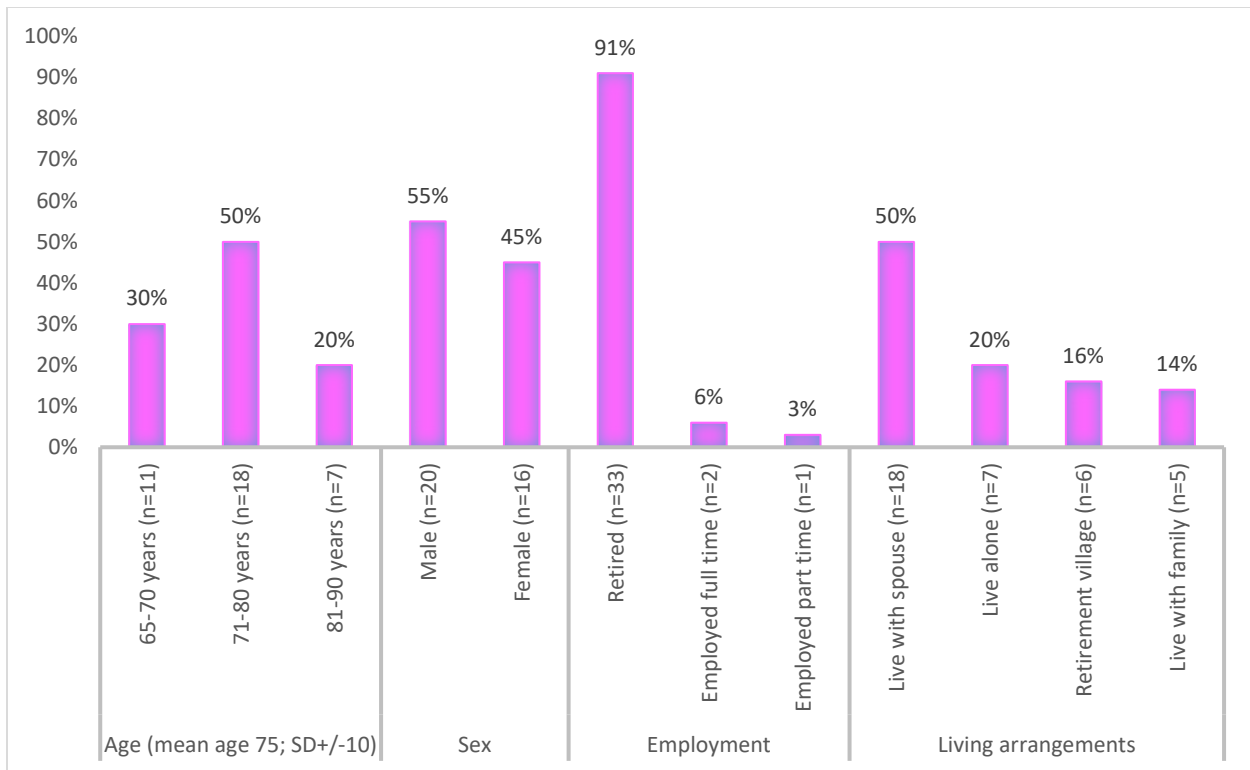
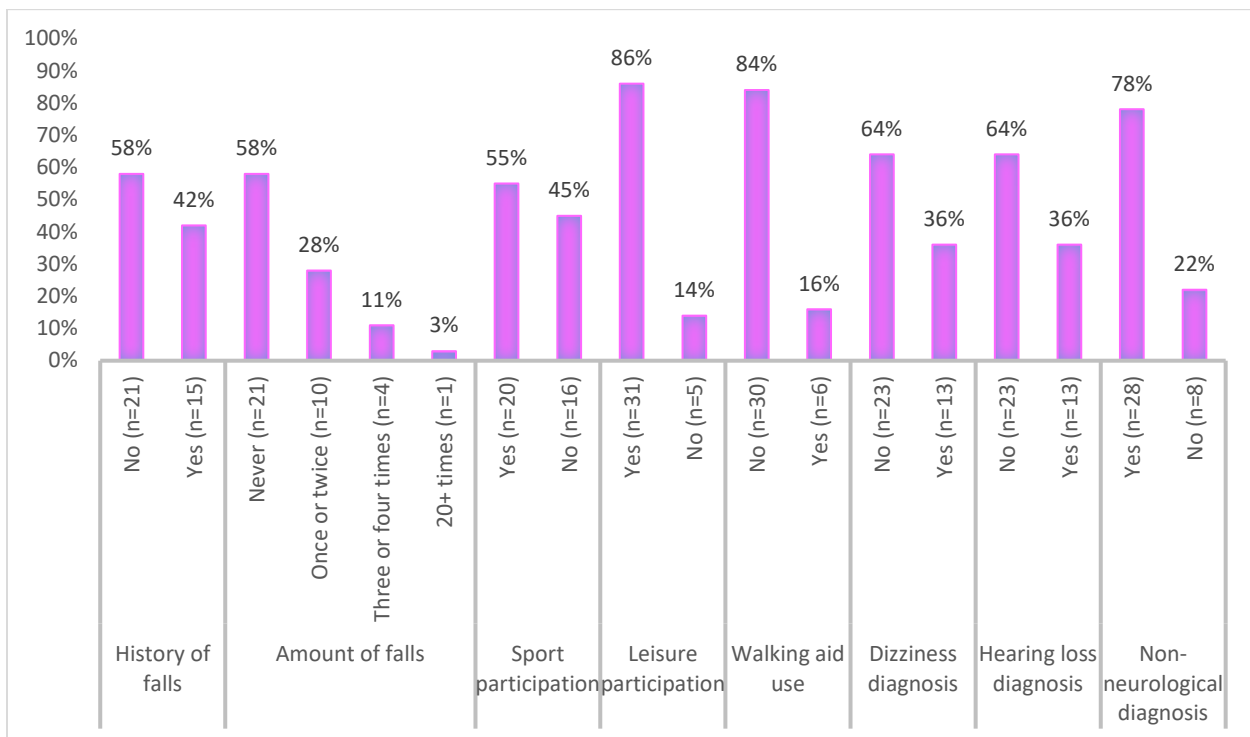**Figure 1: Participant biographic information (n=36)**

