The Understanding and Experience of Falls among Older People with Mental Illness Living in the Community: A Qualitative Study

Ling Koh

Supervisors: Associate Professor Lynette Mackenzie

Dr Meryl Lovarini

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SECTION ONE: LITERATURE REVIEW

Overview

Falls are one of the most significant risks of mortality and morbidity for older adults. In 2015, falls resulted in the death of 696 Australians over 65 years in New South Wales alone (Centre for Epidemiology and Evidence, 2017). Falls can also cause physical consequences ranging from bruises, fractures to soft tissue and brain injuries (Terroso, Rosa, Torres, Marques, & Simoes, 2014). These negative fall-related outcomes may lead to hospitalisation and therefore impose a substantial economic burden on the healthcare system (Curtis et al., 2014; Watson, Clapperton, & Mitchell, 2011). Apart from physical injuries, falls may induce psychological distress and instil a fear of falling in older adults, resulting in an avoidance of daily activities that limits functional abilities, increases dependency and reduces overall quality of life (Deshpande et al., 2008; Li, Fisher, Harmer, McAuley, & Wilson, 2003). With an ever-increasing life expectancy in Australia (Plakiotis & O'Connor, 2012), the significant impacts of falls will demand the advancement of knowledge regarding falls and their management in the older population.

Within the population of older adults, individuals with mental illness have been found to have an increased falls rate compared to those without mental illness. For instance, in hospital settings, fall incidents in psychiatric units are up to four times higher than that in other aged-matched units (Blair & Gruman, 2006; Fischer et al., 2005; Scanlan, Wheatley, & McIntosh, 2012). Research evidence has also shown that community-residing older adults with mental illness are 13.6 per cent more likely to experience falls than a case-controlled sample (Hendrie et al., 2013). Furthermore, the risk of sustaining a fall-induced injury was found to be 1.5 to 2.5 times higher in individuals diagnosed with a mental health condition, which also significantly increased the associated healthcare costs in this population (Finkelstein, Prabhu, & Chen, 2007). However, falls in older adults with mental illness have been studied less rigorously compared to the general older populations (Estrin, Goetz,

Hellerstein, Bennett-Staub, & Seirmarco, 2009; Furness, Mnatzaganian, Garlick, Ireland, McKenna, & Hill, 2017). As a result, limited is known about the characteristics of falls, factors that contribute to risk of falling as well as how to effectively manage falls in older adults with mental illness. Hence, this literature review provides an overview of the current knowledge regarding falls and mental illness, explores the falls risks in older adults with mental illness, and proposes potential avenues for research in this area.

Falls and Older People in General

Falls are a significant risk for older people, who are individuals aged 65 years or over (World Health Organization [WHO], 2002). A fall is defined as a person who unintentionally comes to rest on a lower surface not caused by a sudden medical condition or an external force (Venes, 2017). In Australia, around a third of community-dwelling older people experience at least one fall in a year, and more than half of the falls result in a physical injury (New South Wales Health, 2010). Fall-related injuries often range from mild bruises and sprains to more severe outcomes like dislocations, fractures, soft tissue injury and brain injury (Terroso et al., 2014). Some of these physical consequences require medical treatment (20%) or even hospitalisation (10.7%) (New South Wales Health, 2010), imposing substantial healthcare costs (Watson et al., 2011). Furthermore, falls can often lead to a fear of falling in older adults and result in an avoidance of daily activities (Deshpande et al., 2008). Such fear-induced activity restriction may in turn limit functional abilities, increase dependency and reduce older people's overall quality of life (Deshpande et al., 2008; Li et al., 2003). Thus, in order to understand falls and reduce their negative implications, research has investigated the risk factors contributing to falls among older adults.

Risk factors for falls. According to the World Health Organization (2007), causative factors associated with falls are multifactorial and can be categorised into four dimensions

including biological, behavioural, environmental and socioeconomic factors. As the number of risk factors increases, a person experiences a higher risk of falling and is more likely to sustain fall-related injuries (WHO, 2007). In general, the risk of falls is heightened in older people as they are commonly exposed to the biological risk factors associated with ageing. These include declined vision and hearing, loss of muscle strength and flexibility, impaired balance, slower reaction time and reduced cognitive capacity (Lord, Sherrington, Menz, & Close, 2007).

In addition to the age-related physiological changes, falls risk in older adults can be exacerbated by behavioural factors that encompass individual actions and daily choices, which include multiple medications, substance use, and sedentary behaviour (WHO, 2007). Falls may also be the result of an interaction between biological factors and hazardous features of the faller's social or physical environment such as social isolation and tripping hazards in the home or public environment (WHO, 2007). Furthermore, social conditions and economic status have been associated with older adults' risk of falling; those who live alone or with a lower socioeconomic status have been found with an increased risk of falls (Elliott, Painter, & Hudson, 2009).

Falls Prevention Strategies. Identification of falls risk factors has facilitated the development of various intervention strategies aimed at reducing falls in the older population as identified in a Cochrane review (Gillespie et al., 2012). These falls management strategies usually target one or more falls risk factors by facilitating behavioural change and/or modifying the environment. The Cochrane review reports the effects of exercise programs, multifactorial interventions, home modifications, and withdrawal of unnecessary psychotropic medications in reducing the rate of falls in older people (Gillespie et al., 2012). However, the success of falls management and prevention strategies can be diminished in practice settings

by the diversity among different older populations as well as the variations in health and living conditions (Gates, Fisher, Cooke, Carter, & Lamb, 2007; Jansson, 2007).

As falls are caused by a number of multidimensional factors, population groups with different medical conditions, physical and cognitive capacities, lifestyle behaviour and social contexts are anticipated to have different falls risk profiles and may experience falls that are qualitatively different in nature. Within the wider population of older adults, individuals with mental illness often have a complex array of physical and mental health issues that differentiate their well-being needs from the general older adults (Rickwood, 2006). Therefore, this group of older people may be exposed to a different combination of falls risk factors which contributes to the unique characteristics of falls and their experience of falls.

The Older Population Living with Mental Illness

Mental illness is a term used to describe a spectrum of mental disorders defined according to clinical diagnostic criteria in the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (DSM-5; Australian Institute of Health and Welfare, 2015). These disorders vary in both duration and severity, and they interfere with an individual's cognition, emotion regulation and/or behaviour which then lead to disability in social or occupational activities (American Psychiatric Association [APA], 2013). In the context of this review, a narrower view of mental illness is adopted, with a focus on the common mental disorders affecting older adults in Australia such as mood disorders, anxiety disorders and psychotic disorders (Plakiotis & O'Connor, 2012). However, the prevalence literature of mental disorders in community-residing older Australians shows highly variable estimates (Djernes, 2006). This has been attributed to the differences in definitions and methods adopted by different studies to count cases of mental disorder (Pirkis et al., 2008).

Despite the methodological limitations across existing prevalence studies, the reported population-level data on mental disorders in older people may be helpful when considering the impact of falls in this group at the society level. Based on an Australian survey conducted in 2007, one in five adults (20 per cent or 3.2 millions) lives with a mental disorder and the prevalence of mental illness decreases considerably with increasing age (Australian Bureau of Statistics, 2008). The survey had a response rate of 60 per cent and recruited approximately 8800 participants. However, the investigation only counted cases of mood disorder, anxiety disorder and substance abuse disorder, which excluded other mental illnesses common among older adults such as psychotic disorders. Hence, in spite of the declining estimates with age, the prevalence of mental illness in older Australian adults may be higher than the reported figure. Additionally, as the Australian population progressively ages, the number of older adults with mental illness is anticipated to also increase over time (Plakiotis & O'Connor, 2012).

International epidemiological research suggests that mental illnesses often have an early onset, with three quarters beginning by the mid-20s and later onsets being mostly secondary to an existing mental disorder (Kessler, Amminger, Aguilar-Gaxiola, Alonso, & Üstün, 2007). Therefore, although some older adults have experienced a late onset, the older mental health population may generally have had a lifetime of chronic symptoms associated with their mental health diagnosis (Rickwood, 2006). After experiencing enduring mental disorder throughout adulthood, this group of individuals typically have complex and unique needs in addition to the typical developmental needs described in the wider older population (Australian Institute of Health and Welfare, 2015).

Adults with mental illness may experience the effects of ageing at a younger age due to any premature cognitive deterioration and poor physical health status. For instance, one longitudinal study has found a more rapid cognitive decline in adults over the age of 50 years

with mental illness compared to an age-matched sample of adults without mental illness (Gildengers et al., 2009). Furthermore, individuals with mental illness often experience negative health outcomes as complications of their diagnosis (Karim, Overshott, & Burns, 2005), which have been linked to a life expectancy reduction of 10 to 25 years in this population (Lawrence, Hancock, & Kisely, 2013). Hence, older adults with mental illness are suggested to be more at risk of falls as a healthcare issue commonly associated with ageing.

Search Strategy for Identification of Studies

To locate studies that had investigated falls in middle-aged and older adults with mental illness, a literature search was conducted on September 17, 2018. Relevant studies were identified by searching MEDLINE and CINAHL using the following terms: *mental disorders* or *mental illness* or *anxiety* or *anxiety disorders* or *depression* or *schizophrenia* or *psychotic disorder*s, and *accidental falls* or *fall prevention*. Only studies with participants aged 45 or above and published in English were included in this review. The search was also limited to studies published in the past 20 years to increase information currency.

Falls in Older Psychiatric Inpatients

Compared to the general older populations, falls in older adults with mental illness have been studied less rigorously (Estrin et al., 2009; Furness et al., 2017). Articles on this topic focus primarily on falls that occur among older psychiatric patients in hospital settings, including the identification of falls rates in this group and their mental health-specific risk factors (McMinn, Booth, Grist, & O'Brien, 2016; Scanlan et al., 2012). Studies have reported a falls incidence range of 1.44 to 6.4 per 1000 bed days in hospital psychiatric wards while the overall falls rates in general acute wards ranged from 0.86 to 5.54 per 1000 bed days (Fischer et al., 2005; Scanlan et al., 2012). Similar results have also been confirmed in older inpatients (Scanlan et al., 2012); falls were found more common in psychogeriatric units than

in general geriatric units, with up to 17.1 falls and 13.78 falls per 1000 bed days respectively (Hill et al., 2015; Nyberg, Gustafson, Janson, Sandman, & Eriksson, 1997). Hence, although a wide range of hospital falls rates has been reported, the existing research literature strongly suggests a higher incidence of falls in psychiatric patients than other age-matched patient populations (Blair & Gruman, 2006; Fischer et al., 2005; Scanlan et al., 2012).

In addition to having higher falls rates, psychiatric patients have been found more likely to sustain serious injuries from falls, with residence in geriatric psychiatry units being the most significant predictor of serious falls injury (adjusted odds ratio = 2.8; Fischer et al., 2005). The greater odds of severe falls-related injury have resulted in a significant increase in healthcare cost of falls among older psychiatric patients (Finkelstein et al., 2007). The reported higher rates of sustaining serious injury from falls in the older psychiatric population might be a result of their predisposition to osteoporosis and fragility fractures (Stubbs, Zapato-Bravo, & Haw, 2009). Therefore, older adults in mental health inpatient units are proposed to be an at-risk population for both falling and severe injury post fall compared to older adults in general hospital units.

