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Review

Perspectives and experiences of community-dwelling older adults who experience falling: A qualitative meta-synthesis

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ABSTRACT

Objectives: This study aimed to systematically review and synthesize the perspectives and experiences of community-dwelling older adults who experience falling, to inform the subsequent development of fall prevention and management interventions, and to provide recommendations for healthcare policy and practice.

Methods: The review was a qualitative meta-aggregation study following the JBI qualitative systematic review methodology. Databases searched included Medline (through PubMed), CINAHL, PsycINFO, Embase, and the Web of Science. Peer-reviewed articles published in the English language from January 2010 to May 2023 were retrieved. The JBI Qualitative Assessment and Review Instrument (JBI-QARI) was used to assess the quality of the methodology. The ConQual ranking system was used to establish confidence in the synthesized findings. The protocol was registered with PROSPERO (CRD 42023421789). **Results:** This review included ten qualitative studies with an overall quality score of 60%–90%. Data extracted from eligible studies resulted in 59 findings, which were then aggregated into seven categories based on the similarity in meaning. Three synthesized findings were generated and rated as moderate for synthesized finding 2 and low for synthesized finding 1 and 3 on the ConQual score. Synthesized finding 1: Older adults experience physical injuries and pain, restricted daily activities, and limitations in social activities, reduction or loss of independence, and have feelings of fear and helplessness. Synthesized finding 2: After experiencing a fall, older adults reflect on the cause of the fall and recognize and interpret the risk factors. Synthesized finding 3: Older adults' reflections on the causes and impact of falls reveal both positive and negative reactions. They perceive a number of strategies for coping with falls and their consequences, such as using assistive devices, correcting risk factors, seeking medical help, and receiving ongoing physical and psychological attention.

Conclusions: Healthcare providers should pay attention to the feelings and experiences of older adults after falling, as well as their reflection on the causes and impacts of falling, and develop tailored plans for intervention. There is also a need for longitudinal studies to examine the longer-term impact of falls on older adults to provide insights into the stability and changes in their reflections, perceptions, attitudes, and preventive behaviors over time.

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What is known ?

- Falls have become a common problem for older adults globally.
- Fall-related injuries are a leading cause of pain, disability, loss of independence, and premature death, with significant and increasing financial costs for treatment and recovery.

What is new ?

- Older adults experience physical, psychological, and social changes after a fall, which are, predictably, mainly negative.
- The range of responses after a fall includes those who deny the reality of their situation and those who maintain a positive outlook.
- Understanding this range of reactions will help healthcare providers develop person-centered care plans that motivate

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individuals, or their care givers, to take steps to prevent future falls.

1. Introduction

A fall is an event that results in a person coming to rest inadvertently on the ground floor or other lower level [1]. In the United States, one-quarter of individuals older than 65 report falling each year, while according to Ganz and Latham [2], one in three adults above 65 falls each year worldwide. More concerning is that the incidence of falls in adults over the age of 80 years is as high as 50% [2]. Falls can result in physical consequences, such as traumatic brain injuries, hip fractures, spine injuries, bruises, and so on [3,4], and might further develop into depressive symptoms [5]. Those consequences may not only affect people's functional status and quality of life but also bring high financial and medical expenses to families and a heavy burden on the societal public health system [6,7]. Mortality rates related to accidental falls in older people are increasing, and these rates increase with advancing age [8,9]. Approximately 684,000 people die from falls each year, with the highest number of falls occurring in older people [1].

Accidental falls in older people have been the subject of extensive research in recent decades. A literature review of 87 publications by Terroso et al. [4] showed that falls among older adults were typically the consequence of anatomic characteristics and the physiological consequences of aging, with the pathologies that induce falls being neurological, musculoskeletal, cardiovascular, and other diseases. Further, the causes and risk factors are complex but can be behavioral, biological, environmental, socio-economic, or a combination, with the consequences including fractures, bruises, or other injuries. Terroso et al. [4] also reported that prevention, mitigation, or rehabilitation strategies might be physical, environmental, or behavioral.

A narrative synthesis by Gardiner et al. [10] of 11 qualitative studies showed that falls seriously impacted the self-confidence of older people, with some wishing to shed the label of “fallers” due to its negative connotations. Falls can often lead to decreased activity and social interactions, which challenges those who consider pursuing independence in social interactions to prevent loss of identity, social isolation, and negative feelings of dependency. Consequently, they may be reluctant to seek help because it means foregoing their independence in some way, preferring to choose caution as a personal strategy for managing fall risk.

Given the growing attention toward this important subject and the recent research on falls in older adults, it was felt timely to undertake a structured overview of existing systematic reviews to identify research gaps and provide an up-to-date synthesis of what is known. Therefore, a meta-aggregation approach was taken, a rigorous data synthesis method for qualitative evidence synthesis that summarizes, integrates and interprets the results of qualitative research across different methodologies. It focuses on categorizing primary findings and then further aggregating these categories into comprehensive statements that can be used in policy and practice without losing the critical explanatory value of the qualitative conclusions [11]. Integrative research across national and cultural contexts can provide a better understanding of the experiences of falls among older adults in the community and integrate qualitative findings to inform the subsequent development of fall prevention and management interventions. This is important as it may help to predict and reduce possible injuries from falls and guide older adults to self-management measures after falls. This can be useful for healthcare providers and policymakers who need to make evidence-based decisions about the care of older adults without having to sift through large amounts of qualitative data. This study

aimed to systematically review and synthesize the perspectives and experiences of community-dwelling older adults who experience falling to provide recommendations for clinical policy and practice.

