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Review Article

A Review of Falls Among Older Adults in Saudi Arabia: Risk Factors, Outcomes, and Prevention Strategies

Mohammed M. Althomali,[1]*

[1.] Optometry Department, College of Applied Medical Sciences, King Saud University, Riyadh 11362, Saudi Arabia.

*Corresponding Author: Malthomali@ksu.edu.sa

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Abstract

Falls among older adults in Saudi Arabia pose a significant and growing public health concern, with studies reporting prevalence rates exceeding 47%. These events contribute to physical injuries and psychological distress, longer hospital stays, and rising healthcare costs. This narrative review synthesizes recent findings on the prevalence, underlying risk factors, outcomes, and strategies aimed at preventing falls in this population. Key contributors to fall risk in Saudi Arabia were found to include both intrinsic factors, such as chronic health conditions, limited mobility, obesity, vision problems, mental health issues, and polypharmacy, and extrinsic factors like environmental hazards and inadequate safety measures. Despite growing awareness and various preventive efforts, initiatives such as environmental modifications, the use of assistive devices, and closer hospital monitoring, falls remain common across both community and healthcare settings. The literature points to several effective interventions, including personalized risk assessments, home and facility modifications, medication management, structured exercise programs, and better training for caregivers and medical staff. However, a noticeable gap remains between what is known and what is actually implemented. This underscores the urgent need for stronger implementation of fall prevention strategies. Moving forward, a coordinated, multimodal approach tailored to Saudi Arabia's healthcare system is essential to reduce fall-related incidents and improve the well-being of older adults.

Keywords: Falls, older adults, Falls risk factors, Falls strategies, Saudi Arabia.

Introduction

Falls in older adults are among the most serious health concerns for older adults, ranking as the second leading cause of unintentional injury-related deaths worldwide(LeLaurin & Shorr, 2019; World Health Organisation, 2021) They often lead to injuries such as lacerations, head trauma, and fractures, which not only increase morbidity and mortality but also cause significant psychological distress, loss of independence, extended hospital stays, and higher healthcare costs. (Heikkilä et al., 2024; Kim et al., 2022; LeLaurin & Shorr, 2019; Lord et al., 2021)

Falls continue to be a major issue faced globally, even though numerous attempts and intervention programs have been implemented to reduce their

impact. It is estimated that over 14 million older adults fall annually in the US, resulting in over 38,000 deaths. (Kakara, 2023) Other populations showed similar trends, where falls represent a major cause of injury, hospitalization, or death. (Australian Institute of Health and Welfare, 2023; Office for Health Improvement & Disparities, UK, 2022; Public Health Agency of Canada, 2024)

In the specific context of Saudi Arabia, falls are one of the top 10 causes of death (Patient Falls Prevention and Management, 2021) The ongoing changes in Saudi Arabia have several benefits, including increased life expectancy, improved health, a more robust healthcare system, and better demographic dividends. (Al-Khraif et al., 2022; Saxena, 2008; WHO: Health data overview for Saudi Arabia, 2023) It is projected that by 2050, the population will have increased by 40%, and 11% of this population will be adults aged 60 and above. (WHO: Health data overview for Saudi Arabia, 2023) Although strategies such as environmental modifications, assistive devices, and patient monitoring have been implemented (Alabdullgader & Rabbani, 2021; Alshanberi, 2023), data indicate that fall incidence in healthcare facilities has been rising over the past three decades. (Bindawas, 20023) All of these adverse outcomes of falls highlight the need to prevent them in both clinical and nursing home settings.

This review synthesizes recent evidence on the prevalence, risk factors, outcomes, and prevention strategies for falls among older adults in Saudi Arabia, focusing on studies published between January 2018 and April 2025. Furthermore, by integrating findings from both local and global literature, it aims to identify distinctive challenges and inform targeted approaches to fall prevention in the Saudi healthcare context.

