

Balancing integrity vs. risk of falling – nurses' experiences of caring for elderly people with dementia in nursing homes



Journal of Research
in Nursing
©2009
SAGE PUBLICATIONS
Los Angeles, London,
New Delhi and Singapore
VOL 14 (1) 61–73
DOI: 10.1177/
1744987107086423

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Abstract Dementia is recognized as being a major risk for falls that cause suffering and increase dependency for the individual. The purpose of this study was to explore registered nurses' and nurse assistants' experiences of caring for elderly people with dementia who are at risk of falling, and factors that contribute or reduce falls in this group. A phenomenographic design was chosen. Ten nurses and 18 nurse assistants with experience of fall events were strategically selected for a recorded interview. The informants were chosen from 10 nursing homes in Sweden and Norway. They were asked to describe a fall situation they had been involved in when caring for elderly people with dementia. The findings shed light on an ethical dilemma in the main category 'Balancing integrity and autonomy versus risk of falling' which was comprehensively related to two descriptive categories. The first one was 'Adjusting to the older person's condition' with the concepts of forgetfulness, anxiety and confusion, ability to express oneself and understand, bodily build and function. The

second category was 'Adjusting the care environment', comprising these conceptions: the physical environment, the psychosocial environment, organization and human resources. Based on the staff's perceived difficulties in preventing falls in elderly people with dementia, there is a need for additional support or professional supervision in their work to enhance possibilities for successful fall prevention.

Key words dementia; falls; nursing home; nursing staff; phenomenography

Introduction

The incidence of falls in the population increases with age, and more women than men are prone to falling in most age groups (Lehtola, *et al.*, 2005; Talbot, *et al.*, 2005). Approximately 30 per cent of people over 65 years of age fall each year (Gillespie, *et al.*, 2003). Approximately one in 20 fall incidents causes a hip fracture, which is one of the most troublesome for the faller (Luukinen, *et al.*, 1994; Das and Joseph, 2005). The fall incidence in institutions is reported to be as high as 1.5–2 falls per bed per year, and approximately 10–35 per cent of these falls lead to an injury (Thapa, *et al.*, 1996; Jensen *et al.*, 2002; Dijcks, *et al.*, 2005). For the individuals who are affected, these injuries undoubtedly cause suffering and increased dependence, leading to limitations in daily life, anxiety about falling again and decreased quality of life (Johansson, *et al.*, 1998; Bachrach-Lindström and Unosson, 1999).

Elderly people, especially those with psycho-geriatric problems living in nursing homes, are found to be more frequent fallers than elderly people living in their own homes (Kiely, *et al.*, 1998; van Doorn, *et al.*, 2003; Kallin, *et al.*, 2004) and the fracture risk is found to be four times as high in nursing-home residents (Ytterstad, 1999). The literature on the subject refers to studies of risk factors followed by intervention programmes to prevent falls in hospitals and in communities. Actions like individual risk assessment, which reduced environmental hazards, regular strength and balance training and the use of hip protectors are some of the measures described in the literature (Jensen, *et al.*, 2002; Kannus, *et al.*, 2005). People with dementia often have difficulty in understanding instructions and the ability to cooperate with staff. This makes some of the known interventions designed to prevent falls difficult to implement. A combination of environmental hazards and individual behaviour contributes to a fall accident, and successful prevention involves the individual who falls and the nursing staff, as well as others (Becker, *et al.*, 2003; Gillespie, *et al.*, 2003; Vu, *et al.*, 2004).

Accordingly, there is already a great number of studies in falls among elderly. However, there is a limited number of studies available regarding fall and injury prevention among elderly people with dementia and the staff's experiences in this area. Gillespie *et al.* (2003) underline the importance of gaining more knowledge to be able to reduce the number of falls and their consequences. Nurses and nurse assistants caring for elderly people with dementia play a vital role in organizing the residents' daily activities and the surrounding environment in such a way that falls and risky situations are avoided. This means that the nurse must be able to make quick decisions concerning individual persons' daily activities. These decisions must be grounded in an almost continuous ongoing risk assessment of the resident and flexibility when prioritizing between nursing actions. These assessments and nursing actions are often spontaneous, and made by the nurse alone, on an individual basis.

Hence, it is of great importance to chart the staff's experiences and bring new and valuable insights in fall prevention with regard to elderly people with dementia.