Figure 2: Participant case history relevant to falls (n=36)

The older adults' perceptions relating to fall risk awareness in everyday life allowed for the identification of three main sets of data, namely (i) thematic data analysis that resulted in 104 focus group themes; (ii) deductive analysis that linked the focus group themes to the ICF, resulting in 298 ICF codes; and (iii) word frequency count analysis that determined the most frequently used keyword categories (used 10 or more times) in the focus groups (n=31).

The first category captured a spectrum of possible reasons that could increase fall risk. The predominant reasons for explaining an increased risk of falling was "floor surface" (n=18); "know your own limitations" (n=9); "fear of falling" (n=8); "exercise" (n=7); "vision" (n=7); "animals" (n=6); "hand railings on stairs" (n=6); "blood pressure" (n=5) and "shoes" (n=5).

The second category resulted in a deductive analysis of the focus group codes, which was used to link the focus group themes to the ICF (n=92). A total of 92 focus group themes were linked to the ICF and due to the nature of the linking rules, one focus group theme could appear in more than one ICF category (results indicated in Table 4). Three themes could not be linked to the ICF, as Personal Factors, namely "age" and "trust in God" and "medical conditions" – items that would typically be coded as International Statistical Classification of Diseases and Related Health Problems (ICD) codes. The 92 themes resulted in a total of 298 ICF codes, as depicted in Table 4.

Table 4: Results of themes linked to the ICF

Body Function and Structure	Activities and Participation	Environmental Factors
b152 – Emotional functions (n=24)	d110 - Watching (n=13)	e150 - Design, construction and building products and technology of buildings for public use (n=37)
b210 - Seeing function (n=13)	d460 - Moving around in different locations (n=10)	e155 - Design, construction and building products and technology of buildings for private use (n=21)
b770 -Gait pattern function (n=10)	d429 - Changing and maintaining body position, other specified and unspecified (n=8)	e115 - Products and technology for personal use in daily living (n=11)
b755 - Involuntary movement reaction functions (n=8)	d920 - Recreation and leisure (n=8)	e350 - Domesticated animals (n=8)
b760 - Control of voluntary movement (n=8)	d410 - Changing basic body position (n=5)	e140 - Products and technology for culture, recreation and sport (n=8)
b140 - Attention functions (n=6)	d449 - Carrying, moving and handling objects, other specified and unspecified (n=2)	e110 - Products or substances for personal consumption (n=7)
b125 - Activity level (n=5)	d455 - Hand and arm use (n=2)	e580 - Health services, system and policies (n=4)
b122 - Global psychosocial functions (n=4)	d430 - Lifting and carrying objects (n=1)	e120 - Products and technology for personal indoor and outdoor mobility and transportation (n=4)
b530 - Weight management functions (n=3)	d415 - Maintaining a body position (n=1)	e315 - Extended family (n=3)
b139 - Global mental functions, other specified and unspecified (n=2)	d420 - Transferring oneself (n=1)	e310 - Immediate family (n=3)
b420 - Sensations associated with hearing and vestibular function (n=2)	d450 - Walking (n=1)	e240 - Light (n=3)
b134 - Sleep functions (n=2)		e225 - Climate (n=2)
b126 - Temperament and personality functions (n=2)		e298 - Natural environment and human-made changes to environment, other specified (n=2)
b163 - Basic cognitive functions (n=1)		e230 - Natural events (n=2)
b144 - Memory functions (n=1)		
b749 - Muscle functions, other specified and unspecified (n=1)		
b730 – Muscle power function (n=1)		
b260 - Proprioception function (n=1)		
b715 - Stability of joint function (n=1)		
b235 - Vestibular functions (n=1)		
b545 – Water, mineral and electrolyte balance function (n=1)		
s798 - Structures related to movement, other specified (n=18)		
s770 - Additional musculoskeletal structures related to movement (n=7)		
s750 - Structure of lower extremity (n=4)		
s730 - Structure of upper extremity (n=2)		
s799 - Structures related to movement, unspecified (n=2)		
s260 - Structure of inner ear (n=1)		
Total: n=131 (44%)	**Total: n=52 (17%)**	**Total: n=115 (39%)**