Methodology

A literature search was conducted in April 2025 using three databases: PubMed, MedLine, and CINAHL. Studies that are peer-reviewed and published in English between January 2018 and April 2025 were included. Articles published before 2018 were excluded. Articles that were included were those that explored the causes and risk factors of older adults' falls in healthcare facilities and nursing homes in Saudi Arabia and those that identified some of the strategies that could be adopted in Saudi Arabia's healthcare facilities and nursing homes to address the causes, risk factors, and impacts of older adults' falls in Saudi Arabia. Table 1 summarizes the inclusion and exclusion criteria used to select sources for this literature review.

Table 1: Inclusion and exclusion criteria

Included	**Excluded**
Primary studies	Secondary studies
Studies investigating falls among community-dwelling older adults, as well as those in hospitals and care homes	Studies focusing on children or any other issues apart from falls and fall prevention
Studies carried out in Saudi Arabia	Studies carried outside Saudi Arabia
Studies published from 2018 to 2024	Studies published before 2018
Peer-reviewed studies	Grey literature, including theses, conference papers, and reports
Studies published in English	Studies published in any other language

Search Terms

The terms used in searching for relevant articles in the databases were: older adult falls, epidemiology of falls, causes of older adult falls, risk factors of older adult falls, and fall injuries. These search terms were combined using Boolean Operators AND and OR to create searchable phrases and identify the most suitable articles in the selected databases. Articles that were included were those that explored the causes and risk factors of older adult falls in healthcare facilities and nursing homes in Saudi Arabia and those that identified some of the strategies that could be adopted in Saudi Arabia's healthcare facilities and nursing

homes to address the causes, risk factors, and impacts of older adult falls in Saudi Arabia.

Selection Process

A total of 621 potentially relevant articles were identified in the database. Four additional sources were retrieved through the reference list of selected studies. Following the review of titles and abstracts, 535 articles were dismissed due to their irrelevance or duplication. The remaining 44 articles were assessed for eligibility, resulting in the elimination of an additional 31 articles. Ultimately, 14 articles met all the inclusion criteria for this research. The study selection process is illustrated in Figure 1, which shows all relevant articles identified in the databases. The studies that were included comprised both retrospective and prospective cohorts, along with cross-sectional studies. Appendix 1 shows the 13 article characteristics.

Ethical Considerations

As this is a narrative review, no participants were directly recruited, and findings were synthesized from published studies conducted among older adults in Saudi Arabia. Therefore, ethical approval and informed consent were not required.

Prevalence of Fall and the Associated Outcomes

Many of the studies conducted on the Saudi population show that the rate of falls is high in both healthcare facilities and nursing homes. Different studies showed that the incidence of falls exceeds 47% among older adults. (Alamri et al., 2023; Almegbel et al., 2018; Alshamrani et al., 2024; AlHarkan et al., 2023; Yasmeen et al., 2025) Furthermore, falls are commonly associated with significant injuries and fractures. It is estimated that up to 74% of Saudi older adult fallers sustain injuries, 25% sustain fractures, and 23% require walking aids following a fall. (Alamri et al., 2023; Almegbel et al., 2018).

Causes of Falls in Older Adults

Several studies have shown that different factors contribute to falls in older adults in various settings. These factors can fall into two general categories: intrinsic factors, which are related to the individual's own health and condition, and extrinsic factors, which involve external elements in their surroundings.