2. Methods

The review design was a qualitative meta-aggregation study following the JBI qualitative systematic review methodology [11]. The protocol was registered with the International Prospective Register of Systematic Reviews, PROSPERO (The registration number is CRD 42023421789).

2.1. Inclusion and exclusion criteria

The inclusion criteria were identified based on the PICoS framework. Participants (P): Individuals over 65 years old with a history of falls (fallen in the last 12 months) and living at home in the community. Interest of phenomena (I): The phenomena were community-dwelling older adults' personal perspectives and experiences after a fall. Context (Co): The context fell on the ground floor or other lower level in a community or home setting. Study design (S): Studies that focus on qualitative data, including but not limited to phenomenology, grounded theory, and ethnography. In addition, qualitative data from mixed methods research were also included.

The exclusion criteria were as follows. 1) Studies were not published in the English language. (Considering the linguistic differences of the primary studies, non-English studies, such as Chinese research findings, were only included if they had been translated into and published in English. This decision was taken to maintain some consistency in interpretation and reduce the risk of bias in the interpretation of the original findings due to differences in language.) 2) Studies were published before 2010. (The authors chose the publication date 2010 as it coincided with the statement on enhancing transparency in reporting the synthesis of qualitative research [ENTREQ], which provided a standardized reporting framework for meta-integration of qualitative research and was published in 2010 [12]. This declaration improves the transparency and credibility of qualitative research.) 3) Articles with abstracts but no full text and articles where the phenomenon of interest was a specific intervention, prevention program, or assessment tools rather than the perspectives and experiences of falls in older adults.

2.2. Search strategy

A comprehensive search of relevant electronic databases and manual searches of relevant research bibliographies was conducted. Databases searched included Medline (through PubMed), CINAHL, PsycINFO, Embase, and Web of Science. Qualitative studies were retrieved by combining subject headings and free words. The PICoS search strategy was established as followings: #1 “elder” [Title/Abstract] OR “elderly” [Title/Abstract] OR “old” [Title/Abstract] OR “older” [Title/Abstract] OR “aged” [Title/Abstract] OR “ageing” [Title/Abstract] OR “aging” [Title/Abstract] OR “senior*” [Title/Abstract]; #2 “fall*” [Title/Abstract] OR “falling*” [Title/Abstract] OR “stumble*” [Title/Abstract] OR “tumble*” [Title/Abstract] OR “slip*” [Title/Abstract] OR “accidental falls” [MeSH Terms]; #3 “community dwelling” [Title/Abstract] OR “homebound” [Title/Abstract] OR “housebound” [Title/Abstract] OR “home” [Title/Abstract] OR “home based” [Title/Abstract] OR “community” [Title/Abstract]; #4 “experience*” [Title/Abstract] OR “perception*” [Title/Abstract] OR “feeling*” [Title/Abstract] OR “perspective*” [Title/Abstract] OR “perceive*” [Title/Abstract] OR “sense” [Title/Abstract] OR “awareness” [Title/Abstract] OR “cognition” [Title/Abstract] OR “understanding*” [Title/Abstract] OR “view*” [Title/Abstract] OR

“psychological” [Title/Abstract]; #5“qualitative” [Title/Abstract] OR “ethnography” [Title/Abstract] OR “phenomenology” [Title/Abstract] OR “grounded theory” [Title/Abstract] OR “narrative” [Title/Abstract] OR “interview*” [Title/Abstract]; #6: #1 AND #2 AND #3 AND #4 AND #5.

2.3. Study selection

Two independent reviewers conducted the study selection. Any disagreements that arise between reviewers at each stage of the selection process were resolved through discussion or with a third reviewer.

Following the search, all studies were collated and uploaded into EndNote v.20 (Clarivate Analytics, PA, USA), and duplicates were removed. Titles and abstracts were initially screened against the inclusion criteria for the review. Potentially relevant studies were retrieved in full. Then, the full text was assessed in detail against the inclusion criteria. Reasons for the exclusion of full-text studies were recorded. The search results were presented in a PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses-P) flow diagram.

2.4. Assessment of methodological quality

Two independent reviewers assessed the methodological quality of each eligible study by using the JBI Qualitative Assessment and Review Instrument (JBI-QARI) [11]. The JBI-QARI comprises ten items, including research methodologies, philosophical foundations, research purposes, data collection methods, data analysis methods, consistency in interpretation of results, source of conclusions, consideration of researcher influence on the study, representativeness of participants, and ethical considerations. For each item, responses were categorized as “yes” (if the criteria were met), “no” (if the criteria were not met), “unclear” (if it was uncertain whether the criteria were met), or “not applicable” (if the criteria were not applicable). If more than six out of ten evaluation criteria were rated as “yes,” we included them in our review. Any differences of opinion between reviewers were discussed, and consensus was reached.

2.5. Data extraction

Two independent reviewers extracted data from the included studies using the modified data extraction tool in the software package System for the Unified Management of the Assessment and Review of Information (JBI SUMARI 2022 version). Again, any disagreement was resolved through discussion and consensus or by consulting a third author. The extracted data included research designs, participants, interview settings and methods, and main findings about the experiences of falls. The conclusions were assembled and categorized based on the similarity of meaning. These categories were then integrated to generate comprehensive findings.

2.6. Meta-synthesis in this review

The data synthesis was followed by a JBI meta-aggregation approach based on an understanding of philosophical thinking and qualitative research methodology. The researchers organized similar findings together by repeatedly reading, understanding, dissecting, and comparing the meaning and connections of each study’s findings, summarized and reorganized them into new categories, and aggregated the new categories into integrated results. A critical appraisal of the quality of the methodology was also conducted by two independent reviewers using the JBI-QARI.