The items in each ICF category depicted in Table 4 are shown in decreasing order from the code mentioned most frequently to the code mentioned least in each section. The totals of the three ICF groups were analysed using IBM's Statistical Package for the Social Sciences 24 (SPSS) (IBM, 2016). Data was checked for normality using the Shapiro-Wilk test, which indicated that each group shows a significance of <0.05, thereby not exhibiting normal distribution of the data.

Next, the Friedman two-way analysis of variance (ANOVA) test was conducted to test for significant differences between the three groups of data (Body Function and Structure, Activities and Participation, and Environmental Factors). Results indicated a statistical difference between Body Function and Structure compared to Activities and Participation ($p<0.0001$), as well as between Activities and Participation compared to Environmental Factors ($p<0.0001$). There was no statistical difference between Body Function and Structure compared to Environmental Factors ($p=0.2158$).

Due to the fact that the linking of keywords to the ICF takes into account textual meaning only and not contextual meaning also, a word frequency count was analysed. All words contained in the core vocabulary of older adults as identified by the University of Nebraska–Lincoln, were disregarded from the 2250 unique words, except for four words that were directly related to the topic ("hearing", "step", "walking", and "hands"). The remaining fringe words relevant to the context and topic discussion in the focus groups (n=267) were then analysed for frequency in context, and words with similar meanings were grouped together. When analysing the most frequently used words, it is important to consider the context in which they were mentioned, as this reflects the intention of the participants during the discussion (Sutton & Austin, 2015). This analysis resulted in 31 categories of words that were mentioned ten or more times in the focus groups. The most frequently used category was "fall" (n=213), indicating the focus groups stayed on topic during the discussion. Other than "fall", only one category was used more than 100 times, namely "vision" (n=110). Four categories were used 76 to 100 times, namely "single steps" (n=97), "walking" (n=90), "floor surface" (n=96) and "change in body position" (n=95). The two words mentioned 51 to 75 times were "age" (n=63) and "bones" (n=59). Eight words were mentioned 26 to 50 times, namely "hands" (n=45), "ladders" (n=35), "bathroom" (n=34), "hearing" (n=34),

"environments" (n=33), "walking aids" (n=29), "feet" (n=28) and "animals" (n=26). The remaining fifteen words were mentioned 10 to 25 times.