Characteristics of falls in psychiatric inpatients. With the increased overall falls rates and more serious consequences of falling in older psychiatric inpatients, research studies have explored the nature of falls experienced by this population group to understand the unique causes and circumstances of their falls. The most commonly reported activities at the time of falls in psychogeriatric units are ambulating and wandering around wards (Blair & Gruman, 2006; Furness et al., 2017; Scanlan et al., 2012). In addition to the physical falls factors typically reported in other geriatric wards such as gait instability and lower limb weakness (Oliver, Daly, Martin, & McMurdo, 2004), falls among psychogeriatric patients can be a result of mental illness symptomatology such as hallucinations, disorganised thoughts, anxiety, restlessness and agitated behaviour (Blair & Gruman, 2006; Edelstein & Brown,

2000). The increased falls risk factors among older psychiatric patients is suggested to be further exacerbated by the use of psychotropic medications as well as their side effects during ambulation including orthostatic hypotension and a decreased awareness and interpretation of environmental hazards (McMinn et al., 2016; Tsai, Witte, Radunzel, & Keller, 1998).

Additional risk factors predisposing older adult psychiatric patients to fall have been found to include their concomitant comorbid medical conditions (Edelstein & Brown, 2000; Heslop et al., 2012), treatments such as polypharmacy and electroconculsive therapy (de Carle & Kohn, 2001; Knight & Coakley, 2010), poor nutrition (Edmonson, Robinson, & Hughes, 2011) and sleep deprivation that are commonly experienced by psychiatric patients (Eriksson, Strandberg, Gustafson, Lundin-Olsson, 2009). Due to the uniqueness of falls and risk for falling experienced by psychiatric patients, the falls risk assessment instruments commonly used in general inpatient geriatric populations are considered irrelevant for identifying psychiatric patients at risk of falls (Edmonson et al., 2011; Wynaden et al., 2016). Hence, the Edmonson Psychiatric Fall Risk Assessment Tool (EPFRAT; Edmonson et al., 2011) have been developed as a specialised falls risk assessment tool for use in psychiatric units to target the additional risk factors specific to patients with mental illness.

Earlier falls onset. Empirical research has also revealed a unique characteristic of fallers in inpatient psychiatric wards. The literature shows that patients who fell in medical-surgical units had a reported mean age ranging from 65 to 83 (Oliver et al., 2004), and they generally started to experience falls at the age of 65 years (Halfon, Eggli, Van Melle, & Vagnair, 2001). In contrast, Tay and colleagues (2000) found that patients who fell in mental health units had a younger mean age of 56.3 and falls within the group began to increase evidently after the age of 50. These results propose an earlier age of falls onset among inpatients with mental illness compared to the general patient population. Despite limited research explaining the findings, an interpretation of this reported phenomenon could be the

premature cognitive decline found in adults aged 50 or over diagnosed with a mental illness (Gildengers et al., 2009), in conjunction with the abovementioned additional falls risk factors experienced by psychiatric inpatients.

In summary, the existing literature has documented a higher risk of falls and related injury among psychiatric patients compared to general older patients. An array of inpatient falls studies has also highlighted the unique characteristics of psychiatric patients aged 50 or over as well as the falls risk factors specific to this population group. However, while there is a growing body of research on falls in psychiatric inpatients, very little research to date addresses falls within the community-dwelling population of older people with mental illness. This population is also expected to have a falls risk profile different to the general community-residing older adults due to their exposure to the risk factors associated with a mental health diagnosis.

Risk of Falls in Older People with Mental Illness Living in the Community

While numerous studies have been conducted on falls and falls prevention within the general community-dwelling population of older adults (Gillespie et al., 2012), a systematic review has pointed out the dearth of falls research in mental health settings for the older population (Bunn et al., 2014). Nevertheless, the literature suggests a heightened risk of falls in older people living in the community with mental illness. This is attributed to the additional precipitating factors associated with the symptoms of mental disorders and their implications in older adults' life (Heslop et al., 2012). These population-specific risk factors increase the likelihood of falling by contributing to the biological, behavioural and social dimensions of falls risk.

Biological factors. In addition to the developmental changes commonly reported in older adults, the diagnoses of a spectrum of mental disorders like depression, bipolar disorder,

anxiety disorders, and psychotic disorders are suggested to increase older adults' falls risk through an influence on their cognitive capacities. For instance, the clinical features of mood disorders and anxiety disorders in older adults typically include cognitive symptoms such as difficulty concentrating and distractibility (Byrne & Neville, 2010). Additionally, bipolar disorder and schizophrenia in community-residing adults over 45 years are associated with decreased executive functioning, reduced attention/concentration and slowed information processing (Depp et al., 2007). All these cognitive domains are important in gait coordination and maintaining attention to sensory cues in the environment to ensure safe and functional mobility (Amboni, Barone, & Hausdorff, 2013). Hence, the exacerbated cognitive decline is suggested to place older adults with mental illness at a higher risk of falling (Iaboni & Mulsant, 2016).

In addition to the associated cognitive manifestations, individuals with mental illness are predisposed to falls by a range of comorbid medical conditions. An estimated 11.7 per cent of Australian adults who experienced mental illness reported a co-occurring physical condition (Australian Bureau of Statistics, 2008). Studies have found that chronic disorders like obesity, diabetes mellitus, cardiovascular disease and stroke are significantly more prevalent within the mental health population than in the general adults (John, Koloth, Dragovic, & Lim, 2009; Regenold, Thapar, Marano, Gavirneni, & Kondapavuluru, 2002; Scott & Happell, 2011). Given that these health conditions have been linked to an increased number of falls in the community (Paliwal, Slattum, & Ratliff, 2017), older adults with mental illness may be placed at higher risk of falls by their psychiatric conditions and any comorbid medical conditions compared to the older population without mental illness.

Behavioural factors. The literature identifies a number of behavioural risk factors associated with mental illness that may predispose older adults with mental illness to falling in the community. These include the prescription of psychotropic drugs, multiple medication

use, decreased physical activity and poor nutrition (Deandrea et al., 2010). To reduce the effects of psychiatric symptoms on the daily functioning and participation in older adults with mental illness, a broad range of psychotropic medications are typically prescribed for use in this population. However, these medications often cause undesired side effects that can lead to an increased falls risk. For instance, commonly prescribed medications like mood stabilisers, antidepressants and antipsychotics may result in an impaired balance and gait, sedation, cardiac rhythm changes and/or hypotension that predispose older adults on these medications to falls (Iaboni & Mulsant, 2016; Kerse et al., 2008). Consistently, meta-analyses have demonstrated the association between an increased falls risk in community-dwelling older adults and their use of psychotropic medications (Hill & Wee, 2012; Leipzig, Cumming, & Tinetti, 1999; Woolcott et al., 2009). Nevertheless, pharmacological treatments remain a widely implemented intervention option for older adults with mental illness (Plakiotis & O'Connor, 2012), therefore exposing this population to a higher risk of falls.

Apart from the use of psychotropic medications, individuals with mental illness are often prescribed with multiple medications to manage their medical comorbidities (Byrne & Neville, 2010). Although the non-psychotropic medications used to reduce physical health symptoms are not directly linked to falls, these medications like cardiovascular drugs and analgesics can cause orthostatic hypotension and consequently lead to an increased falls risk and falls severity in older people (Milos et al., 2014). Moreover, the use of multiple medications in older adults, referred to as polypharmacy, has been shown to significantly increase falls rates after adjusting for their socio-demographic, medical and lifestyle factors (Fahami, Sathanapally, Seidu, Davies, & Khunti, 2017). The association between polypharmacy and falls in older people has been attributed to the drug-drug interactions that are linked to sedative and anticholinergic effects and associated with confusion as well as a higher falls risk (Byrne & Neville, 2010).

The symptoms of psychiatric conditions such as depressive mood and psychosis may decrease an individual's motivation and capacity to adhere to a healthy lifestyle (Farholm & Sørensen, 2016; Mushtaq, Mondelli, & Pariante, 2008). For example, research conducted in an Australian sample of community mental health service users found that the participants undertook less exercise compared to a control group in the general population (Davidson et al., 2001). As physical activity leads to muscle strengthening, an improved sense of balance and falls prevention (El-Khoury, Cassou, Charles, & Dargent-Molina, 2013), older adults with mental illness who engage in more sedentary lifestyle behaviours may experience an increased risk of falls. Additionally, individuals with mental illness are found to consume diets of lower quality than the general adults; their diets are energy-dense, highly processed, higher in salt and contain less fruit and vegetables (Dipasquale et al., 2012). The poor eating habits of people with mental illness often lead to a deficiency in dietary nutrients that are essential to maintain muscle mass and improve balance (Duque, Daly, Sanders, & Kiel, 2017), therefore contributing to an exacerbated risk of falls in this population.

Social factors. Social isolation has been conceptually and empirically determined in the literature as a predictor of falls in older adults living in the community (Elliott et al., 2009; Pohl, Cochrane, Schepp, & Woods, 2018). Individuals who live alone are found at risk of sustaining more injuries following a fall episode than those living with others (Elliott et al., 2009). This could be due to their lack of immediate social support and assistance in an emergency such as a fall event (Kharicha et al., 2007). Unfortunately, implications of mental illness in an older person's falls risk extend beyond the physical and cognitive symptoms to include its impact on social participation. For example, psychiatric conditions like psychotic disorders may induce persecutory delusions or hallucinations that lead to avoidance of social interactions (Hansen, Torgalsbøen, Melle, & Bell, 2009). Furthermore, individuals with mood

disorders such as depression may experience a lack of motivation to maintain social contacts (Radke, Güths, André, Müller, & de Bruijn, 2014).

In addition to the negative effects of psychiatric symptoms on social engagement, individuals with a diagnosis of psychiatric disorder may encounter negative discrimination and stigma from family and friends, making it difficult to sustain social networks (Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009). The link between mental illness and social isolation is supported by an Australian survey that targeted community-dwelling adults, which found that approximately 56.4% reported receiving no or minimal social support (Stain et al., 2012). As social isolation is a risk factor for falls and fall injuries (WHO, 2007), older adults with mental illness, especially those who live alone and with limited social support, are considered a population group at risk of falls and injury.

In summary, the literature on falls and mental illness in older people strongly indicates that older adults living in the community with mental illness are at greater falls risk than the general community-dwelling older population. This is due to their exposure to additional falls risk factors unique to their mental health diagnosis, including reduced cognitive functioning, medical comorbidities, use of psychotropic medications, less healthy lifestyle and a lack of social support. Although the nature of several relationships between these risk factors and falls in older mental health population has not been fully explored in an Australian context, the increase of risk factors in multiple aspects (biological, behavioural, social) is proposed to considerably increase the population's falls risk in overall. Furthermore, the presence of mental health-specific risk factors may imply that the nature of falls in this population and their needs are different from the general older adults. Nevertheless, there is less research investigating falls experienced by older people with mental illness compared to the general older populations in the community (Bunn et al., 2014).