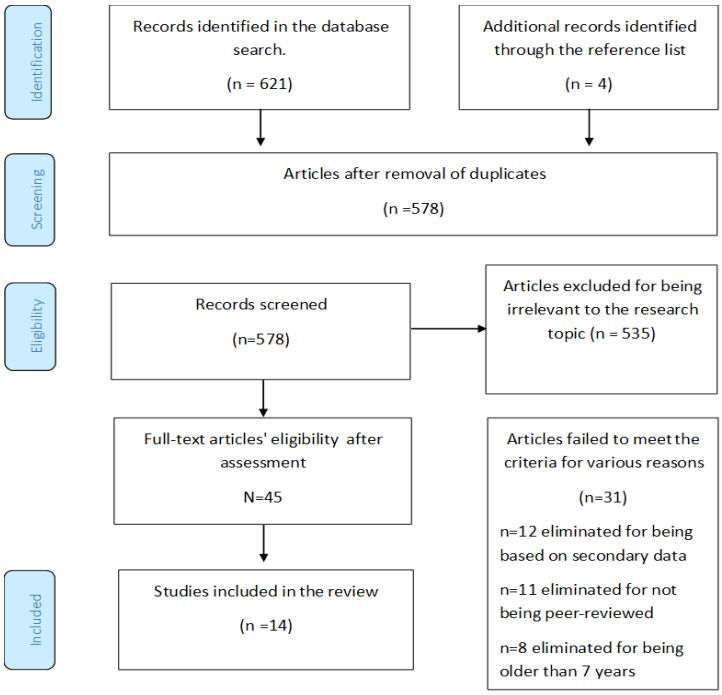

Figure 1: Flow diagram of the search and study Selection

Intrinsic Characteristics

In both hospital and care home environments, many older adult deal with medical conditions that greatly heighten their likelihood of falling. Multiple studies found that incontinence, obesity, impaired functional mobility, walking difficulties, visual impairment, increasing age, and chronic diseases, including hypertension and diabetes, are among the most common causes of falls among older adults.(Alabdullgader & Rabbani, 2021; Alamri et al., 2023; Aljarbou et al., 2025; Alshamrani et al., 2024) Additional factors, such as heart disease, vertigo, frailty, osteoporosis, balance difficulties, elevated body mass index, hip or knee replacement surgery, and arthritis, were found to be primary contributors to falls. (Alamri et al., 2023; Alasmari et al., 2023; Aljarbou et al., 2025; Alqahtani & Alenazi, 2025; Yasmeen et al., 2025; Assiri et al., 2020Alshanberi, 2023) Furthermore, frailty in older

adults above the age of 65 is associated with increased falls both at home and in the nursing home context. (Alshanberi, 2023) The findings of all these studies generally indicate that the overall health condition of older adults determines how likely they are to fall in both community-dwelling, nursing homes, and hospital settings.

Several reviewed studies indicate that psychological issues may contribute to older adult falls. A study conducted by Alenazi and Salih (2023) that involved 296 older adult participants found that depressive symptoms are one of the major causes of falls. (Alanazi & Salih, 2023) Others found that symptoms of neurological disease and cognitive function are a significant risk factor for falling among older adults. (Alasmari et al., 2023; Aljarbou et al., 2025) Moreover, Almarwani (2024) and Al Harbi et al. (2025) demonstrated that fear of falling contributed to the increased risk of falls. (Al Harbi et al., 2025; Almarwani, 2024) Furthermore, Alamri et al. (2023) found that those who reported living with a fear of stumbling or slipping had a significantly higher likelihood of a history of falls. (Alamri et al., 2023) These findings collectively suggest that the psychological state could play a significant role in causing falls. However, none of the studies included in this review evaluated how the mental states actually contribute to falls. There is limited information on the specific mechanism by which psychological states in this cohort contribute to falls. However, both Almarwani (2024) and Al Harbi et al. (2025) involve sufficient sample size, meaning that their association between falls and psychological conditions is robust. (Al Harbi et al., 2025; Almarwani, 2024)

Extrinsic Characteristics

The characteristics of the environment in which older adults spend their time also play a crucial role in contributing to the increased risk of falls. Almegbel and colleagues (2018) reported several extrinsic characteristics associated with falls in community-dwelling older adults. (Almegbel et al., 2018) For example, Almegbel and colleagues (2018) showed that living in rented houses is a significant risk factor for falls among older adults. Although there is no direct link between renting and falls, it could be assumed that in rental houses, there is less freedom for family members to make modifications that could provide older adults with the physical support they need. This inability to modify living spaces provides a plausible explanation for why Almegbel and colleagues (2018) found that the rate of falls was higher among older adults living in rented houses. On the other hand, another study involving 504 nurses in a hospital setting in Saudi Arabia established that some of the most frequent causes of patient fall were wet flooring, a lack of warning signs, a lack of safety grab bars, dangerous hallways, a lack of staff nurses, and the practice of assigning patients to separate rooms, which makes it challenging to monitor them all at once. (Alqrishah et al., 2024) Generally, the findings presented in the studies by Almegbel et al. (2018) and Alqrishah et al. (2024) agree that the specific environments where older adults reside must be modified to allow them to access physical support at any given time. (Almegbel et al., 2018; Alqrishah et al., 2024)