Aim

The aim of this study was to explore registered nurses' and nurse assistants' experiences of caring for elderly people with dementia at risk of falling, and factors that promote or reduce falls in this group.

Method

As we wanted to elucidate nurses' and nurse assistants' experiences and clinical actions when caring for elderly people with dementia at risk of falling, a qualitative, descriptive approach inspired by phenomenography was chosen. Phenomenography aims at recognizing qualitatively different ways in which phenomena are experienced, conceived, perceived or understood, which, according to Marton (1996) and Barnard et al. (1999), are described as synonyms. People conceive phenomena and various aspects of the world around them, the 'second-order perspective', in a limited number of different and logically inter-related ways. This is in distinction from statements of how physical things, phenomena and situations 'are', which is called the 'first-order perspective' (Marton, 1988; Marton & Booth, 1997). The second-order perspective was focused on in this study as variations of the informants' concrete experiences of caring for elderly people at risk of falling in nursing homes.

Informants

Twenty-eight informants, 10 nurses and 18 nurse assistants, 10 from Norway and 18 from Sweden, working in 10 different nursing homes for people with dementia, were included in the study. Inclusion criteria were that the informants had three or more years' experience of working in nursing homes for elderly people with dementia, and experience of fall events in these settings. The nurse managers mediated contact with nurses and nurse assistants who met these criteria, and the researchers (MBL, IJ, SS) contacted informants to provide information about the study and requested their consent to participate. The informants were all women, between 30 and 59 years of age, who had been working in nursing homes caring for elderly people with dementia for between 3 and 25 years. The selection of informants was primarily made to ensure as broad a variation of experiences as possible.

Data collection

Qualitative interviews were conducted. The informants were asked to describe a situation they have been involved in when an elderly person with dementia has fallen down. To probe the informants' descriptions more deeply, questions were asked and concrete examples were requested, for example: what contributed to or what actions could have prevented the fall? The interviews were conducted at the nursing homes and lasted between 30 and 60 min. To test the interview guide and to compare and coordinate the way the interviews were carried out, three of the authors (MBL, IJ, SS) conducted one pilot interview each prior to the data collection. This resulted in minor revisions of the interview guide and the authors decided not to

include these interviews in the findings. The interviews were conducted by three of the authors (MBL, IJ, SS).

Data analysis

The interviews were tape recorded and transcribed verbatim by the interviewers. Data analysis was performed in accordance with phenomenography (Marton, 1988; Uljens, 1989).

1. The transcripts were read a number of times by all four authors to gain an overall impression.
2. Statements relevant to the study aim were marked and numbered in the transcription of each interview.
3. Statements revealing similarities and differences in the informants' conceptions were taken out of their context and grouped into pools of meanings.
4. The pools of meanings were revised into categories that were qualitatively separated from each other.
5. Categories were preliminarily named and grouped into descriptive categories.
6. Quotes were sought in the transcripts to illustrate similarities and differences in conceptions.
7. The relationship between the descriptive categories was revised. A comprehensive main category emerged, to which the descriptive categories could be related (c.f. hierarchy system, Uljens, 1989).

All authors participated actively in the analysis to ensure that we had a mutual understanding of the different steps in the analysis. A code–recode procedure concerning the category system and its relation to the data was conducted, both individually by each author, and together. Preliminary categories were discussed and re-analysed until consensus was reached.

Ethical considerations

This study was conducted in accordance with the 'Ethical guidelines for nursing research in the Nordic countries' (NNF, 2003). Permission for the study was obtained from the nurse managers who established contact with registered nurses and nurse assistants who fulfilled the inclusion criteria for the study. Oral and written information was given, and signed informed consent was obtained from each informant. The informants were told that participation was voluntary and that they could withdraw from the project at any time without negative consequences. They were also informed that the tape-recorded interview would be transcribed, and that names and places of work would be given fictitious names or symbols to ensure confidentiality. The tape-recorded material and transcriptions were kept stored in such a manner that only the authors had access to them.