2.7. Assessment of the dependability and credibility of the findings

Aromataris and Munn [11] suggested that dependability and credibility were two elements considered by the methodological group to influence the confidence of qualitative synthesized findings and were established by a four-level ConQual ranking system (High, Moderate, Low, and Very Low). The dependability of each study was determined by analyzing methodological quality appraisal scores (questions 2, 3, 4, 6, and 7 in the JBI-QARI) to determine how well the study met specifications. The study’s dependability could be downgraded when the five criteria were not completed in the included studies. If four or five of the responses were “yes,” it is rated “High.” If two to three responses were “yes,” the rating was downgraded from High to Moderate. Zero to one “yes” response resulted in downgrading two levels.

Moreover, three levels of credibility were assigned based on the degree of support each illustration provided for the specific data that was associated with. Unequivocal (U): The finding was accompanied by an illustration beyond reasonable doubt and, therefore, not open to challenge. Credible (C): The finding was accompanied by an explanation but lacks clear association with it and is therefore open to challenge. Not Supported (NS): The data did not support the finding. The synthesized findings from all unequivocal findings could be assigned as high level.

Downgrading for credibility might occur when not all included findings were considered unequivocal. The synthesized findings from the mixed unequivocal and credible findings could be downgraded one level from High to Moderate. The synthesized findings from credible findings could be downgraded to two levels and rated as Low. For reasonable and not supported findings or all not supported findings, it could be downgraded to three or four levels and rated as very Low. It was important to note that the moderate ratings do not necessarily imply low quality or lack of dependability/credibility but rather reflect the presence of some variability or uncertainty in the findings.

3. Results

The primary search yielded a total of 3,307 studies. Of these studies, 1,678 duplicated articles were excluded using EndNote v.20. Of the remaining 1,629 studies 1,528 studies were excluded after reading titles and abstracts, 16 articles were not retrieved in full text, and then 75 additional studies were excluded after screening based on the inclusion criteria. Finally, ten full-text articles were assessed for the quality of methodology. After critical appraisal, all of them [13–22] were included in the final analysis (Fig. 1). Data were retrieved from 10 articles which were published between 2010 and 2023. Author, year of publication, country, design, participants, interview settings and methods, and main findings were extracted from the articles (Table 1).

3.1. Characteristics of the reviewed studies

As shown in Table 1, the eligible studies were conducted in Ireland, America, Netherlands, England, and Australia, providing a diverse range of perspectives and insights from different geographical regions to some degree. There were 241 participants in total (142 females, 99 males) aged 65–90 years, some of whom ($n = 100$) had a diagnosis of cancer. This inclusion allowed for the exploration of their specific needs and challenges. The included studies considered participants with a range of cognitive impairments, including those with mild symptoms, those with dementia, and those without any cognitive impairment. The diversity of participants was reflected in their age, gender, living conditions, and physical health status. All had experienced a fall within the past 12