Research Gap: Falls in Community-dwelling Older People with Mental Illness

With the shift of mental health services towards community care, efforts have been made by the Australian government to support older adults with mental illness in community integration and ageing in place (Ash et al., 2012). For instance, an Australian national survey conducted in 2010 has shown that the majority of individuals with psychotic disorders received treatment in the community and their hospital admissions for mental health reasons had decreased by 35.9% since 1997 (Morgan et al., 2011). Nevertheless, little is known about the issue of falls as a major threat to healthy ageing among community-residing older people with mental illness.

One published American study was conducted on a sample of older community mental health service users consisting of older adults with schizophrenia, major recurrent depression and bipolar disorder. Participants reported 13.6% more falls than a control group of older adults attending primary healthcare clinics without mental illness (Hendrie et al., 2013). However, the study did not investigate the characteristics of falls experienced by this group. Hence, to date, the nature of experienced falls, risks of falls and falls management within the at-risk population of older adults with mental illness in the community have been largely unexplored.

Conclusion and Future Research Directions

The evidence from research studies strongly supports the conclusion that older people with mental illness living have a higher falls risk, unique risk factors and complex needs due to their coexisting medical, social, and degenerative conditions. This supposition is supported by the results of existing empirical research in older psychiatric inpatients, indicating an increased risk of falls, qualitatively different characteristics of falls and the need for a specialised risk assessment tool compared to other geriatric inpatients. Nevertheless, a review

of the research literature has highlighted a gap for exploring falls experienced by older people with mental illness living in the community despite them being exposed to more falls risk factors than the general community-dwelling older adults. Furthermore, although numerous falls prevention strategies have been developed to reduce falls within the general community-dwelling population of older adults, these approaches may not meet the needs of those living with a mental illness.

Given the physical and psychological consequences of falls, the understanding of falls and falls management within the at-risk population group of older adults with mental illness in the community remains significant. Hence, future research should begin to examine the issues of falls among this group of older people to understand the antecedents, circumstance, and consequences of their falls, identify the characteristics of falls, and explore the population's needs in relation to falls management. Research into these areas are expected to provide an insight into the falls experienced by this population group and potentially identify falls prevention strategies and approaches perceived as helpful from their perspective.

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SECTION TWO: JOURNAL MANUSCRIPT

Australian Occupational Therapy Journal Title Page Requirements

(i) The Understanding and Experience of Falls among Older People with Mental Illness Living in the Community: A Qualitative Study

(ii) Ling Koh BPsy (Hons).
Lynette Mackenzie PhD, MEdStud, BEdStud, BAppSc(OT), DipCOT; Associate Professor.
Meryl Lovarini PhD, MHSc (Health Informatics), Grad Dip Safety Science, Grad Dip OT, BSc; Lecturer.
Mandy Meehan PG Dip (Old Age Psychiatry), BAppSc (OT); Occupational Therapist.
Diane Grayshon GradCert Mental Health Nursing; Clinical Nurse Specialist.

(iii) Ling Koh – University of Sydney
J Block, 75 East Street, Lidcombe NSW 2141
Email address: lkoh5682@uni.sydney.edu.au

Lynette Mackenzie – University of Sydney
J Block, 75 East Street, Lidcombe NSW 2141
Email address: lynette.mackenzie@sydney.edu.au

Meryl Lovarini – University of Sydney
J Block, 75 East Street, Lidcombe NSW 2141
Email address: meryl.lovarini@sydney.edu.au

Mandy Meehan – Ryde Community Mental Health
39-41 Fourth Ave, Eastwood NSW 2112
Email address: mandy.meehan@health.nsw.gov.au

Diane Grayshon – Ryde Community Mental Health
39-41 Fourth Ave, Eastwood NSW 2112
Email address: diane.grayshon@health.nsw.gov.au

(iv) Falls in Older People with Mental Illness

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(xii) Correspondence: Ling Koh – University of Sydney
c/o Lynette Mackenzie, Discipline of Occupational Therapy
75 East Street, Lidcombe, NSW 2141
Email address: lkoh5682@uni.sydney.edu.au
Phone: 0435475957

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Abstract

The Understanding and Experience of Falls among Older People with Mental Illness Living in the Community: A Qualitative Study

Introduction: Compared to the general older population, older adults living in the community with mental illness are suggested to have an increased risk of falls. However, little is known about the falls experienced by this population. This study aimed to explore the understanding and experience of falls from the perspectives of older adults with mental illness living in the community as well as to identify any falls prevention strategies valued by them.

Methods: Ten consumers aged 50 or over with experience of falling were recruited at a community mental health service centre in Sydney (four male and six female; mean age = 70.4 years). An audiotaped, semi-structured interview was conducted with each participant. Recordings were transcribed verbatim and data were thematically analysed using NVivo11 software to identify key themes.

Results: Four major themes were generated: (1) making sense of falls, (2) being self-reliant after falls, (3) enduring the consequences of falls, and (4) preventing future falls – perceptions and strategies.

Conclusion: Most participants were uncertain about the cause of their falls and seemed to not understand their falls risks. They were also less likely to seek help after a fall, despite injuries. Consequences of falls included physical injury and the negative emotional impacts experienced following a fall. Most participants expressed a certain degree of concerns regarding future falls, however, their strategy to prevent falls was to simply "be careful." Future occupational therapy practice should address the falls risk in community-dwelling older adults with mental illness and implement prevention initiatives tailored to the needs of this population.

Introduction

In many community mental health service settings, occupational therapists emphasise on the principles of recovery, with efforts put into symptom management and ongoing mental health risk assessments (Fossey et al., 2012). While maintaining mental well-being is crucial in supporting consumers' continuing agency in everyday life, relatively little attention has been placed on physical health risks, which are particularly important in the older population as they are prone to serious health issues like falls due to the age-related declines.

Falls are one of the most significant risks of mortality and morbidity for older adults. They can cause physical injuries ranging from bruises, fractures to soft tissue and brain injuries (Terroso, Rosa, Torres, Marques, & Simoes, 2014). Furthermore, falls can induce fear of falling in older adults and result in an avoidance of daily activities that limits functional abilities, increases dependency and reduces the overall quality of life (Li, Fisher, Harmer, McAuley, & Wilson, 2003). While older people are generally predisposed to falls by age-related physiological changes (Lord, Sherrington, Menz, & Close, 2007), their risk of falling may be exacerbated by a mental health disorder (McMinn, Booth, Grist, & O'Brien, 2016). However, compared to the general older populations, falls in older adults with mental illness have been studied less rigorously (Estrin, Goetz, Hellerstein, Bennett-Staub, & Seirmarco, 2009).

Within the limited literature on falls in older populations living with mental illness, research has predominantly focused on understanding falls among psychiatric inpatients. Empirical studies in hospital settings have found that older psychiatric patients generally experience more falls and are more likely to sustain serious falls injuries than other geriatric patients (Fischer et al., 2005; Scanlan et al., 2012). The heightened falls rates reported in psychiatric units for older people are attributed to a range of mental health-specific falls risk

factors documented in the research literature. These include the psychiatric symptoms experienced on ward, medical comorbidities, psychiatric treatments like polypharmacy and electroconvulsive therapy, poor nutrition and sleep deprivation (Edmonson, Robinson, & Hughes, 2011; McMinn et al., 2016).

While there is a growing body of research investigating falls in older psychiatric inpatients, very little research has addressed falls within the community-dwelling population of older adults with mental illness. These individuals living in the community are exposed to the unique falls risk factors associated with a mental health diagnosis and therefore have a falls risk profile that is different from the general older adults. Indeed, a previous study has found that older community mental health service users reported 13.6% more falls than a control group of older people attending healthcare clinics without mental illness (Hendrie et al., 2013). However, the study did not explore the characteristics of falls experienced by this group of older adults. Hence, to date, the nature of falls, risks of falls and falls management within the population of older adults with mental illness living in the community have been largely unexplored, despite their increased falls risk and the potentially severe effects of falling.

This study aimed to explore the perspectives of older adults living in the community with mental illness regarding their understanding of falls, past experiences of falls, and personal strategies to prevent falls. Although older people are generally defined as individuals who aged 65 years or over (World Health Organization, 2002), individuals with mental illness are suggested to experience the effects of ageing at a younger age of 50 due to the premature cognitive decline and poor physical health status (Gildengers et al., 2009; Karim, Overshott, & Burns, 2005). Consistently, previous research has found that psychiatric patients started to experience falls evidently after the age of 50 years (Tay et al., 2000). Therefore, throughout this paper, older adults with mental illness are defined as individuals who aged 50 or over

diagnosed with a mental disorder. An in-depth examination of falls experienced by this at-risk population may offer insights to the specific phenomenon and potentially expand the scope of occupational therapy practice in community mental health settings to address consumers' risk of falls.

Methods

Study Approach

A qualitative approach was adopted to gain insight into the phenomenon of falls as experienced by adults with mental illness over the age of 50 years living in the community. Ethical approval was obtained from the Northern Sydney Local Health District Human Research Ethics Committee (reference no. RESP/18/214). The author is an occupational therapy student with beliefs that reflect the theoretical models of the occupational therapy profession, implying the multi-factorial causes underlying falls as well as the impact of falls on occupational participation and well-being.

Sampling and recruitment

Criterion sampling was utilised to recruit participants from a metropolitan community mental health service. Inclusion criteria included being over the age of 50 years, living in the community, having had at least one fall in the past, and being able to understand and converse in English. Service users at the mental health centre who fulfilled the inclusion criteria were identified by two healthcare providers, with a consideration of their capacity to provide informed consent. Prospective participants were approached by the author to present an information sheet explaining the purpose of the study, the involvement of an audio-recorded interview, voluntary participation and free withdrawal. Participants who agreed to take part in the study were requested to sign an informed consent form prior to commencing interviews.

Data collection

One-on-one, semi-structured interview was selected as the method of data collection to elicit participants' rich descriptions of their past fall experiences (Creswell, 2007a). Ten interviews occurred between July and September 2018. The interviews were flexible and adapted to each participant's unique experience. Nevertheless, an interview guide was followed, which included a series of open-ended questions generated by the author from the research question and reviewed by her supervisors (Mackenzie and Lovarini). The questions were used to prompt detailed recall of a past fall event(s), perceived causes of the fall, consequences of the fall, and any post-fall changes in activities or helpful strategies used to prevent future falls (see Table 1).

Participants were offered a choice of interview venue. Eight of the interviews were conducted in the participant's own home, and the remainder of the interviews took place in a private room at the community mental health centre. Seven participants were interviewed in the presence of a support person (e. g., a family member or healthcare provider) as per their own request or they were considered by their healthcare provider as requiring support in the interview. The interviews were conducted by the author and ranged in length from 30 to 70 minutes. Demographic data on age, gender and living situation (i.e. lived alone or with others) were collected during the audio-recorded interviews. The interview data were audio-recorded for data analysis. Medical records were reviewed after the interviews to extract data on participants' medical diagnoses and prescribed medications.