Findings

The informants' descriptions of caring for the residents at risk of falling formed one main category and two descriptive categories, which were built on seven different conceptions. Hence, the outcome space in this study was both hierarchically and

horizontally structured (Figure 1). The main category ‘Balancing integrity and autonomy vs. risk of falling’ was comprehensively related to the two descriptive categories ‘Adjusting to the elderly person’s condition’ and ‘Adjusting the care environment’, which included contributing and preventative factors in falls. The descriptive categories were horizontally and qualitatively separated, but were of equal importance and will be exemplified with quotations, which are rendered in italics.

Balancing integrity and autonomy vs. risk of falling

The main category ‘Balancing integrity and autonomy vs. risk of falling’ encompasses an ethical dilemma by which the residents’ integrity and right to self-determination are placed in contrast to their right to protect from, and avoid the risk of fall and physical injury. The balance between these poles was included in the informants’ descriptions, more or less explicitly stated. The residents’ right to integrity and autonomy includes being allowed to visit the toilet alone and perform personal hygiene in privacy. It also includes the ability to move freely around the unit choosing and performing various activities themselves, and having furniture, rugs, clothes and shoes they are accustomed to; this contributes to and strengthens the residents’ feeling of home, personality and well-being. The right to be protected and not be exposed to injury focuses on the residents’ reduced ability to judge everyday situations or their own capacity. Striking a balance between, on the one hand, protecting the residents’ integrity and autonomy and, on the other hand, protecting them from falling, emerged as an ever-present and difficult balancing act for the staff.

It’s really hard things. You usually don’t know what you should do...we can’t tie her down, she has to be able to move – so it’s a risk. People have to be allowed to live their lives. (I, 5)



Figure 1 Balancing integrity and autonomy vs. risk of falling.

Adjusting to the elderly person's condition

This descriptive category focuses on dementia and age-related conditions, and comprises the 'conceptions', 'forgetfulness', 'anxiety and confusion', 'ability to express oneself and understand' and 'bodily build and function'. The informants highlight the challenge of balancing integrity and autonomy vs. the risk of falling when these circumstances exist.

Forgetfulness

Forgetfulness was related to the residents' ability to remember basic relationships in time and space, their own physical and psychological functional ability and how to use walking aids. The informants experienced that the residents forget the 'here and now' and base their actions on earlier habits, which contributed to falls. This could occur when they do not understand their present situation and think that they have to hurry to catch a train or get to work, which was a reality in their previous daily life. Another example mentioned was that residents with dementia forget their state of health, such as pains in legs and hips, and this takes them by surprise and leads to a fall. One informant described the meaning of forgetfulness:

She was very demented and didn't remember that she'd broken a bone, and then she's sitting on a regular chair. I'm standing at the other end of the room and see her stand up and call to this lady, 'Wait, I'll help you'. But she stands up and thinks she can walk and falls and breaks it all over again. (I, 1)

The informants perceived that forgetfulness was difficult to change through information and reminders, for example using aids and alarms or calling for help. Assistance with regular toilet visits was considered to reduce the risk of a resident going on their own while not being monitored and risking a fall. According to the informants, it is important to always be one step ahead to prevent any incidents. This "...demands that the staff be attentive to the resident's needs...and frequently go and look in on the resident whom they know exhibit risk behaviour". However, overly intrusive observation and control on the staff's part could irritate and provoke risk behaviour. Making the right decision was expressed as an ethical dilemma.

Anxiety and confusion

Anxiety and confusion were described as varying throughout the day, with increased occurrence in the late afternoon, evening, night and early morning. It was at these times that the residents became fear-ridden and anxious, and sought contact, which was termed the 'twilight effect'. This often involved a restless wandering around in the unit which led to tiredness and unsteadiness. Their anxiety could also assume other forms, as the following quotation illustrates:

He was also a bit of a mechanic and could take his walker apart, unscrewing all the screws, which made him fall when he used it. (I, 9)

Different actions to reduce the risk of falls were described, such as mitigating anxiety and confusion. Calming measures included letting the resident participate in the work on the unit or spend time outdoors during the day.

...try to give her something to do...wipe off the table...peel potatoes... (I, 22)

Furthermore, playing music that they enjoyed at bedtime or simply remaining close at hand and being calm were seen as important. Sedative drugs were mentioned as a possible treatment to reduce anxiety, but these could also cause dizziness, tiredness and confusion, thereby contributing to a fall. Providing an extra evening meal was mentioned as a way to give the resident a good night's sleep and reduce the risk of him/her getting up during the night due to hunger.