Alshamrani and co-authors (2024) highlighted that environmental hazards and polypharmacy are associated with falls. (Alshamrani et al., 2024; AlHarkan et al., 2023) Others found that the use of anti-hypertensive medications is among the most significant individual-level causes of falls among older adults. (Alamri et al., 2023) Alabdullgader and Rabbani (2021) also identified polypharmacy and environmental factors, such as high door sills, uneven floor surfaces, and poor lighting, as associated risk factors. (Alabdullgader & Rabbani, 2021) These findings indicate that medical professionals should identify medications associated with a high likelihood of falls and develop measures to protect older adults taking these medications from falls.

An interesting observation in the findings presented by Almegbel et al. (2018) is that living with a caregiver is a significant risk factor for falls among older adults. (Almegbel et al., 2018) Ideally, caregivers should provide the necessary physical support to individuals in the home and nursing home setting, meaning that their presence should

lead to a decline in the likelihood of falls. This suggests that caregivers might benefit from proper training and education to assist older adults safely and highlights the need for policymakers in the health sector to intervene and invest in this domain to help reduce falls among older adults.

Strategies to Mitigate Fall Risks in Older Adults

It has been established now that multiple studies in Saudi Arabia have shown falls are very common among older adults in Saudi Arabia, and different risk factors are associated with them, such as impaired functional mobility, visual impairment, suffering from chronic diseases, low muscle strength, impaired balance, and limited mobility. Falls remain one of the top ten causes of death in Saudi Arabia. While Saudi Arabia has benefited from improvements in many aspects of life expectancy, public health, and healthcare infrastructure, these gains also highlight the need for focused efforts and targeted strategies. These strategies are essential to manage fall-related risks and provide better support for the aging population across all areas of care. The strategy used to address falls among older adults must also consider the specific types of challenges they are targeting to overcome. Findings derived from Alshamrani et al. (2024) and Innab (2022), suggest that patient-focused strategies such as patient assessments to establish the likelihood of falls, the provision of support equipment for patients identified as being the most vulnerable to assess the likelihood of falls among different patients, and providing assistance to patients requiring personalized physical support with the necessary assistance, such as walkers and bed alarms to call for assistance when they need to move from one place to another, should help in overcoming many of the individual-level challenges identified. (Alshamrani et al., 2024; Innab, 2022)

Almegbel et al. (2018) and Alqrishah et al. (2024), on the other hand, suggest that the integration of stricter enforcement of fall prevention policies and environment-focused strategies, such as construction on non-slippery floors and physical support equipment in environments where patients spend most of their time and optimizing personnel and workloads, and concentrating on the requirements and behaviors of each patient should contribute significantly to the reduction of falls and should help in overcoming some of the environmental risk factors. (Almegbel et al., 2018; Alqrishah et al., 2024) Furthermore, Alamri et.al (2023) found that the intake of certain medications can increase the likelihood of falls. This emphasizes the significance of healthcare providers and specialists to understand the various side effects of these medications to reduce or prevent further falls and falls related injuries, and provide recommendations and support to those older adults taking these medications who are susceptible to falls. (Alamri et al., 2023)