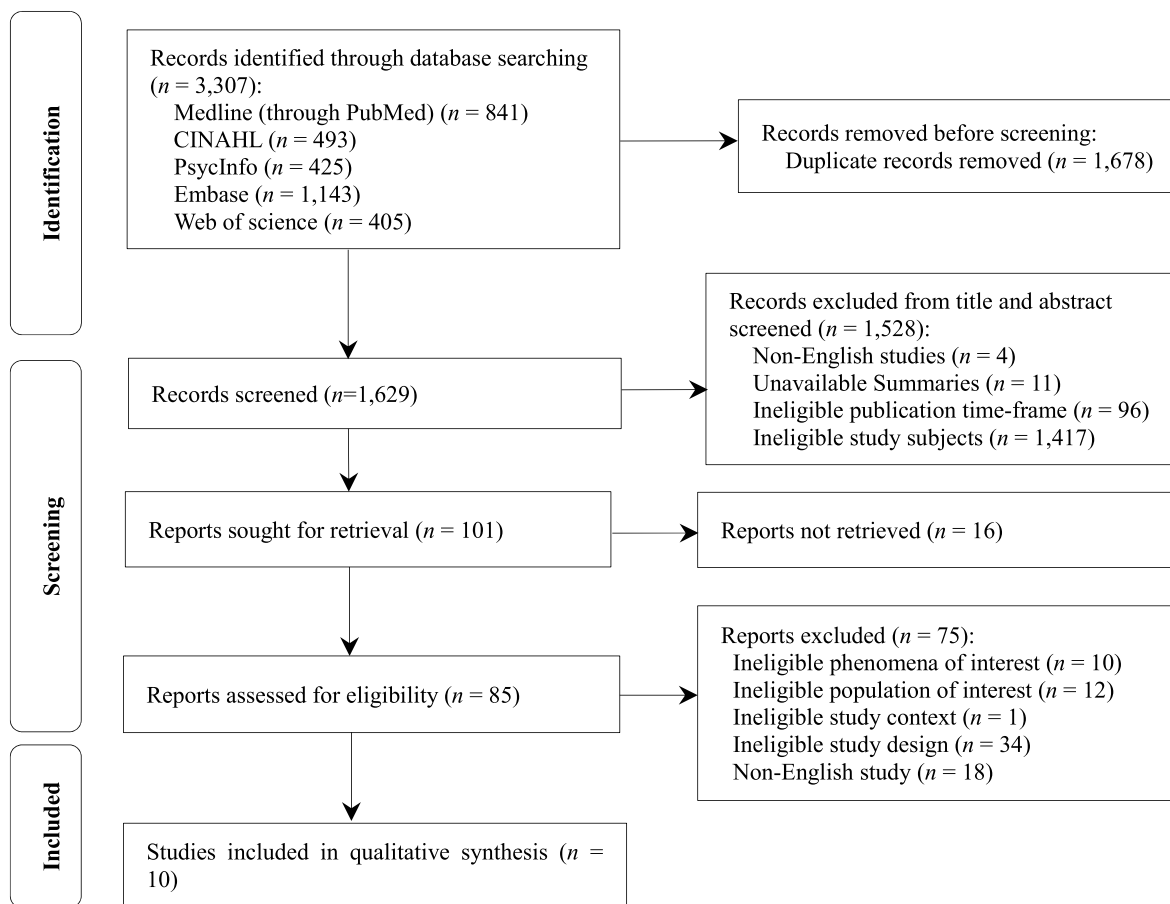


Fig. 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses-P (PRISMA-P) flow of study selection and inclusion process.

months, with some more recent (within the past two weeks or month). Some had multiple falls, while others had only one fall over a longer period.

The overall quality of studies ranged from 60% to 90%, according to JBI-QARI. The dependability of the 9 included articles was downgraded by one level, rated as moderate, while the remaining 1 article maintained a high rating (Table 2). The credibility of synthesized findings 1 and 3 was downgraded by one level due to the mix of unequivocal and credible findings, while the credibility of synthesized finding 2 remained unchanged. Therefore, three synthesized findings were generated and rated as moderate for synthesized finding 2 and low for synthesized findings 1 and 3 in the ConQual score (Table 3).

3.2. Synthesized findings

To illustrate this more clearly, the findings have been structured around the individual's perspectives and experiences in physical, psychological, and social aspects, the individual's thoughts and psychological reactions to the fall, and their attitudes and subsequent coping strategies (Fig. 2).

3.2.1. Synthesized finding 1

Synthesized finding 1 was integrated from 20 findings, which were merged into 3 categories.

Category 1 Physical experiences of falls: falls led to older adults experiencing severe pain, making them become frailer and feel vulnerable, which means they are unable to move or carry out daily

activities as freely as before [13]. When the therapist asked if they wanted to register their name and wait for a shower, some individuals felt that they might be too weak to proceed when they eventually received word for the shower [18].

Category 2 Psychological feelings of falls: the experience of falling among older adults led to a range of emotional and psychological feelings, varying in severity. At the milder end, older individuals experienced self-blame and worried about falling, which was a source of panic, "I start panicking ... I couldn't possibly stand up straight. I'm stiff and tense and leaning over. I just go into a complete panic about falling again." [13]. As the panic intensified, they felt shock and a loss of control, leading to a reduction in confidence in their abilities. This heightened panic manifested as a constant fear of falling, accompanied by anxiety about unknown and serious consequences. The fear was also related to being alone, not knowing the cause of the fall, and the fear of losing independence [22]. These negative emotions from falling, such as frustration, anger, and disappointment, further contributed to the overall reduction in confidence in their self-ability, "Once you've started feeling that you're weak and you can't do this or that, well, it just-it affects how you face life and what you do every day." [15].

Category 3 Perceptions and experiences of social interaction after a fall: older adults experienced limitations in social interactions, reduced or lost independence, and felt changes in social identity, for example, "I don't want to be dependent, that's the big fear I have." [18]. "Because, honestly, I felt neglected, absolutely brushed aside." [21]. There were even cases of social withdrawal in older adults. Social withdrawal is a common response, and individuals

Table 1
Descriptions of the characteristics of included studies(n = 10).