Ability to express oneself and understand

The informants experienced special problems related to caring and the increased risk of falling when residents with dementia have insufficient ability to express their needs and call for help. They could not always communicate 'the right thing', and the staff could not understand what they meant. It was experienced that the residents fall or sink to the ground, often when washing or getting dressed, without making the staff aware that something is wrong. Other situations involving the risk of falling were when residents with dementia did not understand the staff's instructions and information about what was going to happen. One informant described the following:

...it seems like it's hard to get him to understand what he's supposed to do, in a way it doesn't sink in... when we help him we notice that he sort of fights us off ... (I, 7)

Bodily build and function

General age-related weakness, reduction in physical functioning and build and inadequate ability to control and understand his/her own body movements or misjudgements of distance were described as factors contributing to the risk of falling.

He was very thin...he was in such bad condition, you know, that he didn't even have control over his own body and stuff. The slightest thing...and he was on the floor... (I, 5)

The informants also described caring problems and the risk of falling when the resident trip over their own feet, become dizzy and experience difficulty in turning their heads and seeing where the chair is when sitting down. Measures mentioned to avoid the risk of falling due to dizziness and muscle weakness included being attentive to the medication. The decreased bodily control and function strengthen the ethical dilemma in caring with regard to leaving or not leaving the resident with dementia alone in the bathroom. Making them choose stable shoes and trousers that they cannot remove without help was mentioned as a means of reducing the risk of tripping.

Adjusting the care environment

This descriptive category comprises three conceptions which were seen as contributing to and/or preventing falls: the physical environment, the psychosocial environment, organization and human resources.

The physical environment

The physical surroundings include the building's layout, equipment, furniture, colours and lighting, which were perceived as factors contributing to and/or preventing falls. "...to guide them in a better way you can mark on the lamp where you turn it on and mark the toilet cover by painting it black...". Architectural conditions, such as sloping corridors and

multiple floors, were mentioned as reduce the staff's ability to supervise residents with dementia and contribute to the risk of falls. The colour and material of the floor were seen as both contributing to and preventing falls. It was experienced that residents often interpret markings in contrasting colour as holes or other obstacles. In trying to climb over or avoid the obstacle, they can easily lose their balance. Rugs or slick floors were also described as constituting an increased risk of tripping and falling. A bathroom floor with a ribbed floor was described as providing good foothold even when wet and preventing falls.

It happens most often that they pee on the floor.....it's most often then that they fall on the floor because it's wet on the floor and...Yeah, and lots of old people take off their diapers and...then there's urine... (I, 8)

Both having and not having a light on at night were also considered to cause problems. The informants described situations in which residents making their way to the toilet at night have fallen because they could not see where to go. If the light is on, however, it may happen that they get up to turn it off, which also contributes to the risk of falling, as well as the furnishing.

because some think they see a strange person if they see themselves in the mirror and become aggressive. And it can also lead to them becoming unsteady (I, 15)

For the prevention of falls, interventions in the physical surroundings were described as 'limiting or promoting the resident's freedom of movement'. Both types of actions pose a risk of falling. Placing residents with dementia behind a tray table or extremely near a table, as well as using bedrails or belts and footrests on wheelchairs, were mentioned as examples of a limitation of freedom of movement. These restraints keep the residents from getting up and walking without supervision, but the informants perceived that these actions also may cause reactions and feelings of 'being closed in' and 'panic'. They said that the bedrail, for example, can provoke anxiety and risk-filled situations in which residents climb over the rail and fall from an even greater height.

To facilitate residents' freedom of movement while still having the possibility to monitor their behaviour, various types of alarms were used in the nursing homes. These include bed alarms, alarm rugs, door alarms and wrist alarms. However, these did not always prevent falls. Aids such as wheelchairs, chair lifts and lifting belts allow for more secure lifting, which reduces the risk of falls.

The psychosocial environment

This conception addresses various forms of anxiety and the lack of secure conditions surrounding residents with dementia, which can create fall-risk situations. Fellow residents were described as possibly contributing to a disturbing and restless environment. For example, when the residents get up during the night and wander around, causing others to get up to see what is going on. Unidentified loud noises were also described as creating anxiety and stress.