Data analysis

Interview recordings were transcribed verbatim by the first author. Participants were assigned an ID number from 1 through 10 to protect their anonymity. The interview data were then analysed using thematic analysis according to Braun and Clarke's (2006) guidelines. An

inductive approach was taken to allow themes to emerge from the data so that data is not coded using pre-existing frameworks (Braun & Clarke, 2006). In addition to listening to the audio-recordings for transcription, the transcripts were read and reread for familiarisation prior to coding. Initial codes were then assigned to segments of raw data. Subsequently, codes were grouped into categories, which were then organised into broader groups that represented emerging themes within the data. Next, thematic similarities and differences were compared across participants to review each potential theme as well as validate their existence in the original data. NVivo11 software was used in the data analysis process to store, organise and compare data. The refined themes were then related back to the study aim and existing literature to answer the research question.

Rigour

Five strategies were utilised to enhance the credibility, dependability and trustworthiness of the findings. During the four months prior to data collection, the first author visited the community mental health centre repeatedly to engage and involve self in the field. In addition, the first author used a reflective journal to document her emerging thoughts on the phenomenon throughout the data collection and analysis process. This enabled her to acknowledge the influence of her personal values on data interpretation in order to increase the credibility of findings (Mays & Pope, 2000). Member checking was used to ensure accuracy of interview data from participant's perspective (Minichiello, Aroni, & Hays, 2008). Participants were provided the opportunity to review their interview transcript. Only seven participants requested their transcripts for review, with no changes made. Throughout data analysis, consensus coding was conducted by the author and her two supervisors (Mackenzie and Lovarini). Each interview transcript was coded by two individuals independently and their codes were compared for similarities and differences. Emerged themes were discussed, reviewed and refined by the three coders. Additionally, peer reviewing occurred throughout

the research process whereby the author's supervisors, who were experienced qualitative researchers in falls research, examined the methodology, interview transcripts and final report. They provided ongoing feedback to the author to validate or question the findings, therefore minimising researcher bias (Creswell, 2007b).

Results

Table 2 presents the demographic characteristics of all ten participants. All participants reported having had at least one fall in the past five years. Participants' accounts referred to falls that had occurred, sometimes recurrently, between 20 years and three months previously. Four key themes emerged from the interview data: (1) making sense of falls, (2) being self-reliant after falls, (3) enduring the consequences of falls, (4) preventing future falls – perceptions and strategies.

Theme 1: Making sense of falls

This theme presents findings relating to the context in which participants experienced a fall event and tried to make sense of the fall. It comprises two subthemes, namely, the circumstances around the fall and the attributed cause of the fall. During the course of interviews, some participants displayed mental health symptoms such as flight of thoughts, thought blocking and circumstantial speech. The manifestations of symptoms imposed challenges in differentiating between the circumstances of similar fall events, especially when participants had more than one fall in the same location. Hence, rephrasing and revisits to fall events were used for clarification and to maintain the interview focus. In terms of participants' accounts, many reported having difficulty recalling some memories associated with their falls. Some forgot what they were doing at the time of fall, some could not recall their action right before the fall, some had difficulty remembering the time of day when the fall occurred.

> I wish I could [remember] but it's almost like my brain's… sort of cut that memory out. But I can remember talking with [my friend]. I remember getting to that point where the road and that path connect, but I can't remember where my foot was or whether I was on a rock or whether it was a hole or what, I don't know. (Participant 10)

In one instance, the participant and her support person suggested differing circumstances of a fall event. While Participant 1 reported, *"no, I wasn't by myself, there was [my daughter], there was my son and we were painting the house, yeah,"* her daughter emphasised that participant had been alone and that no one had witnessed the fall. Whilst the majority of participants voiced the challenges of remembering and describing their falls, a few explicitly acknowledged their memory issues; one ascribed the limited recall to a side effect of the electroconvulsive therapy (ECT) received while the other had considered the long-term medication use as a contributing factor to his memory difficulties.

> Sometimes I have some memory loss still. July, August, September, that's nearly three months. But they said… they told me that, they told me that's one of the side effects of it (ECT), right. (Participant 8)

Another recurring subtheme was the attributed cause of the fall. Some of the reported fall events were either attributed to an external environmental factor, an internal behavioural cause or a physical health symptom.

> That was my fault because I missed a step and ended up with a fractured ankle. (Participant 2)

> She has… you know, Parkinson's. [That's] when they get stiffness in the… (pats thigh). That's what caused the fall. (Participant 1's daughter)

Other fall experiences were attributed to an unknown reason, with participants stating that they “don’t know” or “I just fell”. A few participants seemed to have been putting effort into trying to make sense of their falls, however expressed their frustration at the inexplicability of falling.

> No, I’ve already fallen a few times. I don’t know why I fall over. (Participant 5)

> But you still get upset sometimes, angry you know what I mean, why it happened. But it’s still nothing you can do about [it] anyhow. (Participant 4)

Two participants, although not being able to pinpoint the exact cause of their falls, cited dizziness prior to the fall event, which was a symptom described by a few other participants as a side effect of their medications.

> Faintly dizzy… and the blood pressure dropped really low. I’ve got normally very low blood pressure, but it went really low. (Participant 8)

> I was just over-medicated, just so doped up. So I got out of bed at about 1 o’clock to go to the bathroom. I was just doped, just dizzy erm just… yeah. So overly-medicated with erm… sedatives, yeah sedation type medication that I was just… I wasn’t steady. (Participant 10)

Theme 2: Being self-reliant after falls

In this theme, participants described their immediate response after encountering a fall. Most participants demonstrated their value for self-reliance when dealing with a fall event. Some of them relied on self by crawling to furniture and raising themselves up while a few of them insisted on getting up by themselves despite serious injury and help being available.

> I said when I hit the ground "I have broken my ribs" … They asked me if I wanted help getting up, I said "no, let me get up myself." I got up myself. (Participant 9)

Participant 3, who broke his ankle after a fall, reported that he *"still walked around all that day all that night."* Later when revisited the fall event, he stated that,

> (Breathes out heavily) I don't know. I was… just… I'd dealt with it already. I had the VitalCall on me and all that, I didn't bother to.

Theme 3: Enduring the consequences of falls

This theme presents the varying impact of falls on participants, ranging from serious physical injuries to emotional consequences. Most participants experienced a physical injury from falls, many of which required medical assistance while some resulted in prolonged pain with no medical attention sought. In a few instances, participants sustained a serious injury that led to the need for hospitalisation.

> Well I went to hospital. They couldn't put me into plaster then because I had to fly home within a couple of weeks. But the rest of my holiday I spent in a room with my leg up. [It's] just terrible, I couldn't do anything. (Participant 10)

Some participants, despite experiencing pain, diminished the need to seek medical attention for their falls injury. When invited to explore the underlying reasons for their decision, a few participants reported that they were "used to having falls" or they "don't bother the doctors with it".

> Oh, it wasn't that I didn't want to go with them (paramedics and fire rescue team). I trusted them to do the right thing. But there was no point in me going, putting everyone into a whole lot of trouble and the hospital having to find a bed when there was absolutely nothing wrong with me. (Participant 6)

Some fall events were described as having “minor” physical consequences but had resulted in negative emotional outcomes, such as fear of falling, loss of confidence, needing reassurance and feelings of stupidity.

> Dreadful, yeah. So I'm very very scared. You don’t mind me saying so, well, I’m really scared of these things ... I’m really scared. (Participant 3)

> Everyone is upset if you get hurt. You will [feel] upset and say how stupid am I [and] why did this happen. (Participant 4)

In some instances, participants associated future falls with a substantial fear of the unknown or potential mortality.

> When I’m flat on my stomach, when I’m flat on my stomach I can’t get up. Oh… [I] don’t know what I’m gonna do. (Participant 7)

> But I’m cautious to ensure that I don’t fall and have a compound fracture that may result in me dying suddenly. (Participant 9)

Theme 4: Preventing future falls – Perceptions and strategies

Some participants indicated their awareness and concerns about own falls risk. A range of perceived falls risk was reported, including physical health condition, tripping hazards in the home environment and risk-taking behaviour. A few participants reported experiencing a falls risk that was related to their mental health condition.

> But when you get caught up in… I suppose in any hallucinations, it takes our… attention away from walking and… yeah so that would definitely be a high risk. (Participant 10)

Given their concern about future falls, participants were asked if any strategies were used or perceived as helpful to prevent falls. A minority of participants described actions and routines to decrease their risk of falls such as “using a torch” and reminding self of walking technique “heel toe, heel toe.” Two participants mentioned the perceived usefulness of strengthening exercises but “put [it] away for tomorrow” due to a lack of motivation. The majority of participants reported to increase their level of attentiveness and “be careful” to target different falls risk and to prevent self from falling.

> I get dizzy. Dizzy yeah… so I’ve gotta be very careful there. (Participant 3)

> So I have… I just have to be careful of rugs and anything that slips [in my house]. You know like rugs and things like that. (Participant 8)

> I’ve got no hand to use the rail going up and stairs, both hands occupied (chuckles). Big risk, big risk. But I’m very careful you know. I watch the steps properly, very careful. ‘Cause I know if something goes wrong, I’m gonna fall backwards. (Participant 9)

> You know in the shower if you’re not careful, the soap is slippery. You see you have to be careful you know what I mean… If you slip you can’t catch yourself. That’s why I learn how to be careful when there’s soap on the floor. (Participant 4 with obsessive compulsive disorder)

In all, most participants were to some degree concerned about future falls and stated a range of personal falls risk. They appeared to rely heavily on being careful to prevent falls in the future.

Discussion

This study is the first to examine the experience of falls from the perspectives of older adults (aged 50 or over) with mental illness living in the community. The findings provide important

insights into the individuals' understanding of falls, their past experiences of falls and strategies to prevent falls. Participants ranged in their primary mental health diagnosis, medical comorbidities, age and living situation; nevertheless, all participants had experienced at least one fall in the past five years with most of them reported experiencing three or more falls over this time. All ten participants had at least one medical comorbidity that predisposed them to falls (Paliwal, Slattum, & Ratliff, 2017), and nine of them were taking four or more psychotropic medications, indicating that this participant group was at high risk of falls.

The majority of our participants expressed difficulties recalling aspects of their past fall(s). Two participants ascribed their limited recollections of fall events to a potential result of their mental health treatment like long-term medication use and electroconvulsive therapy (ECT). Indeed, ECT and some psychotropic medications have been documented in the literature as having adverse effects on older adults' memory (Lindsey, 2009; Weiner, 2000). However, having a limited understanding of the antecedents to falls might have hindered our participants' attempts in rationalising the falls occurrence. Some participants attributed their falls to the environment like slippery surface, a personal behavioural factor such as "my fault" and "I was rushing," or a physical health symptom like reduced strength and balance. These accounts were in fact similar to the perceptions of general community-dwelling older adults who fall (Shankar, Taylor, Rizzo, & Liu, 2017). Nevertheless, some of our participants ascribed their falls to an unclear or unknown reason. Such unawareness of falls origins in older adults has been explained by Faes and colleagues (2010) as a result of cognitive difficulties. While older adults diagnosed with a mental disorder may experience a more rapid cognitive decline compared to the general older adults (Gildengers et al., 2009), the challenge in participants attributing clear causes for their falls could have also been a result of the limited understanding of their falls risk factors.