According to research by Alrimali et al. (2023), the level of knowledge among nurses regarding fall prevention is a crucial strategy for preventing falls in healthcare facilities and nursing homes. (Alrimali et al., 2023) Although the authors establish that most nurses in Saudi Arabia have sufficient knowledge on how to prevent falls among patients, prevalence data presented in studies such as Alamri et al. (2023), and Alshamrani et al. (2024) show that patient falls are still very common in healthcare facilities in the country. (Alrimali et al., 2023; Alshamrani et al., 2024) In this regard, it could be argued that the implementation of actual fall prevention measures in healthcare facilities is low, despite nurses demonstrating sufficient knowledge of these measures. As a result, studies such as Alamri et al. (2023), and Alshamrani et al. (2024) agree that, in addition to providing nurses and other hospital personnel with training on how to prevent falls, it will be necessary for healthcare facilities to establish and enforce policies that compel nurses to implement these interventions. (Alrimali et al., 2023; Alshamrani et al., 2024) Overall, the success of other environment-focused strategies, such as investment in support installations, will depend on how well individual healthcare facilities enforce fall prevention policies.

On a side note, others have examined healthcare providers to understand their perceptions of what

causes a patient to be at a higher risk of falls. In the research by Innab (2022), for example, the nurse's perception of the factors associated with falls shows that low muscle strength, impaired balance, limited mobility, and the inability to follow safety instructions are some of the significant characteristics that cause falls among patients. (Innab, 2022) From the insights acquired from Innab (2022) and Alshamrani et al. (2024), it is evident that nurses and older adult patients who are actually at risk of falls have different perceptions regarding the causes of falls. (Alshamrani et al., 2024; Innab, 2022) Nurses, for example, often cite the inability to follow instructions as one of the primary causes of falls, whereas patients tend to attribute the most profound factors to physiological ones. This discrepancy highlights the importance of conducting further research in this field and finding effective fall prevention strategies that can help older adults reduce their incidence of falls.

Strategies to Address Older Adults Falls in Saudi Arabia: Author's Opinion

Different risk factors were observed in the Saudi population. One of which was having arthritis. The most common symptoms of these falls are lower extremity stiffness or pain and discomfort, limited physical activity, and muscle weakness, which can change gait and balance patterns. This may contribute to a higher risk of falls in older adults with arthritis. (Hill et al., 2013; Sturnieks et al., 2004) In addition, arthritis medications such as methotrexate and naproxen have been shown to have typical adverse effects, including weariness, blurred vision, drowsiness, and dizziness, all of which may cause disorientation or a loss in the stability of their gait, potentially leading to falls.

Polypharmacy was also another risk factor and challenge faced by older adults and clinicians in the Saudi population. A recent meta-analysis showed that polypharmacy can increase the possibility of falls by 51% when compared to those individuals who have fewer than four medications. (Guo et al., 2023) Others have shown that the incidence of hospital admission due to falls was correlated with higher medication intake. In fact, taking 10 or more medications increased the likelihood of hospital admission by more than 300%. (Zaninotto et al., 2020) Others have shown that older adults consuming one or more anticholinergic or sedative medications had nearly twice the probability of experiencing a fall over a year compared to those using fewer than one of either medicine. (Wilson et al., 2011) The American Geriatrics Society (2023) reviewed the latest evidence regarding inappropriate medication use that increases the chances of falls and fractures. It is recommended that the use of anticholinergics, antipsychotics, antiepileptics, hypnotics, and opioids should be avoided unless an alternative drug is unavailable. (American Geriatrics Society 2023 Updated AGS Beers Criteria®, 2023) Given these concerns, it is important for older adults' medications to be reviewed regularly. A reduction in the number of unnecessary prescriptions might help lower the risk of falls that often lead to hospitalization. Special attention should be paid to spotting medications that may no longer be appropriate and, where possible, safely discontinuing them. Just as important is the need to clearly explain the potential side effects of any prescribed drugs, so that older adults are fully informed and better able to follow safer treatment plans