Author/year Country	Design	Participants	Interview settings/methods	Main findings
Ellmers et al., 2022, England [13]	Qualitative study	n = 9 6 females, 3 males Aged 73–81 years	Home Phone/video-calls semi-structured interview: 31–64 min	<ul style="list-style-type: none"> ·The falling is caused by the ageing body. ·Identify the risks and plan for safety. ·Consciously engage movement strategies: slowing down and controlling the walking pattern. ·Activity curtailment/worry about falling as a source of panic. ·Self-blame
Sattar et al., 2019, America [14]	Convergent parallel mixed methods	n = 100 38 females, 62 males Aged 76 years (mean)	Outpatient clinic Face-to-face semi-structured interview: 20–30 min	<ul style="list-style-type: none"> · Willingness to take extra cautions. · Describe tripping/not being good at turns/do not use their walking aid.
Meyer et al., 2018, Australia [15]	Exploratory mixed methods	n = 13 7 females, 6 males Aged 82 years (mean)	Home Face-to-face semi-structured interview	<ul style="list-style-type: none"> · Could not recall being spoken to about getting up from the floor following a fall and about fall prevention. · Reduction in confidence in self-ability. · Reduction in independence.
Shankar et al., 2017, America [16]	Grounded theory	n = 63 46 females, 17 males Mean age 79.9 years	Consultation room Face-to-face semi-structured interview	<ul style="list-style-type: none"> · Fall is circumstantial, accidental, carelessness. · Fall is caused by uneven sidewalks. · Name some modifiable risk factors. · Minimize any risk factors or have engaged in activities that they themselves believe reduce risk.
Dollard et al., 2014, Australia [17]	Grounded theory	n = 11 All females Aged 65–87 years	Home Face-to-face semi-structured interview: 60 min	<ul style="list-style-type: none"> · Perceive fall-related injury as serious. · Be persuaded by other people. · Monitor and manage the physical and emotional impacts, often by resting. · Do not want to waste general practitioners' time for trivial reasons. · Do not have timely access to their general practitioners.
McMillan et al., 2012, England [18]	Grounded theory	n = 19 15 females, 4 males Aged 67–89 years	Home Face-to-face, semi-structured interview: 34–70 min	<ul style="list-style-type: none"> · Fall from the normality of the everyday life. · Shock and loss of control/extreme pain/immobility · Attempt to move and assess the injury. · Enforced dependence · Strive to achieve their preferences regarding the help available. · Make the decision to take control of his or her own recovery as formal healthcare services withdraw. · Be frailer and be unlikely to make further progress, even a shower. · Look forward to getting independence back. · Believe that something not theirs caused them to fall. · Blame themselves as the direct cause for falling.
Dollard et al., 2012, Australia [19]	Grounded theory	n = 3 1 female, 2 males Aged 70–89 years	Home/sports club Face-to-face semi-structured interview: 60 min	<ul style="list-style-type: none"> · Develop new routines to deal with change: using a commode and urinal in the bedroom, getting rid of old mats in the kitchen that pose a tripping hazard, getting the cupboards lowered. · Be 'tired' of their falls status as ascribed to them by others. · Heighten awareness of professional knowledge or understanding of falls prevention such as 'picking up your feet' 'slowing down.' · Work with technology: using a walking stick, grab rails for shower unit and bathroom, stair rail, and falls alarm.
Bailey et al., 2011, Ireland [20]	Ethnographic fieldwork	n = 5 females Aged 70–82 years	Home/garden semi-structured life-space diary lasted for 4 weeks; Introductory home visit for 3 times	<ul style="list-style-type: none"> · Lose independence · Lose confidence in their abilities · Lose social identity · Come to terms with life subsequent to falls and be contented with life.
Stewart and McVittie 2011, England [21]	Interpretative phenomenology	n = 8 7 females, 1 male Aged 67–89 years	Home Face-to-face, semi-structured interview: 60 min	<ul style="list-style-type: none"> · Develop new routines to deal with change: using a commode and urinal in the bedroom, getting rid of old mats in the kitchen that pose a tripping hazard, getting the cupboards lowered. · Be 'tired' of their falls status as ascribed to them by others. · Heighten awareness of professional knowledge or understanding of falls prevention such as 'picking up your feet' 'slowing down.' · Work with technology: using a walking stick, grab rails for shower unit and bathroom, stair rail, and falls alarm.
Faes et al., 2010, Netherlands [22]	Grounded theory	n = 10 6 females, 4 males Aged 70–90 years	Home/outpatient clinic Face-to-face, Interview: 35 min	<ul style="list-style-type: none"> · A constant fear of falling/a fear of unknown and serious consequences/ being alone/losing independence · Fear related to not knowing the cause of the fall. · Negative emotions: frustration, anger and disappointment. · Become dependent on caregiver after falling/social withdrawal. · Falling is ascribed to ageing/consider falling is inevitable and impossible to prevent/consider nothing could be done to reduce the fear of falling. · Deny falling/hide their falls from their caregiver or others. · Intrinsic factors: somatic origins and personal traits or habits. · External factors: poor lighting and loose carpets. · Adapt their behavior to avoid falling: use the walking aids/wait a moment when they get out of their cars/avoid certain the places where there is no one to help. · Develop new activities: read more papers and magazines instead of travelling to keep themselves informed. · Have a positive view of fall prevention: know what to do to avoid falling.

Table 2
Critical appraisal of the included studies (n = 10).

Study	The JBI-QARI										Dependability	
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10		Total %
Ellmers et al. [13]	U	Y	Y	Y	Y	N	N	Y	Y	Y	70	Moderate
Sattar et al. [14]	NA	Y	Y	Y	Y	N	N	Y	N	Y	60	Moderate
Meyer et al. [15]	NA	Y	Y	Y	Y	N	N	Y	Y	Y	70	Moderate
Shankar et al. [16]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
Dollard et al. [17]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
McMillan et al. [18]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
Dollard et al. [19]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
Bailey et al. [20]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
Stewart and McVittie [21]	Y	Y	Y	Y	Y	N	N	Y	Y	Y	80	Moderate
Faes et al. [22]	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	90	High

Note: Y = yes. N = no. U = unclear. NA = not applicable.

Q1: Is there congruity between the stated philosophical perspective and the research methodology? Q2: Is there congruity between the research methodology and the research question or objectives? Q3: Is there congruity between the research methodology and the methods used to collect data? Q4: Is there congruity between the research methodology and the representation and analysis of data? Q5: Is there congruity between the research methodology and the interpretation of results? Q6: Is there a statement locating the researcher culturally or theoretically? Q7: Is the influence of the researcher on the research, and vice-versa, addressed? Q8: Are participants, and their voices, adequately represented? Q9: Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body? Q10: Are the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?.

JBI-QARI = Joanna Briggs Institute Qualitative Assessment and Review Instrument.

Table 3
ConQual summary of findings.