Some participants reported experiencing “dizziness” and “low blood pressure” before falling, which are physical signs regarded in the literature as side effects of medications that contribute to falls (Milos et al., 2014). However, only two participants associated these symptoms with their medications and attributed them as the cause of their falls. Although most participants, when describing their perceived falls risks, cited similar physical signs, they did not acknowledge the symptoms’ connection with their medications. This finding is in fact not surprising as a previous study showed that the wider general population of community-dwelling older adults who took psychotropic medications also did not relate their falls to drug use (Bell, Steinsbekk, & Granas, 2017). A possible explanation for this finding is that our participants had limited knowledge of the side effects of their medications, which was the case found within the general older population (Bell et al., 2017). Hence, our participants might not have been equipped with adequate information to recognise their medications as a falls risk factor which induced the experienced negative symptoms that led to falls.

Furthermore, whilst many participants were not able to attribute clear causes for their falls, Table 2 illustrates that most participants experienced a broad range of comorbidities that were likely to have an effect on their falls (Paliwal et al., 2017). The findings may imply that our participants did not understand the full spectrum of their falls risk factors, hence why they were unable to make sense of their falls. Being unable to reflect and identify the reason for a fall has been found to induce more negative psychological and emotional experiences of the fall and hinder the formulation of active coping strategies to prevent future falls (Roe et al., 2008). Therefore, the difficulties in rationalising falls among our participants might have contributed to their reported substantial fear towards future falls and the lack of active strategies to prevent falls.

Participants’ immediate reactions to fall events revealed their value for self-reliance. Most participants tried getting up by themselves, some despite having a serious physical

injury like a fractured ankle. To maintain self-reliance, some participants delayed or avoided help-seeking behaviour entirely after a fall. A few participants explained the reduced inclination to seek medical help as a result of being "used to having falls". These accounts indicated participants' acceptance of falls as part of their life and normalising the endurance of falls, an attitude that has also been found in general community-dwelling older adults (Dickson et al., 2011). Although self-reliance is associated with a sense of independence and hence embraced by older people (Wacker & Roberto, 2013), not seeking medical attention after sustaining a serious fall injury can worsen the injury and lead to prolonged recovery, which was the case with some of our participants. To encourage healthcare service use in older adults with mental illness, psychosocial models and theories suggest the importance for healthcare providers to explore and address consumers' psychosocial barriers to accepting or seeking help (Wacker & Roberto, 2013).

In addition to physical injuries, falls also induced fear of falling in our participants, aligning with the psychological impact of falls commonly reported in the general older adults (Scheffer, Schuurmans, Dijk, Hooft, & Rooij, 2008). However, unlike the general older population (Scheffer et al., 2008), our participants did not report any social withdrawal as a result of their fear of falling. This could be due to the fact that older adults with mental illness typically experience social isolation in the community (Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009). Therefore, our participants might not have already been engaging in much social participation prior to their falls. The fear of falling indicated that our participants were concerned about falling in the future, although some did not understand the full spectrum of their falls risk. Risk factors that were commonly reported among our participants include physical and mental health symptoms, home hazards and own risky behaviours. Thus, in contrast to the general community-dwelling older adults who were less concerned about

future falls (Yardley, Donovan-Hall, Francis, & Todd, 2006), many of our participants viewed themselves as susceptible to falling and some expressed fear about their falls risk.

To address the perceived falls risk and cope with the induced fear of falling, most participants relied heavily on "being careful" when undertaking activities, often with no other behavioural or environmental adaptations made. However, the "be careful" approach is not supported by current research to effectively reduce falls or falls risk. Hence, its use as the main strategy to address risk factors across situations without other evidence-based modifications can be problematic. While a few participants mentioned the potential usefulness of exercise interventions, they identified low motivation as a barrier to their adherence to the strategy, a finding consistent with previous research showing the impact of low motivation on health behaviour change among individuals with mental illness (Farholm & Sørensen, 2016). Hence, the special needs of our participants could have made "being careful" the predominant strategy to prevent falls. The use of a single passive approach could also be accounted for by the unclear falls causes which left our participants with no basis for strategy formulation to prevent future falls. Additionally, their limited understanding of the impacts of medications and medical comorbidities on falls might have further impeded rationalisation of falls and the use of effective coping.

Limitations and Future Research Directions

This study is the first to examine the perspectives of older adults (aged 50 or over) with mental illness living in the community who fall. Findings provide important first preliminary insight into the understanding and experiences of falls in this group of older adults. However, as an exploratory qualitative study, the findings were generated in a sample of participants living in a metropolitan area within Australia and therefore cannot be inferred to the older psychiatric populations in rural areas. Also, this study investigated participants' past falls

experiences, which relied on their subjective recall of previously encountered fall events. Thus, the limited recall reported in our findings could be a result of the delayed recall time. However, participants' perceptions and understanding of falls experiences were of interest rather than their precise recall of fall events. Future qualitative studies may examine the perspectives of older adults with mental illness who have had a recent fall to explore any potential differences in the perceptions of falls risk.

As older people with mental illness living in the community are suggested to be qualitatively different from the general older population, a longitudinal study is warranted to investigate their specific risk factors for falls. Longitudinal evidence of falls risk factors may unveil the special needs of this population group in relation to falls prevention. Intervention studies are also recommended to explore the effectiveness of different prevention programs and strategies in this group of older adults. Future research recommendations also include the exploration of healthcare providers' accounts regarding consumers' falls and falls risk. A comparison of the two sources of information could generate insight as to how well consumers understand their own falls risk as well as uncover their likelihood to report, discuss falls, and seek assistance from their healthcare provider. Furthermore, interviewing healthcare professionals may provide their perspectives towards falls prevention initiatives in community-residing older adults with mental illness.

Implications for Practice

Findings from this study suggest that occupational therapists working with older adults with mental illness in the community setting should anticipate high levels of falls risk in this population. It underlines the importance of including falls screening in regular risk assessment procedures to identify consumers at high risk of falls and introduce appropriate interventions. In addition, older adults with mental illness are less likely to initiate help-

seeking behaviour after a fall, despite injury. Therefore, therapists can draw on their expertise in empowerment to partner with consumers and enable them to overcome the psychosocial barriers to healthcare service use when in times of need. Consideration should also be given to the inclusion of routine discussion with consumers about falls especially when these individuals present with a range of falls-predisposing medical comorbidities and polypharmacy.

Due to the unique falls risk profiles and complex needs of older adults living with mental illness, occupational therapists have a role in educating consumers on their specific risk factors (e.g., medication side effects) and equip them with a range of targeted prevention strategies beyond just "being careful". While valuable efforts have been put into developing various effective falls prevention programs and interventions for the general community-dwelling population of older adults (Gillespie et al., 2012), to date, no falls prevention program has been designed to specifically target the needs of older adults with mental illness (Bunn et al., 2014). Hence, there is an urgent need for occupational therapists working in older adult community mental health settings to tailor the existing evidence-based falls prevention interventions for general older adults to meet the specific needs of this population.

Key Points for Occupational Therapy

Occupational therapists working in community mental health settings with older people:

- Need to be increasingly aware of consumers' falls risk
- Have a role in educating consumers about their risk of falls
- Should implement initiatives to equip consumers with strategies to prevent falls

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Table 1: *Interview questions*

1. Can you tell me about a fall you have had?
    - Where and when did the fall happen?
    - What was happening before and during the fall?
    - What were you doing at the time?
    - Who was present?
2. What do you think caused the fall?
    - What was different this time when you did this activity?
    - How did you feel before the fall?
    - What happened on the same day/the day before the fall?
3. What happened after the fall?
    - How did you manage to get up?
    - How did the fall affect you?
    - Were you injured? What did you do about the injury?
    - How did you feel after the fall?
4. What did you do differently after the fall?
    - Did the fall change how you feel about doing the activity?
    - What did you do to prevent falling again? Was it helpful?
5. Is there anything else you would like to share with me about your fall?

Table 2: *Participant characteristics*

Participant no.	Age	Gender	Mental health diagnoses	Medical Comorbidities	Living setting	Reported falls in past five years	Four or more medications
1	74	Female	Anxiety depression	Parkinson's disease, hypertension, incontinence, gastro-esophageal reflux disease (GORD)	Family	4	Yes
2	68	Female	Schizoaffective disorder Bipolar affective disorder	Hypercholesterolaemia	Alone	1	Yes
3	73	Male	Schizophrenia	Raynaud's syndrome, GORD, thyroid cancer	Alone	5	Yes
4	88	Male	Obsessive compulsive disorder	Arthritis, arrhythmias	Family	Frequent falls	Yes
5	58	Female	Schizophrenia	Type II diabetes, obesity	Housemate	> 3 falls	Yes
6	80	Female	Schizoaffective disorder	Arthritis, hypothermia, hyponatremia, hypertension	Alone	3	Yes
7	75	Male	Bipolar affective disorder	Permanent complete heart block, hyperlipidaemia, iliac artery stenosis (bilateral claudication), benign paroxysmal positional vertigo, GORD	Alone	3	Yes
8	78	Female	Major depression Anxiety Posttraumatic stress disorder	Hypercholesterolaemia	Family	5	No
9	57	Male	Bipolar affective disorder Schizoaffective disorder	Diabetes, obesity	Alone	1	Yes
10	53	Female	Borderline personality disorder	Diabetes, obesity	Alone	4	Yes

Research Office
Kolling Building, Level 13
Royal North Shore Hospital
St Leonards NSW 2065
Tel (02) 9926 4590 Fax (02) 9926 6179

NSW GOVERNMENT Health
Northern Sydney
Local Health District

21 June 2018

Professor Lynette Mackenzie
Faculty of Health Services, 75 East Street
Lidcombe, NSW, 2141

Dear Professor Mackenzie,

NSLHD reference: RESP/18/214
Study Title: A tailored falls prevention program for people aged 50+ with mental illness living in the community.

Thank you for submitting a response, dated **31/05/2018** to the Northern Sydney Local Health District HREC Executive Committee's request for additional information/modification of the above study, which was first considered at a meeting of the HREC Executive held **23/05/2018.** Based on the information you have provided and in accordance with the NHMRC National Statement 2007 and NSW Health Policy Directive PD2010_055 Ethical and Scientific Review of Human Research in NSW Public Health Organisations, this project has been assessed as low/negligible risk and is therefore exempt from full HREC review.