Cardiovascular comorbidities such as hypertension and diabetes have been frequently reported among Saudi older adults who experience falls. According to the World Falls guidelines for the prevention and management of falls in older adults, it is recommended that older adults with cardiovascular disease monitor and manage their orthostatic hypotension by reducing or modifying their medication, as well as using elastic stockings and abdominal binders. (Montero-Odasso et al., 2022) For diabetics, one of the main complications affecting this group is diabetic peripheral neuropathy. This can cause increased postural instability, reduced individual peripheral sensation, and a deficit in proprioception input. (Nardone et al., 2006; Van den Bosch et al., 1995) All of the aforementioned changes can increase the risk of falls. Several studies and systematic reviews have

highlighted that strength exercises, endurance training, balance training, walking exercises, and Tai Chi can help improve balance and gait, as well as reduce the risk of falls, among older adults and younger patients with diabetes. (Gu & Dennis, 2017; Morrison et al., 2018; Streckmann et al., 2014) However, it was suggested that a long-term follow-up should be conducted to determine its effectiveness and understand the necessary duration, frequency, and intensity. Others have shown that lowering body weight, controlling comorbidities, and reducing lower extremity pain are most effective in reducing the number of falls in this cohort. (Gravesande & Richardson, 2017)

Moving further, psychological disorders such as depression and fear of falling were strongly correlated with falls in studies reported in Saudi Arabia. Evidence suggests that the safe and effective prescription of selective serotonin reuptake inhibitors (SSRIs) for older adults at risk of falls should be carefully considered. (American Geriatrics Society 2023 Updated AGS Beers Criteria, 2023) For depression, given the association between antidepressant usage and an elevated risk of falls and fractures, alongside concerns about the inappropriate use of SSRIs in older adults, it has been recommended that these medications should be avoided unless a safer option is unavailable. (American Geriatrics Society 2023 Updated AGS Beers Criteria, 2023; Kerse et al., 2008; Lohman et al., 2021) In addition, physical exercise programs were found to be effective in reducing depression in older adults, which in turn can improve balance and reduce the risk of falling. (Hu et al., 2020; Mokhtari et al., 2013; Singh et al., 2005) Regarding fear of falling, studies demonstrated that the most effective intervention programs require a combination of physical exercise and educational programs. These programs can help older adults identify and mitigate the risks of falls. (Brouwer et al., 2003; Jung et al., 2009; Kruisbrink et al., 2022; Olsen & Bergland, 2014) These studies convey that fear of falling is not solely a cause of physical ailment but rather is also influenced by psychological and cognitive factors.

In various studies, visual impairment has been identified as a risk factor among fallers. It would be anticipated, therefore, that visual intervention would reduce the risk of falls by introducing visual intervention. Nevertheless, there is a limited number of randomized controlled trials assessing the impact of visual interventions, and the existing literature on effective visual strategies for fall prevention is lacking. Some showed that cataract surgery decreases the risk of falls (Brannan et al., 2003; Schwartz et al., 2005; Tseng et al., 2012), while others showed an increase in the reported number of falls (Meuleners et al., 2014), while others showed no effect in reducing the number of falls. (Harwood et al., 2005; McGwin et al., 2006) Furthermore, others have shown that providing glasses prescription updates or single-vision glasses with tints does not yield a positive outcome regarding fall reduction. (Cumming et al., 2007; Haran et al., 2010) It is imperative to understand that those studies suffered from some limitations, specifically due to data contamination. This hindered drawing a conclusion about the effectiveness of visual intervention. Moreover, a randomized controlled trial found that visual attention training led to no improvements in balance or mobility. (Althomali et al., 2019) Further research is warranted to draw a better understanding of the potential role of visual interventions in fall prevention.

Collectively, these studies make it clear that falls are multifactorial in nature. Because of this, it is essential to use a combination of interventions that can address these various risks together in order to reduce the frequency of falls effectively.

A complicated system's inability to keep the body in balance is the cause of falls. (Nowak & Hubbard, 2009) Older adults are more likely to fall due to various interacting circumstances than a single underlying cause, as shown above, making falls a multifactorial phenomenon. A multimodal risk abatement strategy is, therefore, recommended and necessary to reduce falls. (Davison et al., 2005; Fitzharris et al., 2010; Gillespie et al., 2012; Hopewell et al., 2020; Logan et al., 2021; Montero-Odasso et al., 2022).