Synthesized finding	Design	Dependability	Credibility	ConQual score	Comments
Synthesized finding 1: Older adults experience physical injuries and pain, restricted daily activities, and limitations in social activities, reduction or loss of independence, and have feelings of fear and helplessness.	Qualitative	Downgrade one level	Downgrade one level	Low	Dependability: downgraded one level as scored 4/5 for the 5 criteria in one study, 3/5 in nine studies. Credibility: downgraded one level due to mix of unequivocal (U) and credible (C) findings (17U+3C).
Synthesized finding 2: After experiencing a fall, older adults reflect on the cause of the fall and recognize and interpret the risk factors.	Qualitative	Downgrade one level	No change	Moderate	Dependability: Downgraded one level as scored 4/5 for the 5 criteria in one study, 3/5 in nine studies. Credibility: remained unchanged due to all unequivocal (U) findings (11U).
Synthesized finding 3: Faced with a fall, older adults blame themselves, deny the fact, get tired of it, or see it as an inevitable, unavoidable event, while others try to figure out how to avoid it. They perceive a number of strategies for coping with falls and their consequences, including engaging in adaptive behaviors to avoid falls, such as using assistive devices, correcting risk factors, seeking medical help, and ongoing physical and psychological attention.	Qualitative	Downgrade one level	Downgrade one level	Low	Dependability: downgraded one level as scored 4/5 for the 5 criteria in one study, 3/5 in nine studies. Credibility: downgraded one level due to mix of unequivocal (U) and credible (C) findings (30U+2C).

become increasingly dependent on caregivers, “I stay at home more often and don’t visit my friends anymore. I am afraid I’ll fall when I go out.” [22].

3.2.2. Synthesized finding 2

Synthesized finding 2 was integrated from 11 findings, which were merged into 2 categories.

Category 1 Thoughts on causes of falls: individuals reflected on and attributed the various causes of falls. They attributed their falls to intrinsic factors and an aging body, e.g., “I don’t do turns very well.” [14], “... as if it’s inevitable when you get old.” [13]. Others blamed several external factors ranging from poor lighting to uneven sidewalks to loose carpets, “... so, I was using the walker, I ran over a mouse, and I went back like this, and the walker fell, and I fell ...” [16]. “However, sometimes I stumble on a loose carpet.” [22].

Category 2 Thoughts on risk factors for falls: individuals who have experienced falls could identify and articulate the risk factors for falling, take steps to mitigate them, and develop safety plans, as Charles stated: “That’s what you’re concentrating on; assessing the

risk and planning how you’re going to counter that risk and weighing up the consequences” [13]. It involved being aware of both intrinsic factors (such as age-related changes, medical conditions, and physical limitations) and external factors (such as environmental hazards, poor lighting, and slippery surfaces) that may increase the risk of falls [21]. However, some older people acknowledged that they couldn’t recall the fall prevention knowledge they had received previously [15].

3.2.3. Synthesized finding 3

Synthesized finding 3 was integrated from 32 findings and merged into 2 categories.

Category 1 Attitude to falls: older adults have a variety of perceptions and attitudes toward falls after falling. Some people may not take responsibility for the cause of a fall, attributing it to external factors beyond their control, chance, accident, or negligence [16]. They gained a new awareness of the seriousness of fall-related injuries, for example, “And you sort of think of blood clots and all sorts of things that could go wrong.” [17]. Others took