...because there's a lot of unintelligible talk she reacts to...she's often irritated with people who talk around her (I, 11)

The informants also described situations at mealtimes related to falls caused by fellow-residents' behaviour, which could be irritating and disturbing and generate a

situation where things 'get messy in the group'. As a consequence, they get into conflicts with each other, resulting in irritation, aggression, pushing and falling.

She went into a male resident's room, and he got really angry and pushed her so that she fell... (I, 13)

In order to reduce the risk of falls, the staff try to work calmly and without stress to create a secure environment around residents.

Organization and human resources

The ratio of staff members to residents in the unit and the design of the unit were seen as important in the ability to supervise and retain control. The informants stressed the problem of insufficient number of staff, especially during weekends and evenings. Planning and organizing work in respect of the most dependent residents could reduce the risk of falls.

The ones who are restless have to stay in bed in the morning so they won't get into trouble while we are taking care of the others (I, 27)

The informants emphasized that increased knowledge about dementia behaviour using improved documentation and team discussion results in faster identification of risk behaviour and the ability to prevent falls. They also wish to establish separate units for residents with dementia with high-level needs of care and those with lower needs of care.

Discussion

This study was carried out with the aim of exploring nurses' and nurse assistants' experiences of caring for elderly people with dementia at risk of falling and factors which contribute or reduce falls in this group. The result showed a complex picture grounded in the ethical dilemma personnel face when, in the course of providing care, they must choose between residents' safety and their rights to integrity and autonomy. This issue is also illuminated by Heyman and Davies (2006), who consider the dilemma of autonomy vs. safety as crucial for risk management in all contexts regarding adults with learning disabilities. In our study, the informants describe their attempts at understanding and interpreting the reactions and wishes of the residents with regard to their rights to autonomy vs. avoiding the risk of behaviour which might lead to falls. This could remind the staff about the necessity of having adequate knowledge about the individual patients to decide what is the best decision. As concluded by Udén *et al.* (1999), the risk of falling must be weighed against the benefits of independence, including optimal mobility. Other aspects in this area which can influence the staffs decisions regarding risk management are described by Godin (2006), meaning that both political, social and cultural influences may have an impact on the choices the healthcare personnel make in their clinical practice, as well as the carers' attitudes towards risk behaviour (Heyman and Davies 2006). Studies have also pointed out the importance of an ethical approach in the care of people with dementia in general, and of not overriding their will to carry out necessary care (Norberg, 1996; Mullins and Hartley, 2002). However, research on this ethical dilemma regarding the prevention of falls among people suffering from dementia is scarce.

An important factor contributing to falls was the resident's forgetfulness, which could lead to actions based on their previous habits and physical functioning instead of understanding their own limitations. These difficulties reduce the possibilities for carers to take preventative action and create an increased need for observation and control of the residents. The carers try to stay 'one step ahead', while simultaneously respecting the integrity of the elderly with dementia. According to Heyman and Davies (2006), one strategy that could help the staff to enhance quality of care for these people is to identify the optimal balance between safety and autonomy when risks for falling arise.

The findings in our study highlight the specific problems of anxiety and confusion, which contribute to falls. Anxiety and confusion in residents could lead to various behaviours, such as aggression and restless wandering, which often cause trouble. These behaviours are well-known among elderly with dementia and significantly associated with falls (Kallin, et al., 2004; Testad, et al., 2005). The informants in our study tried to mitigate these problems by demonstrating nearness and support, as well as finding activities to divert the residents' anxiety. As reported in other studies, the informants stressed the need for knowledge about people with dementia and their previous history to be able to determine what would calm them down (Kihlgren, et al., 1998).

Other findings in our study indicate that the physical build of a person has significance for the risk of falling. Those who are tall and thin or have decreased lower extremity strength or difficulty walking and balancing are regarded as running a greater risk of falling. Furthermore, as reported by Edberg (1999) people with dementia could have difficulties in interpreting their own body limits and fall between two stools. Simple exercise programmes, such as progressive muscle strengthening, balance training or a walking plan, individually tailored for each participant by a trained health professional, are suggested measures that have been shown to have a positive effect on physical strength and balance (Gillispie, et al., 2003; Jensen, 2002). Lundin-Olsson et al. (2000) has also shown that people who are physically active fall less often than those who are inactive, a factor which has also been pointed out in our study.