Limitations

This review has several limitations that should be acknowledged. First, as a narrative review, it may not capture all relevant studies and is subject to potential publication bias. The included studies were heterogeneous in design and often cross-sectional, limiting comparability and causal inference. Many studies were single-center studies, reducing generalizability. Finally, there is a lack of interventional and longitudinal research in Saudi Arabia, limiting our understanding of the long-term effectiveness of fall-prevention strategies.

Conclusions

Falls among older adults in Saudi Arabia are an increasingly pressing public health issue. They not only result in significant physical harm and emotional distress but also add a considerable financial burden to the healthcare system. This review has shown that the causes of falls are varied and often interconnected, involving both intrinsic factors such as chronic illness, mobility limitations, vision impairment, and depression, and extrinsic factors, including environmental hazards and polypharmacy. Although various measures have been introduced to reduce fall risk, these incidents remain widespread, pointing to the need for more effective, comprehensive and sustainable strategies.

The findings highlight broader implications for both clinical practice and implementation strategies and emphasize the urgent need for tailored national guidelines, integrated fall-prevention programs across healthcare and community settings, and stronger enforcement of safety measures and policies. These guidelines should make fall prevention a central element of older adults' care, supported by proper training for healthcare professionals and caregivers alike. Tailored interventions should prioritize modifiable risks such as polypharmacy, environmental hazards, and poor mobility, and fall-risk screening should be embedded into routine geriatric assessments

What distinguishes this review is its focus on the Saudi context. While findings align with international evidence, this synthesis highlights unique local challenges, particularly the high prevalence of falls, limited awareness of fall risk, increasing drug use, and persistent gaps between knowledge and implementation. By presenting the first comprehensive overview of Saudi data, this work provides a foundation for future research and supports the development of culturally adapted national policies aimed at reducing fall-related morbidity, disability, and healthcare costs. With the continued growth of the older population, collaboration between healthcare workers, policymakers, and researchers will be essential to reduce fall rates and enhance the overall well-being of older adults across the country.

Author Contributions

The author solely contributed to the conception, design, data acquisition, analysis, drafting, and critical revision of the manuscript, agreed on the journal submission, and accepted accountability for all aspects of the work.

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Data Availability Statement

The author will transparently provide the primary data underpinning the findings or conclusions of this article, without any unjustified reluctance. If need from editorial team.

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Conflicts of Interest

The author declare no potential conflicts of interest related to the research, writing, or publication of this work.

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Appendix 1: study characteristics

Article	Aim	Method	Age of cohort	Sample	Findings	Limitations
Alshamrani et al. (2024)	To establish the frequency and contributing factors of falls among older adults in Makkah	Quantitative Cross-sectional design	Aged 65 and above	383 older adults	Having a chronic disease, obesity, visual impairment, impaired functional mobility, and incontinence were the most important risk factors for falls among older adult individuals.	The researchers noted potential selection bias in the recruitment of participants.
Alqrishah et al. (2024)	To identify the causes of falls among patients in government hospitals in Saudi Arabia	Quantitative Cross-sectional design	Not applicable	504 nurses	Wet floors, the lack of support bars, the lack of warning signs, the shortage of nurses, and unsafe corridors were identified as the most important risk factors of falls in hospitals.	The data was derived exclusively from nurses and did not include any patients.
Almegbel et al. (2018)	To establish the 1-year prevalence of falls among old people in Riyadh	Quantitative Cross-sectional design	60 years or above	1182 older adults	Low education levels, living in rented houses, and having a caregiver were associated with a higher risk of falls.	All the participants were 60 years and above, and so the sample did not represent the entire population.
Alamri et al. (2023)	To establish the factors associated with falls among older adults in Jeddah	Quantitative Cross-sectional design	60 years or above	403 older adults	Chronic illnesses, medication use, and mobility challenges are the most common causes of falls among older adults.	The study focused exclusively on older adults.
Almarwani (2024)	Sought to investigate the knowledge and attitudes of Saudi Arabian older women living in the community around fall risk.	Quantitative Cross-sectional design	60 years or above	150 older women adults in community dwellings in Riyadh	Nearly half of the participants reported falling in the past year. While they showed good knowledge of falls, gaps remained, especially about social isolation as a consequence. Fear of falling (FOF) was common, especially among those without a fall history.	Sample bias from self-selected active participants, limiting generalizability to vulnerable populations. Recall and social desirability biases may have influenced interview responses. The cross-sectional design prevents establishing causation