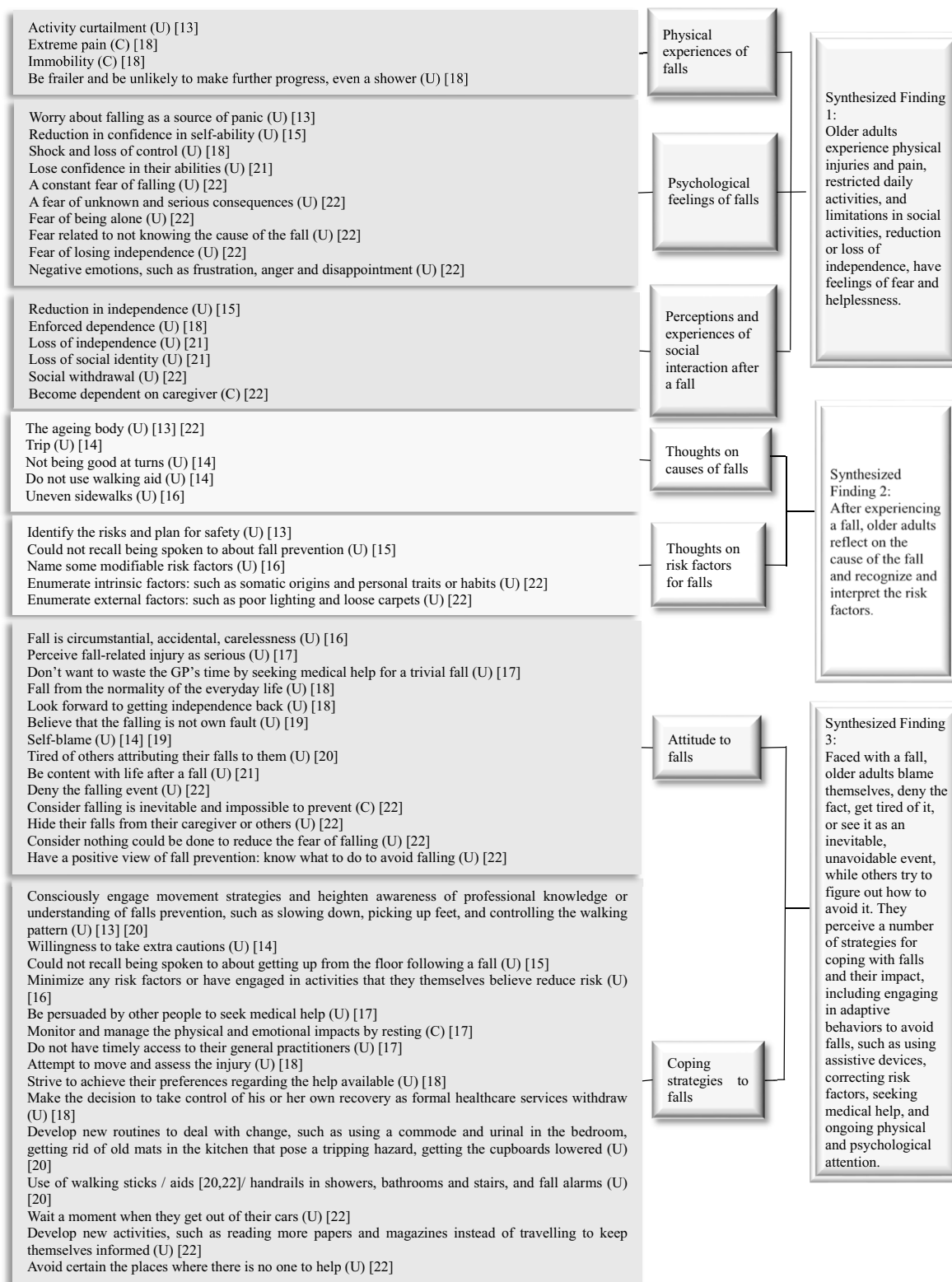


Fig. 2. Summary of findings and categories for each synthesized finding. U = Unequivocal. C = Credible. NS = Not Supported.

responsibility and blamed themselves for the falls, citing factors like not paying attention or being careless, eg. "I'm angry with myself because I'm stupid. I don't look where I'm walking." [16]. "They have been silly falls, not age (related) falls ..." [19]. While some

denied or hid their fall experiences from others and felt fatigued by repeated mentions of their falls, for example, "... taking the help? I'm not just a faller. I have a wicked sense of humor, did you know I was a great dancer and the piano there ..." [20]. Regarding prevention,

some individuals believed falls are unavoidable and cannot be prevented, while others maintained a positive attitude toward fall prevention and took proactive measures to avoid falls [22].

Category 2 Coping strategies to falls: after experiencing a fall, some people choose to go to the hospital. However, some older adults choose not to go to the hospital. They believed they could manage the consequences of the fall themselves, considered the fall a minor incident, or simply lacked the time to do so [17]. Older adults proactively developed new habits to cope with the changes brought about by the fall, such as using a commode and urinal in the bedroom, getting rid of old mats in the kitchen that pose a tripping hazard, or getting the cupboards lowered [20]. They consciously adopted strategies like picking up their feet, slowing down, or using walking aids, handrails, fall alarms, and other technologies to reduce the risk of falling [20,22]. However, it is important to note that older adults often forget the training in losing coping strategies they have received, for example, “*I don’t know, I can’t remember. They might have said, but I don’t remember.*” [15].

4. Discussion

This review has sought to bring together global perspectives from well-constructed qualitative studies conducted worldwide. It is noteworthy, however, that the studies meeting the inclusion criteria were from three regions only, namely North America, Australia, and Europe. It means that there is a need to examine the experience of falls from broader cultural perspectives, enriching knowledge around falls intervention and prevention. Therefore, an important finding of this meta-aggregation is that further research is needed in these geographical regions to address these gaps in our understanding.

4.1. Perspectives and experiences of falls

This review summarized the older adults’ perspectives and experiences of falls, which are predominantly and predictably negative. The physical experiences might influence their psychological and social responses. For instance, experiencing extreme pain might lead to a constant fear of falling, and immobility might lead to social withdrawal, which in turn might cause them to refrain from expressing their feelings. This, of course, may reflect participant’s attempts to deny the reality of their situation and to ‘soldier on’ regardless, but this absence could pose a considerable blind spot for practitioners and researchers seeking to obtain full, rounded, and genuine perspectives. It is, after all, noteworthy that those individuals who maintain a positive outlook on life after a fall appear to take measures to actively prevent future falls. They reflect on the cause of the fall and recognize and interpret the risk factors, thus engaging in adaptive behaviors to avoid further falls, including using assistive devices, correcting risk factors, seeking help, and ongoing physical and psychological attention. The studies from the United Kingdom [18] and the Netherlands [22], which revealed more positive attitudes following a fall, indicated greater contentment with their current life circumstances, aspirations to regain independence, and possessing important knowledge about fall prevention. Thus, it would seem essential for the assessment and preventive strategies to focus more fully on the physiological reality of falls to avoid individual attempts to minimize the potential impact, which may have dire future consequences. For instance, in the Australian study [19], participants sometimes denied any responsibility for the fall, while in the Netherlands [22], some even denied the fall had happened. Similarly, in the United States [14], Netherlands [22], and Australian [15,17,19] studies, issues such as self-blame or fatalist attitudes were evident, along with a strong

belief in self-management and monitoring without the need for medical assistance.

With such a broad range of psychological reactions, interventions that assist individuals in reframing their outlook based on a comprehensive assessment and diagnosis of their true circumstances may help individuals build a more realistic, proactive, and positive approach to their circumstances, thus reducing the risks of future falls. This seems critical given the studies from the United Kingdom [13,18,21], Australia [15], and the Netherlands [22] identified important psychological impacts perceived by older adults, including loss of self-confidence, fear of being alone, and heightened levels of anxiety, which in turn, led further to a loss of independence, increased dependence on others, and a diminished sense of social identity. Such perspectives will vary according to factors such as the levels of family support, the economic means of the individual, and the type and nature of the health and social care system in the country of residence. The research on re-fall prevention needs to be further concerned. Given the potential post-fall loss of independence, in-depth exploration seems essential to assess needs and preferences through similar qualitative research methods to determine preventive measures, implementation strategies, support services, and available resources.