This HREC has been accredited by NSW Ministry of Health as a Lead HREC under the model for single ethical and scientific review and Certified by the NHMRC under the National model for Harmonisation of Multicentre Ethical Review (HoMER).This lead HREC is constituted and operates in accordance with the National Health and Medical Research Council's *National Statement on Ethical Conduct in Human Research* and the *CPMP/ICH Note for Guidance on Good Clinical Practice*. No HREC members with a conflict of interest were present for review of this project.

I am pleased to advise that the HREC, at a meeting of its Executive Committee held on **20/06/2018** has granted ethical and scientific approval of the above **single centre** project. The HREC have determined that this project meets the requirements of the National Statement.

You are reminded that this letter constitutes *ETHICAL* and *SCIENTIFIC* approval only. You must not commence this research project at a site until a completed Site Specific Assessment Form and associated documentation have been submitted to the site Research Governance Officer and Authorised. A copy of this letter must be forwarded to all site investigators for submission to the relevant Research Governance Officer.

The project is approved to be conducted at

- [redacted]

If a new site(s) is to be added please inform the HREC in writing and submit a Site Specific Assessment Form (SSA) to the Research Governance Officer at the new site.

The following documents have been approved:

Document	Version	Date
HREA	1.3.1	2018
Project Description	2	-
Patient Information Sheet	-	-
Consent Form	-	-
Interview Guide	-	-
Screening Tool	-	-
Study Information	-	-

The Human Research Ethics Application reviewed by the HREC was **HREA AU/1/401639**

Please note the following conditions of approval:

- HREC approval is valid for **5 years** from the date of the HREC Executive Committee meeting and expires on **20/06/2023** The Co-ordinating Investigator is required to notify the HREC 6 months prior to this date if the project is expected to extend beyond the original approval date at which time the HREC will advise of the requirements for ongoing approval of the study.
- The Co-ordinating Investigator will provide an annual progress report to the Institution beginning in **August 2019** as well as a final study report at the completion of the project using the template available on the Research Office website. An annual report is due **every year on 30 August**.
- The Coordinating Investigator will immediately report anything which might warrant review of ethical approval of the project in the specified format, including unforeseen events that might affect continued ethical acceptability of the project and any complaints made by participants regarding the conduct of the project.
- Proposed changes to the research protocol, conduct of the research, or length of approval will be provided to the HREC Executive for review, in the specified format.
- The HREC Executive will be notified, giving reasons, if the project is discontinued before the expected date of completion.
- Investigators holding an academic appointment (including conjoint appointments) and students undertaking a project as part of a university course are advised to contact the relevant university HREC regarding any additional requirements for the project.

Should you have any queries about your project please contact the Research Office, ph: 9926 4590, email NSLHD-Research@health.nsw.gov.au .

Please quote **NSLHD reference RESP/18/214** in all correspondence.

The HREC wishes you every success in your research.

Yours sincerely

Jodi Humphries
Research Ethics Manager
Northern Sydney Local Health District

Research Office
Kolling Building, Level 13
Royal North Shore Hospital
St Leonards NSW 2065
Tel (02) 9926 4590 Fax (02) 9926 6179

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Northern Sydney
Local Health District

5 October 2018

A/ Professor Lynette Mackenzie
Faculty of health sciences
University of Sydney
Lidcombe NSW 2141

Dear A/Prof Mackenzie,

NSLHD reference: RESP/18/214
Title: A tailored falls prevention program for people ages 50+ with mental illness living in the community.

Thank you for submitting an application for authorisation of this project. I am pleased to advise that the delegate of the Chief Executive for Northern Sydney Local Health District has granted authorisation for the above project to commence at [redacted]

The version of the SSA reviewed by NSLHD RGO was: **AU/2/C886312**

Ethical approval for this study was granted by the **Northern Sydney Local Health District HREC** at a meeting of the Executive Committee **held** on **20 June 2018.**

The documents authorised for use at this site are:

Document	Version	Date
Human Research Ethics Application	AU/1/401639 (V1.3.1)	03 May 2018
Project Description	2	-
Patient Information Sheet	-	-
Consent Form	-	-
Interview Guide	-	-
Screening Tool	-	-
Study Information	-	-

The NSLHD RGO Notes:
External Researcher Pack for;

- Dr Meryl Patricia Lovarini
- A/ Professor Lynette Mackenzie

Site authorisation will cease on the date of HREC expiry **20 June 2023.**

You are reminded that, in order to comply with the Guidelines for Good Clinical Research Practice (GCRP) in Australia, and in accordance with additional requirements of NSLHD, the Chief Investigator is responsible for ensuring the following:

1. The HREC is notified of anything that might warrant review of the ethical approval of the project, including unforeseen events that might affect the ethical acceptability of the project.
2. The HREC is notified of all Serious Adverse Events (SAEs) or Serious Unexpected Suspected Adverse Reactions (SUSARs) in accordance with the Serious Adverse Event Reporting Guidelines.

3. Proposed amendments to the research protocol or conduct of the research which may affect the ethical acceptability of the project, and are submitted to the lead HREC for review, are copied to the Research Governance Officer.
4. Proposed amendments to the research protocol or conduct of the research which may affect the ongoing site acceptability of the project are to be submitted to the Research Governance Officer.
5. The Institutional annual report for all Human Research is due to the NSLHD Research Office on the 30 August. In addition, annual report acknowledgment from the Lead HREC should be submitted to the Research Governance Officer.

Standard forms and additional guidance documents are available on the Research Office Website: http://www.nslhd.health.nsw.gov.au/AboutUs/Research/Office

Yours sincerely

Natanya Hunt
Research Governance Officer
Research Office
Northern Sydney Local Health District

Appendix B

[redacted]

Faculty of Health Sciences

Cumberland Campus

75 East St

Lidcombe NSW 2141

Phone: (02) 9351 2222

PARTICIPANT INFORMATION SHEET

QUALITATIVE STUDY

Exploring the past falls experience of community-dwelling people aged 50 and over with mental illness

Invitation
You are invited to participate in a research study exploring the past falls experience of adults with mental illness aged 50 or over living in the community.

The study is being conducted by:
Associate Professor Lynette Mackenzie (The University of Sydney)
Dr. Meryl Lovarini (Lecturer, The University of Sydney)
Mandy Meehan (Occupational Therapist, [redacted]
Diane Grayshon (Registered Nurse, [redacted]

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

1. 'What is the purpose of this study?'
The purpose of this study is to understand your experience of a fall(s) you had in the past.

2. 'Why have I been invited to participate in this study?'
You have been invited to participate in this study because you have been identified as a consumer at [redacted] who is eligible for this study.

3. 'What if I don't want to take part in this study, or if I want to withdraw later?'
Participation in this study is voluntary. It is completely up to you whether or not you participate. If you decide not to participate, it will not affect the treatment you receive now or in the future. Whatever your decision, it will not affect your relationship with anyone at The University of Sydney or [redacted]

If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason. You can also request that any unprocessed re-identifiable and individually identifiable data that you have contributed to the study be withdrawn.

4. 'What does this study involve?'
If you agree to participate in this study, you will first be asked to sign the Participant Consent Form.

Then we will ask you to participate in one (1) interview. The interview will take place at [redacted]at a convenient time to understand your past fall experience. The interview will take approximately 45 minutes and will be audio recorded with your permission. You will be given the opportunity to review your interview transcript to correct any errors or inaccuracies.

5. 'Are there risks to me in taking part in this study?'
There are no known risks to participating in the study. Participants may experience some inconvenience due to the time involved in being interviewed.

6. 'Will I benefit from the study?'
This study aims to increase knowledge regarding falls in adults with mental illness living in the community. However, we cannot guarantee that you will directly benefit from this study.

7. 'Will taking part in this study cost me anything, and will I be paid?
Participation in this study will not cost you anything except your time and you will not be paid for your participation.

8. 'How will my confidentiality be protected?'
Of the people involved in the falls prevention program, only the researchers named in this Participant Information Sheet will know whether or not you are participating in this study. Any identifiable information that is collected about you in connection with this study will remain strictly confidential and will be disclosed only with your permission, or except as required by law. Only the researchers and the Human Research Ethics Committee (HREC) for monitoring purposes will have access to your details and results that will be held securely at The University of Sydney and [redacted] Health Centre.

9. 'What happens with the results?'
We will include the study results in reports, presentations at conferences and publications in peer-reviewed journals.

In any publication, information will be provided in such a way that you cannot be identified. The results of the study will be provided to you, if you wish.

10. 'What should I do if I want to discuss this study further before I decide?'
When you have read this information, the research student Ling Koh will discuss it with you and any queries you may have. If you would like to know more at any stage, please do not hesitate to contact her on 0435 475 957 or the principle investigator Associate Professor Lynette Mackenzie on (02) 9351 9832.

11. 'Who should I contact if I have concerns about the conduct of this study?'
This study has been approved by the Northern Sydney Local Health District HREC. Any person with concerns or complaints about the conduct of this study should contact the Research Office who is nominated to receive complaints from research participants. You should contact them on 02 9926 4590 and quote RESP/18/214 .

Thank you for taking the time to consider this study.
If you wish to take part in it, please sign the attached consent form.
This information sheet is for you to keep.

Appendix C

[redacted]

[redacted]

[redacted]

[redacted]

Faculty of Health Sciences

Cumberland Campus

75 East St

Lidcombe NSW 2141

Phone: (02) 9351 2222

CONSENT FORM

QUALITATIVE STUDY

Exploring the past falls experience of community-dwelling people aged 50 and over with mental illness

1. I,.....
   of.....
   agree to participate as a participant in the study described in the Participant Information Sheet set out above.

2. I acknowledge that I have read the Participant Information Sheet, which explains why I have been selected, the aims of the study and the nature and the possible risks of the investigation, and the statement has been explained to me to my satisfaction.

3. Before signing this consent form, I have been given the opportunity of asking any questions relating to my participation and I have received satisfactory answers.

4. I understand that I can withdraw from the study at any time without prejudice to my relationship to the investigators, The University of Sydney or [redacted] Health Centre. If so I wish, I may request that any unprocessed data I have supplied be withdrawn from the study.

5. I agree that research data gathered from the results of the study may be published, provided that I cannot be identified.

6. I understand that if I have any questions relating to my participation in this research, I may contact Ling Koh on 0435 475 957 who will be happy to answer them.

7. I acknowledge receipt of a copy of this Consent Form and the Participant Information Sheet.

8. I consent to:

● **Participate in a 45-minute interview**	YES	☐	NO	☐
● **Audio-recording of the interview**	YES	☐	NO	☐
I would like to review my interview transcript	YES	☐	NO	☐
I would like to receive a summary of the research findings	YES	☐	NO	☐

Complaints may be directed to the Research Office on Level 13, Kolling Building, Royal North Shore Hospital, St Leonards NSW 2065
Phone 02 9926 4590 | email NSLHD-research@health.nsw.gov.au

Signature of participant	**Please PRINT name**	**Date**
_____		
Signature of witness	**Please PRINT name**	**Date**
_____		
Signature of investigator	**Please PRINT name**	**Date**
_____		

Australian Occupational Therapy Journal Requirements

Author Guidelines

CONTENTS

1. SUBMITTING TO *AUSTRALIAN OCCUPATIONAL THERAPY JOURNAL*

Thank you for your interest in Australian Occupational Therapy Journal. Submissions are only received through the “Scholar One” manuscript central website accessed through the journal home page.