Our informants described a wide range of more or less validated actions that they used to prevent the residents from sustaining a fall. Different kinds of restraints and surveillance were used as the most common actions. Karlsson et al. (1997) have questioned the preventive effect of these actions, and report the risk of an increased number of falls if restraints are used for people with dementia. Restraints could lead to residents' reacting with irritation and provocative risk behaviour, resulting in an increased risk of falling. Even Kirkevold et al. (2003, 2004) show that the use of different kinds of restraints is common in nursing homes. The authors argued that if the resident with dementia does not understand that his/her behaviour could be a danger to his health, the staff have a responsibility to protect and help him with respect and dignity and use as little restraint as possible. Evans et al. (2003) and Kallin et al. (2004) recommended that if restraints are used, the person should be observed continuously and isolation should be avoided. Furthermore, Testad et al. (2005) have shown that an educational programme with group counselling for the staff on dealing with residents with dementia significantly reduced the use of restraints. The programme covered topics, such as aggression, dementia and alternatives to the use of restraints.

The informants in our study were well aware of various common factors in the environment that contribute to the risk of falling. A proper architectural layout with smaller groups of residents allowing a better overview was recommended. This is in

line with studies by Heyman and Davies (2006) considering that a more regulated environment is less risky. It was also stressed in our study that the colour and material of the floor presented a special element of risk for the residents, as they may see colours and lines on the floor as holes which they step over, and consequently run the risk of losing their balance. The floor should, therefore, be of a single colour and without patterns. Wijk et al. (1999) and Waker (2004) also stress the significance of measures, such as colour, which are conformable to and help people with dementia orientate themselves in their surroundings.

The findings in our study stressed the need for both written and verbal follow-up of a case of someone falling. This allows for increased knowledge about people with dementia, which in turn increases preparedness for avoiding future falls. Other studies also argue that a clear documentation on the circumstances surrounding each fall is of vital importance for planning care for the individual and thereby preventing more falls (Waker, 2004; Rao, 2005).

Methodological issues

As we wanted to explore various kinds of experiences of caring for older people with dementia at risk of falling, a phenomenographic approach was chosen. To ensure a broad selection of informants, nurses working in different nursing homes, both in Sweden and Norway, were strategically selected. All the nurses had broad experience in working with this particular group of elderly persons and had been directly involved when someone had fallen in their unit. Thus the informants brought rich, experience-based, person-centred and concrete descriptions to the study. It should be seen as a strength in the study that the personnel most closely involved in the 24-h care of the elderly with dementia and with direct experience of falls and the circumstances related to these situations the nursing staff were the informants.

In order to enhance trustworthiness (Sandelowski, 1986), different measures were carried out throughout the research process. As three different interviewers (MBL, IJ, SS) conducted the interviews, the security of the study could be threatened. To minimize any causes for error in collecting data, the interviewers conducted a pilot interview to test the interview guide and to ensure that the interviews were conducted in the same way. These interviews were transcribed and, along with the conducting of the interview, discussed by all authors prior to starting the collection of data. Furthermore, the interview transcriptions were made by the interviewers themselves. When 10 interviews were analysed, in a consensus of all authors, a tentative pattern of categories and descriptive categories emerged which was reviewed only to a limited extent during the analyses that followed. Several nurses had experienced most of the conceptions. The categories are illustrated by quotations, which strengthens the auditability of the findings.

Conclusion

This study has provided a picture of the complex and difficult situations that caregivers in homes for elderly people suffering from dementia are faced with daily, as well as the paradox of the same environment factors both contributing to and preventing falls. The result has shed light on the informants' ethical dilemma of balancing between seeing to the residents' safety on the one hand and their right to integrity and autonomy on the other. This is also a question of how they manage and deal with risks regarding themselves and the residents.

This study confirms that the prevention of falls in the care of people with dementia demands a systematic identification of risk factors among these persons and their needs, together with continuous evaluation of the outcome of various interventions for the individual. Increased knowledge among staff, for instance through professional supervision in care situations, can contribute to successful prevention.

Key points

- Caring for people with dementia at risk of falling can mean that the nurses are forced to choose between defending the person's integrity or protecting him/her from falling
- A wide range of more or less validated actions are used to prevent people with dementia from sustaining a fall. The use of different kinds of restraints and surveillance are common measures that could lead to residents reacting with irritation and provocative risk behaviour, resulting in an increased risk of falling.

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