Of the most frequently used categories, the top eight were also categorised under the ICF, namely "fall", "vision", "steps", "floor surface", "change in body position", "walking", "age" and "bones". These words/phrases were mentioned a total of 823 times and compared to the total amount of ICF codes (n=298) generated during the focus group discussions (Figure 3).
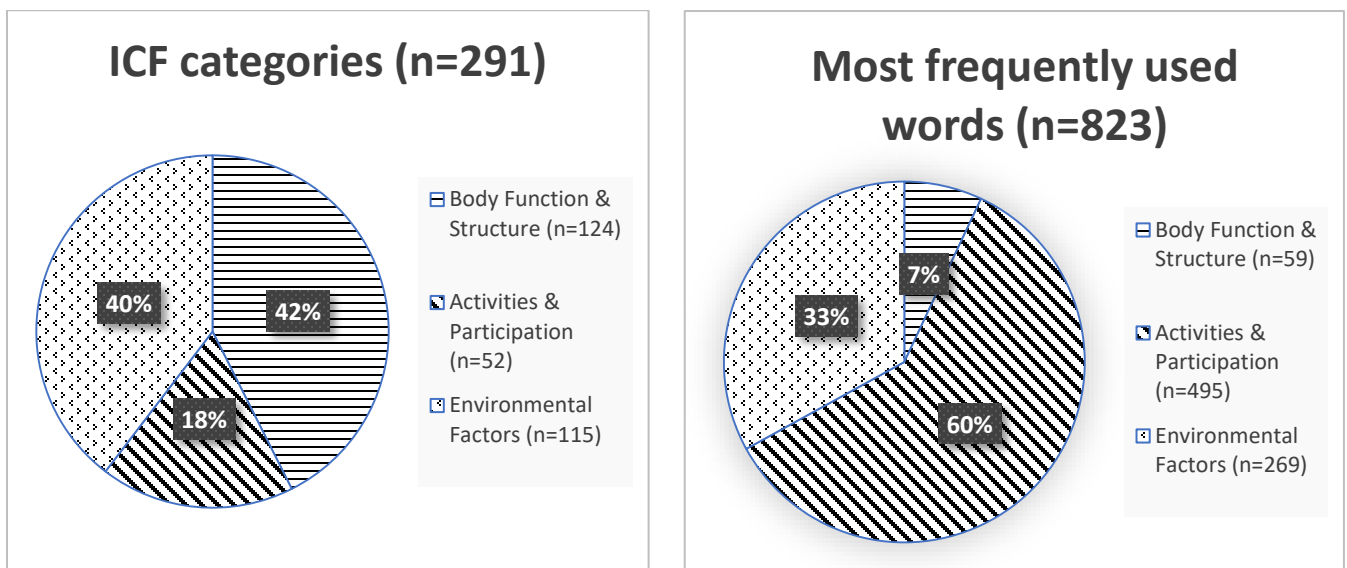

Figure 3: ICF categories of all codes (n=291) compared to most frequently used word categories (n=823)

Figure 3 highlights the difference between linking all the textual words to the ICF and linking to them the most frequently used categories, within the context of the discussion.

4. Discussion

Participants were able to stay on topic, as is indicated by the fact that "fall" was the most used word during the discussion. Environmental Factors such as "floor surface", "fear of falling", "animals" and "shoes", were frequently mentioned. This correlates with a recent study by Hanger

(2017) that suggests that changing standard floor surfaces to low-impact floor surfaces can significantly reduce fall-related injuries, although it does not alter the overall risk of falling. The idea of injury-reducing flooring was also embraced by older adults in a study by Gustavsson, Jernbro, & Nilson (2018), indicating that this could be a significant method of reducing fall-related injuries in homes and hospitals. A study by Brundle et al. (2015) suggests that an unfamiliar or unsafe environment, inside or outside the house, is not in itself a risk factor for falls in older adults, but rather that the person's ability to cope with the environment and their interaction with the environment are significant.

As part of a person's interaction with the environment, one also has to consider the role of older adults' reaction time and the effect of reaction time on mobility and gait. Declines in physical and cognitive functioning are indeed risk factors for falls in older adults, as their postural control and attention demands and abilities decrease compared to younger adults (Jehu, Paquet, & Lajoie, 2017). Exercises and intervention programmes could be beneficial for improving gait, reaction time and dynamic postural control in older adults, which could lead to a decreased risk of falling (Morrison, Colberg, Parson, & Vinik, 2014).

The results from the textual analysis indicated that Body Function and Structure codes were identified most frequently. This correlates with Pohl et al. (2015) who also found that participants often mentioned the ageing body and physical impairments as reasons for increased fall risk. Physical impairment and several medical conditions, including central nervous system disorders that could increase older adults' fall risk, were regularly mentioned during the discussion. This corresponds with the findings of Ensrud et al. (2003) who indicated that the use of certain central nervous system drugs could lead to increased physical impairments and falls.

Textual analysis, as used when using the linking rules to link all the themes to the ICF, focuses just on the text itself, whereas contextual analysis, as used when linking the most frequently used categories to the ICF focuses on the surrounding conditions and environment in which the text was written – in this case, the focus groups (Drisko & Maschi, 2016). Comparing the textual and contextual analysis between all the themes and the most frequently used categories, the results are vastly different, indicating the importance of considering the context in which the words were used. This supports the notion of Gamage et al. (2018) that we should use patient narratives to increase our knowledge on falls and preventive measures for older adults.