Authors should register at https://mc.manuscriptcentral.com/aotj and follow online submission instructions. Manuscripts that fail to meet requirements of the Author Guidelines will be rejected without review.

For help with submissions, please contact the Editorial Assistant: aot.eo@wiley.com

Australian Occupational Therapy Journal Article Submission “Checklist for Authors”

The following checklist will appear as part of the online submission process. Authors must confirm adherence to all items.

I have adhered to all of the following in the manuscript submitted

• The manuscript was double-spaced in 12 point Times New Roman or Times Roman font and does not exceed the permitted word count.

• I used Australian-English spelling.

• The abbreviation of ”OT” or “OTs” was not used.

• The submitted manuscript did not contain any identifying information about specific people, programs, locations or study sites.

• I consulted the *Publication Manual of the American Psychological Association, Sixth Edition* and/or the official companion APA Style Blog (http://blog.apastyle.org/apastyle/) to prepare correct citations and references. All journal articles published after 1997 included the digital object identifier (doi) presented according to APA style rules.

• The corresponding author obtained and included his/her ORCID number.

• The “Abstract” was no longer than 300 words and used the following headings: Introduction; Methods; Results; Conclusion.

• Abbreviations followed the *Publication Manual of the American Psychological Association, Sixth Edition*/or the official companion APA Style Blog (http://blog.apastyle.org/apastyle/); this included abbreviations in the reference list.

• Up to five keywords were selected from either the U.S National Library of Medicine Medical Subject Headings (MeSH) (https://www.nlm.nih.gov/mesh/) or the Cumulative Index to Nursing and Allied Health Literature Thesaurus. Only MeSH or CINAHL words were used.

• The Main Document used subheadings set out in the Guidelines.

• If my study used humans, I provided details of the Institutional Review Board, Human Research Ethics Committee or equivalent delegated authority in the Scholar One form where indicated and these details were also written into the Method Section of the manuscript (blinded for review)

• Research articles followed the reporting guidelines presented in http://www.equator-network.org/. I note reviewers will be asked to evaluate the manuscript in light of these guidelines.

I provided evidence of adherence as a supplementary document: e.g., prospective clinical trial registration.

• A section called “Key Points for Occupational Therapy” was included at the end of the paper, before “references”.

• A section called “Declaration of Authorship” was included after “Key Points” and before “references”. The declaration stated the contribution of each author to the paper and any conflict of interest. I/we used wording that demonstrated adherence to the roles and responsibilities of authors described in the International Committee of Medical Journal Editors (ICMJE) recommendations (http://www.icmje.org/).

• A section called “Funding” was included after the author declaration.

• People or institutions who were acknowledged gave written permission.

2. EDITORIAL CONSIDERATIONS

Aims and Scope

The *Australian Occupational Therapy Journal* is a leading international peer reviewed publication presenting influential, high quality innovative scholarship and research relevant to occupational therapy.

The journal is the official research publication of the professional peak body, Occupational Therapy Australia. The journal publishes empirical studies, theoretical papers, reviews and invited scholarly commentary.

The aim of the journal is to be a leader in the dissemination of scholarship and evidence to substantiate, influence and shape policy and occupational therapy practice locally and globally.

Preference will be given to papers that have a sound theoretical basis, methodological rigour with sufficient scope and scale to make important new contributions to the occupational therapy body of knowledge.

Topics may include:

- how participation in occupation is affected by body structures and function domains

- participation in occupations across the lifespan

- environments affecting engagement in occupation and occupational therapy services (physical, social, policy etc.)

- interaction of person, environment and occupation factors to influence health

- people who receive, could receive or who are impacted by occupational therapy practice, policy or education;

- assessments measuring constructs relevant to and applied in occupational therapy research, practice or education;

- occupational therapy interventions (development, implementation and impact)

- scope of occupational therapy practice

- professionalisation and professionalism in occupational therapy

- pedagogy and educational practice involving occupational therapy, including interprofessional , multidisciplinary, transdisciplinary and single discipline research that includes occupational therapy and/or occupational therapy students/ staff.

AOT does not publish protocols for any study design

Authors must position their study in an appropriate and sound theoretical and empirical context; with a critical analysis of relevant literature in the Introduction section. The manuscript must demonstrate how findings make an important contribution to knowledge in the field.

For quantitative papers, authors are encouraged to demonstrate how their studies enable replication, generalizability and contribute to understanding possible or actual causality. Typically this will involve reporting using guidelines such as those available in the EQUATOR network. Authors must use measures that are well validated and have proven psychometric properties.

Authors are encouraged to triangulate data to substantiate their findings where appropriate, for example: self-report measures and performance observation measures; therapist and consumer measures/ perspectives.

The journal preferences qualitative research that contributes to development of substantive or formal theory, is empirically grounded, is internally reflexive and has explored its value for different groups including study participants. Studies that demonstrably illuminate aspects of occupational therapy and can thus inform decision making will be of particular interest to readers. Qualitative studies must demonstrate transferability, dependability, trustworthiness, and credibility.

In mixed method research, authors are required to clearly outline how the a-priori design demonstrates integration of qualitative and quantitative methods during data collection, analysis and reporting. When a mixed method approach is reported, authors should clearly identify the design (e.g., sequential explanatory, sequential exploratory, concurrent nested, etc.) and report which data took priority during data collection and analysis (e.g., did qualitative data lead the results with support from the quantitative?). Consideration should be given to whether the approach used is mixed or multiple methods.

Instrumentation studies present the development and/or evaluation of the psychometric properties of a tool – reliability, validity, sensitivity, clinical utility. The journal has a preference for standardised taxonomies such as COSMIN.

The *Australian Occupational Therapy Journal* receives many more papers than it can publish. Studies may be methodologically appropriate, have significant or original results, but that may not mean the paper is a significant contribution to new knowledge. The journal aims to publish research that will provide a rigorous, relevant evidence base to inform professional practice and decisions relating to occupational therapy. Authors must demonstrate that their research is thus not only technically competent but is an original and significant contribution to knowledge and practice.

The journal will consider multidisciplinary or interprofessional studies that include occupational therapy, occupational therapists or occupational therapy students, so long as ‘key points’ highlight the specific implications for occupational therapy, occupational therapists and/or occupational therapy students and/or consumers.

If authors extract material from single larger interprofessional or multidisciplinary studies for an occupational therapy-specific study, these papers are only acceptable if distinct and separate questions are asked, if a theoretically and empirically grounded rationale is provided for the extracted study, and if the methodology is appropriate to the question

If authors are submitting a paper where data is derived from a larger study, authors are required to disclose all related publications that are published, submitted or under review. If authors state that aspects of the study have already been published, a case must be made to demonstrate how the present paper is distinctive and makes a significant contribution to knowledge.

Conditions of submission

Papers submitted to the journal must not be presenting content that has been previously published. The only exceptions to this rule are the following: conference abstracts; part of a published lecture or academic thesis; as an electronic preprint; poster/ abstract/ oral presentation presented at a conference or scientific meeting where proceedings are available on a pre-print server.

Papers that present clinical trials are not deemed to have been previously published if they appear in clinical trials registers and/or if results in such registers are presented as a brief summary or table.

Papers submitted to the journal must not be under consideration for publication elsewhere.

If accepted for publication, authors agree the paper will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder which is the journal publisher. Authors must be aware that in signing the copyright form they are entering a legal agreement not to disseminate or republish the journal-article on any file sharing site, by email attachment, in thesis dissertations or in any other form. Authors are able to disseminate the pre-production manuscript if they own the copyright and they

are able to include citation details of the Australian Occupational Therapy Journal published paper on such documents.

All papers submitted to the *Australian Occupational Therapy Journal* are subject to automated text-matching software screening which reports a % similarity index.

Editorial Processes

All submissions are inspected by the Editorial Team first to determine whether all criteria in the "Checklist for Authors" have been met. A paper that does not meet criteria will be rejected and returned to authors.

Second, Editorial inspection determines whether or not papers are within the journal "Aims and Scope". The Editorial Board may decide to reject any paper not deemed to be within the Aims and Scope of the journal. A reason for rejection will be provided. The decision is final.

A paper deemed to be in line with the "Aims and Scope" of the Journal will be blind-reviewed by one member of the Editorial or Review Board and either a specialist guest-reviewer or another member of the Editorial or Review Board. Reviewers will provide feedback using the *Australian Occupational Therapy Journal* review-form. Reviewers will be directed to consider the methodological quality of the study and may choose to use standardised critical appraisal tools. Reviewers will provide blind comment to authors regarding the manuscript. Reviewers will make confidential recommendations to the Editorial Board regarding publication priority. The Editorial Board will use reviewer reports to inform decisions regarding acceptance, rejection, or provision of opportunities to revise and resubmit. Resubmissions have no guarantee they will be accepted. A rejection decision is final; no further correspondence will be entered into.

An accepted paper is submitted to the WILEY production process.

Authors will receive the page-proofs for their paper and are required to review for accuracy; any changes beyond accuracy may incur a charge. The author-approved proof is sent to the Editor in Chief for final review. The Editor and the Publisher reserve the right to make minor modifications to typescripts to correct spelling or grammar issues that have been overlooked, or eliminate ambiguity and repetition. A paper is not approved for publication, regardless of the stage of review or correspondence sent and received until the Editor in Chief approves publication of the final proof. If an author identifies an error after publication that is their responsibility, he/she/they are responsible for costs associated with correction and publication of corregium.

3. ETHICAL CONSIDERATIONS

This journal is a member of the Committee on Publication Ethics (COPE).

Human Studies

For manuscripts reporting studies involving human participants or data originally generated from human participants (e.g., chart reviews, program evaluations, secondary data analyses), we require a statement identifying how ethical and /or research governance approval was obtained, where and under what authority it was granted. Authors must provide the name of the committee and state the reference number where appropriate. The name of the approving committee/s should be included in the manuscript (but de-identified for blind review purposes) – it is not acceptable to refer to "researcher institutional ethics committees" in general.

For research conducted in Australia or through Australian institutions the National Statement on Ethical Conduct in Human Research 2007 - updated May 2015 applies (https://www.nhmrc.gov.au/guidelines-publications/e72).; for research with Indigenous Australians this also includes the companion document "Values and Ethics - Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research" (NHMRC, 2003).

For research conducted by investigators in countries other than Australia, there is a requirement for authors to demonstrate that the research complied with principles of the World Medical Association Declaration of Helsinki Ethical Principles for Medical Research involving Human Subjects as amended October 2000 and that research was conducted with institutional or equivalent approvals consistent with the World Health Organization "Standards and operational guidance for ethics review of health-related research with human participants" (2011). Failure to provide this information or demonstrate this requirement will result in the submission being rejected.