						between FOF and risk factors.
Alabdullgader and Rabbani (2021)	Aimed to assess the prevalence of falls and related risk factors among older adults in Saudi Arabia	Quantitative Cross-sectional design	60 years or above	269 older adults aged 60 and above attending primary healthcare centers	Falls were common among older adults in Unaizah City, linked to age, polypharmacy, aging, and environmental factors. Most falls occurred indoors, highlighting the need for home safety improvements	Participants were patients from selected PHCs in Unaizah City, which may limit the generalizability of the findings. The questionnaire was not pilot-tested. The prevalence of falls may be underreported due to memory issues common in older adults.
Innab 2022	To explore nurses' views on factors contributing to falls and strategies for their prevention in acute care settings.	Quantitative, cross-sectional survey.	Not applicable	102 nurses working in Saudi hospitals	The leading contributors to falls were identified as poor balance and muscle weakness, reduced mobility, and difficulty adhering to safety instructions	Based only on nurses' perceptions; did not include patient data. The use of a single hospital might limit generalizability
Alasmari et al 2023	To investigate risk factors in fallers eho have diabetes	Quantitative, cross-sectional design	60 years or above	309 older adults	Neurological disorders and reduced cognitive function significantly increased fall risk.	Participants were selected from PHCs in centers of the Ministry of National Guard, which may limit the generalizability of the findings. The medications used by patients need to be classified and specified in order to understand their effect on falls in older adults.
Alqahtani & Alenazi, 2025	To examine the relationship between frailty and falls in older adults	Quantitative, cross-sectional design	60 years or above	395 older adults	Falls were correlated with frailty, high BMI, and comorbidities	Relied on self-reported medical history; potential recall bias.
Alharkan et al 2023	To examine the association between falls and polypharmacy	Quantitative, cross-sectional study	60 years or above	387 older adults	Polypharmacy was associated with falls	Conducted in a single city; findings may limit generalizability
Alanazi & Salih, 2023	To examine the prevalence of falls and depressive	Quantitative, cross-sectional	60 years or above	296 older adults	Depressive symptoms were significantly	Relied on self-reported depression.

	symptoms among older adults	design			associated with falls	Measures may be biased.
Yasmeen et al 2025	to evaluate fall risk, assess awareness of medications that increase fall risk, and determine the effect of pharmacist counseling among community-dwelling older adults	Quantitative, cross-sectional design	60 years or above	391 older adults	Arthritis, obesity and diabetes were strongly associated with fall risk. Awareness of fall-risk-increasing drugs is still inadequate among older adults in the Jazan region	Relied on self-reported measures, which might cause recall bias.
Al Harbi et al., 2025	To explore factors associated with fear of falling among older adults	Quantitative, cross-sectional design	60 years or above	170 older adults	Fear of falling was common (46.5% prevalence) and associated with poor health perception, female gender, vision problems, and previous falls	Focused on fear of falling rather than actual fall incidents; sample size relatively small
Assiri et al., 2020	To examine the prevalence and risk factors of falls among individuals aged 65 years and older attending primary healthcare centers	Quantitative, cross-sectional design	65 years or above	402 older adults	Falls were more likely among older adults with cardiac disease, vertigo, visual problems, or those requiring walking aids	Conducted in a single city; findings may limit generalizability