The contextual analysis of the most frequently used categories indicated that Activities and Participation was the main focus of these discussions. Participants were more concerned about the impact that falls have on their ability to participate in daily activities than about their physical limitations such as age or medical conditions. As they age, the HRQoL of older adults might be influenced by declining physical health and functioning, due to the age-related changes in their bodies (Halaweh, Dahlin-Ivanoff, Svantesson, & Willén, 2018). This could lead to older adults being less active and less engaged in their daily life and recreational activities. The study by Gustavsson et al. (2018) came to the same conclusion, stating that participants were less interested in focusing on fall risks and more interested in discussing the impact falls have on social interactions and issues concerning daily activities. They further mention that older adults view falls as common and normal, and not as something out of the ordinary in the ageing population. They also reiterated that most older adults find it difficult to establish a balance between taking risks and engaging in opportunities of being independent in their daily life (Tinetti & Kumar, 2010), which could lead to falls and a reduced HRQoL. Focusing on Activities and Participation also supports the notion by Johnson (2018) that increased knowledge of the activities that are

linked to falls could be a valuable contribution to the prevention of falls in community-dwelling older adults.

Involvement in everyday activities, both social and mental, and maintaining such an involvement, is one of the factors that can increase a person's HRQoL (Nightingale, Rouse, Walhin, Thompson, & Bilzon, 2018). Participating in different life events is important for HRQoL; however, information about how falls restrict participation among older adults remains scant. A recent study by Liu (2017) indicates that about 70% of community-dwelling older adults experience participation restrictions. This supports the data gathered in this study and the notion that older adults' fall-related discussions indeed centre around Activities and Participation, which is significantly related to fear of falling and could lead to a reduction in HRQoL (Pohl et al., 2015). Fear of falling could include fear of the actual fall, fear of the physical consequences, fear of pain, fear of loss of independent living and/or fear of being embarrassed (McMahon, Talley, & Wyman, 2011). It is therefore important for HCPs to recognise and take into account how older adults view falls, including their fear of falling, and how these perceptions may influence their daily activities and subsequently their HRQoL (Trujillo, Painter, & Berry, 2014). Fall prevention is an important contributor to good health and improved HRQoL, and for older adults, it is imperative to stay active despite being concerned about falling (Halaweh et al., 2018).

On conclusion of this study, we were able to provide insight into the perceptions of older adults in the South African context with regard to falls and to link these perceptions to the ICF. This enabled us to identify certain key themes from these discussions, namely (i) older adults perceived environmental factors such as floor surfaces, animals and footwear to be contributing factors that could increase their risk of falling; (ii) they considered falls to have a significant impact

on their ability to participate in daily activities and life events; (iii) participation in activities was more important than the physical limitations that medical conditions or age placed on their lives; and (iv) they considered falls to be common and normal in the ageing population. The final theme highlighted the importance of taking notice of older adults' narratives, including their fear of falling, and to increase clinical knowledge on falls and provide preventive measures for this population. The identified themes are important for further research and the scientific discourse could be moved forward by comparing the perceptions of the older adults to the perceptions of healthcare practitioners and researchers (as documented in the literature dealing with falls in older adults), thereby compiling a holistic picture based on the aspects considered important by all three sources in assessing fall risk in older adults.

5. Limitations and recommendations of the study

In our focus groups, only two general questions were asked in relation to the participants' perceptions of fall risk in older adults. Further studies could consider asking specific questions regarding each ICF category to elicit more responses. The focus groups were conducted in urban and rural areas to include different contexts and be representative of the local community. Discussions were held only in Afrikaans or English, and thus were representative of the second and third most commonly spoken languages in Gauteng, South Africa, (where the focus groups were conducted) (South African Government, 2018). Other language groups should also be included in further studies, but although different words will be used in different languages to describe their experiences, it is expected that the essence of the construct will remain the same, regardless of the language used to describe it.

6. Implications and conclusion

Based on this study, the main focus of fall assessment and fall intervention in older adults should be on Activities and Participation. Older adults might perceive falls as a common occurrence related to age, but by decreasing their fall risk, healthcare practitioners could assist them in improving their HRQoL. Older people's perspectives in respect of fall risk may influence the attendance and involvement dimensions of the activities they participate in, as well as fall prevention activities (Lim et al., 2018). Therefore it is critically important during assessment and intervention to include their perceptions on the factors that they consider relevant. In this study, we included both participants who had and who had not fallen previously, which resulted in richer data and themes gathered during the focus group discussions.

7. Author contributions

All authors contributed equally to this research paper.

8. References

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