Clinical Trial Registration

Clinical trials will normally be prospectively registered in a publicly accessible database and clinical trial registration numbers should be included in all papers that report results. Include the name of the trial register and your clinical trial registration number at the end of your abstract.

If your trial is not registered, or was registered retrospectively, please explain the reasons for this in the cover letter.

Research Reporting Guidelines

Accurate and complete reporting enables readers to fully appraise research, replicate it, and use it. The *Australian Occupational Therapy Journal* will publish positive, negative and inconclusive results as long as the research is rigorous.

Authors must adhere to research reporting standards presented in the EQUATOR network (http://www.equator-network.org/).

Authors must submit the relevant EQUATOR reporting guideline checklist as a not-to-be-published supplementary document to the submission. If authors do not believe one of these guidelines is appropriate a rationale must be provided in the cover letter and an alternative standards benchmark provided.

Roles and Responsibilities of Authors

An author is someone who demonstrates roles and responsibilities defined by the International Committee of Medical Journal Editors (ICMJE) (http://www.icmje.org/). A declaration must be made to this effect.

The ICMJE recommends that authorship be based on the following criteria: (i) Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; (ii) Drafting the work or revising it critically for important intellectual content; (iii) Final approval of the version to be published; and (iv) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Conflict of Interest

Authors should disclose any actual or perceived conflicts of interest. Any interest or relationship, financial or otherwise that might be perceived as influencing an author's objectivity is considered a potential source of conflict of interest. These must be disclosed when directly relevant or directly related to the work that the authors describe in their manuscript. Potential sources of conflict of interest include, but are not limited to, patent or stock ownership, membership of a company board of directors, membership of an advisory board or committee for a company, and consultancy for or receipt of speaker's fees from a company. The existence of a conflict of interest does not preclude publication. If the authors have no conflict of interest to declare, they must also state this at submission. It is the responsibility of the corresponding author to review this policy with all authors and collectively to disclose with the submission ALL pertinent commercial and other relationships.

Funding

Authors must make a funding statement. This will appear at the end of the paper before the reference section. Authors should list all funding sources. All funding received for work described within a submitted manuscript must be acknowledged in the funding disclosure section. Provide the name of the funder, the grant number, and the name of the principal investigator as applicable. If there was no specific study funding, then the authors should report the following statement: “This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.”

Acknowledgements

The contribution of colleagues or institutions can be acknowledged. Personal thanks and thanks to anonymous reviewers are not appropriate. Acknowledgements should contain information on individuals who have contributed to this work but did not meet the criteria for authorship or decline to be included as an author. All those individuals who are named in the acknowledgements must be contacted by the author and agree to have their name included. Each individual’s specific contribution to the work must be briefly stated. Acknowledgements of general support or

mentorship will be deleted by the editor as acknowledgements are only for those individuals who have provided a specific contribution to this work. In addition, the authors must provide information on previous dissemination of this work, in part or whole, at conferences or workshops. Prior presentation of the paper at a meeting should be briefly described last.

4. ARTICLE TYPES AND REQUIREMENTS

Type of Article	Word limit (excluding abstract, references, tables and figures	Abstract required - word limit	Number of references allowable	No. of tables or figure files
Feature	5000	300	35	4
Review *	5000	300	35	4#
Viewpoints (invited only)	2000	150	15	2
Critically Appraised Papers	800	NA	10	0
Letter to Editor	300	NA	3	0

* Refer to full detail regarding length, references and tables for Review Articles below

Usually published in online-only format

All articles

All articles must be accompanied by a cover letter that addresses how the paper complies with conditions of submission.

If content is derived from a larger study, study series or previously published work, the authors must explain in the cover letter how their submission makes an original and substantial contribution to new knowledge and they must include citations and doi links for all related/ derivative studies.

The cover letter should include a statement regarding written permissions for photographs, personal communications, and copyrighted material. These written permissions should be attached to the cover letter.

The cover letter should confirm that any person or institution named in the acknowledgements has given permission

Feature Articles

Feature Articles can be in the form of research papers, theoretical papers, case reports or descriptive articles. Manuscripts should not exceed 5000 words including Key Points, Author Declaration and conflict of interest, funding and acknowledgement. The Title, Abstract and References are not included in the word count. The journal does not publish articles that present only study protocols without results.

Feature articles should contain the following:

Title page: This will be a separate file to the main document – upload using the “title page” option in Scholar One. The title page should contain:

(i) a short informative title that contains the major content concepts. The title should not contain abbreviations (see our best practice SEO tips);

(ii) the full names, qualifications and designations of the authors;

(iii) the full addresses of the authors' affiliations;

(iv) a short running title (no more than 40 characters, abbreviations are permitted);

(v) authors' declaration of authorship contribution*;

(vi) funding statement*;

(vii) conflict of interest statement*;

(viii) acknowledgements*;

(ix) word length for the main text excluding references, abstract and tables;

(x) word length of the abstract;

(xi) the number of references, figures and tables include as part of article;

(xii) Designate the corresponding author by providing his or her full address, telephone and fax numbers, and e-mail address.

(xiii) A minimum of five MeSH or CINAHL terms should be included as key words

*In the printed publication these will appear at the end of the paper before "references" – they are included here in the title page because this is not sent out to reviewers.

Structured abstract: 300 word limit including Introduction, methods, results and conclusion.

Introduction: The aims of the article should be clearly stated and a theoretical framework (if applicable) should be presented with reference to established theoretical model(s) and background literature. A succinct review of current literature should set the work in context. The introduction should not contain findings or conclusions. The aim of the research should be stated at the end of the introduction section.

Methods: This should provide a description of the method (including recruitment of subjects, study procedures, instruments and data analysis) in sufficient detail to allow the work to be repeated by others. Name (but de-identify for review) the Human research Ethics Committee/s or equivalent if human participants were involved.

Results: Results should be presented in a logical sequence in the text, tables and figures. Participant characteristics are presented in results. The same data should not be presented repetitively in different forms.

Discussion: The discussion should consider the results in relation to the study purpose, practice and scholarly context. The relationship of your results to the work of others and relevant methodological points could also be discussed. Limitations of the study should be identified. Implications for practice and future research should be considered. A conclusion section may be used but is not mandatory.

Key Points for Occupational Therapy: This is included at the end of the paper, before "references". It comprises a bulleted list of three points summarising implications of the paper for occupational therapy practice/ policy or and or education. These should not exceed 45 words in total (that is, 10-15 words each). Each point should reflect the journal's aim and scope above and must not simply restate the findings.

References: No more than 35 references.

Standard inclusions of Author Declaration including conflict of interest, funding statement, acknowledgement if appropriate: This will be a separate file to the Main Document – upload as "supplementary file" not for review. Normally no more than 100 words.

Tables and/or Figures: No more than 4 will be included. Large Tables or Figures may be published as on-line only files to permit efficient production of the print-version of the journal. The file link will be published in the print version.

Appendices are not permitted.

(Reporting Guidelines will normally be included as a non-published supplementary file in the submission. In some cases, e.g., CONSORT flow-chart, aspects of the guidelines may be included in the main document)

Reviews

Narrative reviews, scoping reviews, meta-syntheses, systematic reviews and meta-analyses are included in this category. The journal does not publish articles that present only review protocols.

Review articles should contain the following:

Title page: This will be a separate file to the main document – upload using the “title page” option in Scholar One. The title page should contain:

(i) a short informative title that contains the major content concepts. The title should not contain abbreviations (see our best practice SEO tips);

(ii) the full names, qualifications and designations of the authors;

(iii) the full addresses of the authors’ affiliations;

(iv) a short running title (no more than 40 characters, abbreviations are permitted);

(v) authors’ declaration of authorship contribution*;

(vi) funding statement*;

(vii) conflict of interest statement*;

(viii) acknowledgements*;

(ix) word length for the main text excluding references, abstract and tables;

(x) word length of the abstract;

(xi) the number of references, figures and tables include as part of article;

(xii) Designate the corresponding author by providing his or her full address, telephone and fax numbers, and e-mail address.

(xiii) A minimum of five MeSH or CINAHL terms should be included as key words; Note that MeSH key words are reviewed by an indexer and may be edited.

*In the printed publication these will appear at the end of the paper before “references” – they are included here in the title page because this is not sent out to reviewers.

Structured abstract: No more than 300 words including Introduction, methods, results and conclusion.

Introduction: A rationale and context for the review must be provided. The aim of the review should be stated at the end of the introduction section.

Methods: The methodology used to design and conduct the review should be presented in sufficient detail to allow the work to be repeated by others.

Results: Results should be presented in a logical sequence in the text, tables and figures. Details of sources retrieved and analysis findings are presented in results. The same data should not be presented repetitively in different forms.

Discussion: The discussion should consider the results in relation to the study purpose, practice and scholarly context. The relationship of your results to the work of others and relevant methodological points could also be discussed. . Limitations of the review should be identified. Implications for practice and future research should be considered. A conclusion section may be used but is not mandatory.

Key Points for Occupational Therapy: This is included at the end of the paper, before “references”. It comprises a bulleted list of three points summarising implications of the paper for occupational therapy practice/ policy or and or education. These should not exceed 45 words in total (that is, 10-15 words each). Each point should reflect the journal's aim and scope above and must not simply restate the findings.

References: Review articles use references as part of the introduction, method and in the discussion to frame the study. They also present references as ‘data’ or findings. Authors should consider these two reference types when preparing the manuscript. Up to 20 “usual” main document references may be used (i.e., sources cited in the introduction, method and discussion to place the review findings in context). There is no limit on the number of ‘references’ reported in the research results. Typically author, title, source details will be presented in ‘results tables’, but the full citation with doi will appear in the reference list along with “usual” references.

Standard inclusions of Author Declaration including conflict of interest, funding statement, acknowledgement if appropriate: This will be a separate file to the Main Document – upload as "supplementary file" not for review. Normally this will be no more than 100 words.

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Appendix E

Standards for Reporting Qualitative Research (SRQR)*
http://www.equator-network.org/reporting-guidelines/srqr/

	Page/line no(s).
Title and abstract	
Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	Page 33; line 2
Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	Page 35
Introduction	
Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	Page 36-37
Purpose or research question - Purpose of the study and specific objectives or questions	Page 37; paragraph 3
Methods	
Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**	Page 38; paragraph 2
Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability	Page 38; paragraph 2; line 4
Context - Setting/site and salient contextual factors; rationale**	Page 38; paragraph 3
Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**	Page 38; paragraph 3
Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	Page 38; paragraph 2; line 3
Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings;	Page 39; paragraph 2

rationale**	
Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	Page 39; paragraph 1
Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	Page 59; table 2
Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	Page 39; paragraph 3
Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	Page 39; paragraph 3
Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	Page 40; paragraph 2

Results/findings

Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	Results section (page 41-46)
Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	Results section (page 41-46)

Discussion

Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	Discussion: page 46-50 Practice implications: Page 51-52
Limitations - Trustworthiness and limitations of findings	Page 50

Other

Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	Page 33; (vii)
Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	Page 33; (vi)

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
DOI: 10.1097/ACM.0000000000000388