4.2. Recommendations for practice

By bringing these findings together, this review has sought to identify cross-study similarities and unique findings to help support those developing policy and practice in this area. Despite these gaps in the research, this review has revealed a universal set of positive principles that can be adopted across all contexts with three levels of foci: an individual patient focus, a healthcare provider focus, and a policy focus.

At the individual patient level, interventions should include heightening and reiterating awareness of the benefits of fall prevention, addressing and correcting risk factors, supporting positive help seeking behaviors, maintaining ongoing physical and psychological monitoring of an individual’s health status, and using a range of assistive devices, which, through technological advancements, have grown in their sophistication. At one end of the spectrum, some can seek help, monitor their physical condition, and use a range of assistive devices for coping with life changes, while at the other end, some may deny their reality or become wholly dependent on caregivers. The caregiver’s skill is designing a plan that addresses these varying and complex needs.

At the healthcare provider level, there is a need to prepare clinical staff to conduct thorough assessments that consider both internal and external factors contributing to falls. This includes evaluating physical factors, such as balance and mobility, and environmental factors, such as lighting and accessibility. Early fall risk screening for older adults can help them realize the risk of falls and take some measures to prevent falls [23]. By identifying individual early risk factors, tailored interventions can be implemented to reduce the likelihood of falls and promote a more positive outlook that enables greater empowerment and control. Health education on fall prevention is necessary, and such education in medical institutions and communities is still beneficial in preventing the causes of falls and reducing the injuries caused by falls in older adults [24]. Healthcare institutions and community organizations should develop educational programs for caregivers to raise awareness of fall prevention and post-fall care, focusing on the potentially serious physical, psychological, and social consequences of falls.

The WHO’s 2021 report, entitled ‘Step Safely,’ states that “falls take the lives of 684,000 people each year” and “172 million more people experience disabilities arising from a fall each year” with

“fall-related deaths” rising “faster than any other type of injury over the last two decades.” [25]. There is, therefore, an urgent need for community policymakers to take heed of these findings and to prioritize creating age-friendly environments that minimize fall risks. This includes ensuring adequate lighting in public spaces, maintaining accessible sidewalks, and promoting home safety assessments to identify and address hazards within individuals’ residences [26]. As revealed in this study, diverse perceptions and attitudes can significantly influence behavior and decisions concerning fall prevention and safety measures in older adults. By understanding the experiences, perceptions, and attitudes of community-dwelling older people, health and social care providers that involve community workers, social workers, community nurses, and home health aides should collaborate to provide universal and comprehensive care and support for older adults who have experienced falls. This collaborative approach will ensure that physical, psychological, and social aspects of post-fall management are addressed and that greater independence is prolonged. However, many policies and programs on falls appear to have been designed with little capacity to be evaluated [26]. Therefore, the content criteria of monitoring and evaluation mechanisms need to be established, especially for the reliable monitoring of falls among older people in the community setting. It is essential to improve the assessment in implementation and effectiveness in achieving objectives in place.

In summary, falls amongst community-dwelling older adults greatly burden the individual, their family, and community-based health and social care services. Understanding the complex causes, experiences, and impacts is essential to reduce the burden and promote greater independence amongst this population. However, this review has revealed the emphasis of current research has largely been on short-term snapshots of perspectives and experiences of falls and individual reflections on falls, but there is also a need for longitudinal studies to examine the longer-term effects of falls and their impact on older adults, to provide insights into the stability and changes in their reflections, perceptions, attitudes, and preventive behaviors over time. Only when a fully rounded picture has been captured can we feel confident that services are truly meeting the needs of this vulnerable population.

5. Limitations

While great care has been taken to choose research methodologies with rigorous designs that provide rich and detailed insights into the falling experiences of older adults, as with all qualitative methods, the findings can be influenced by the researchers’ theoretical position, personal biases, and prior assumptions. The studies chosen were conducted and published at an earlier time. It is acknowledged that the results may not entirely capture the present situation with changes in society, healthcare policy, and technology. Finally, the interpretation and presentation of the findings may be influenced by the researcher’s preconceptions, assertions, and reactions. To address all these limitations, we have sought to be open and transparent about the decisions made to ensure confidence in the findings and the resulting discussion.

6. Conclusions

The meta-aggregation approach synthesized the findings from 10 qualitative studies in five countries (Ireland, America, Netherlands, England, and Australia). Three synthesized findings were generated and rated as moderate for synthesized finding 2 and low for synthesized finding 1 and 3 on the ConQual score. Older adults experience physical injuries and pain, restricted daily activities, limitations in social activities, reduction or loss of

independence, as well as feelings of fear and helplessness. Individual reflection on the causes and impact of falls reveals positive and negative reactions, which have important implications for developing tailored intervention plans. Any intervention plan needs to consider individual perceptions, beliefs, attitudes, and personal circumstances in terms of insight, level of support, and living conditions. This study reveals some universal principles that can be applied to any situation to ensure a robust and tailored plan of action that puts at the heart the need to pay close attention to the perceptions of these vulnerable people, as well as their needs and expectations.

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Data availability statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author upon reasonable request.

CRediT authorship contribution statement

Huimin Jiang: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data Curation, Writing - original draft, Visualization. **Haobin Yuan:** Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Data curation, Writing - review & editing, Visualization, Supervision, Project administration. **Stephen Tee:** Writing - review & editing, Visualization, Supervision, Project administration. **Oi Ching Bernice Lam Nogueira:** Visualization, Supervision, Project administration.

Declaration of competing interest

The authors declare that they have no competing interests.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijnss.2024.03.009>.

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