The balance of life: Two case studies on falls and fall-prevention in older persons

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ABSTRACT
The study was performed with the aim of understanding personal and professional strategies for fall-prevention. Using the case study as the research design, two cases with embedded units of analysis were investigated. The points of reference were two community dwelling older persons, who had both experienced falling accidents. Data was collected by interviewing the two narrators and five health and social workers, and analysing documents. The stories of falling accidents were told with fall as a metaphor for death. The two protagonists’ understanding and prevention of falling accidents depended on their backgrounds, life experiences, living conditions, and the circumstances of old age, as they attempted to re-establish balance in life. The study showed no direct relationship between the staff’s professional efforts to prevent falls and the narrators’ own strategies, but indirectly, the professionals created a supportive network; a platform of continuity where the efforts of the staff and older persons complemented each other. The staff had no clear approaches to addressing the issues raised by the accidental falls or to the prevention of falls. To strengthen fall-prevention efforts nurses could be used to contribute both person-centred and narrative approaches by incorporating evidence-based knowledge and reflective knowhow.

Keywords: Ageing, accidents and falls, falls prevention, home care, case study research.

Introduction
Falls and unstable balance are a public health problem among older adults in the western world (1, 2). Falling accidents substantially increase mortality, morbidity and immobility rates (3). Each year the falling rate for persons over 80 is 50%, and in half of these cases the falls are recurrent (4, 5). Between 20% and 30% of those who suffer injuries that reduce mobility and independence, and increase the risk of premature death. Not every fall results in a fracture but wrist fractures are more common than hip fractures for persons between 56 and 75, whereas hip fractures predominate persons older than that. In scientific fall discourse, there are various approaches to the causes and risk factors of falls. There is a medical approach which concentrates on physical factors and functions. There is also an everyday approach, where balance, balance in body and balance in mind and body are the pivotal points (6, 7). In between on this continuum, there is a stance represented by Tinetti (8) expressing an understanding of falls as an interaction of several causes, intrinsic as well as extrinsic, and of fall-prevention as multifactorial. For 25 years, comprehensive research has been carried out and much is known about risk factors for falls, effective intervention to prevent falls, implementation to prevent falls among older adults, and Close calls for action (9). Since 1999, the multifactorial fall prevention programme in the Nordic Countries has built on the WHO Healthy City approach (10, 11). Here fall-prevention efforts focus on the following points: nutrition deficiencies in persons with low body mass index, nutritional diets, vitamin D supplements and one-and-a-half litre of non-alcoholic drinks per day; environmental hazards, footwear and clothing and visual impairments; medicine such as benzodiazepine and psycho-tropics and more than four different medications irrespective of type. (12, 13). The Danish Clinical Guidelines (14) have followed this line.

Nevertheless, the older persons’ own perspectives and experiences of falling and of restoring balance have seldom been considered a topic for research (15, 16). Neither has interaction with professionals or the influence that a fall can have on daily life and self-perception (17). Fall-prevention programmes are full of advice to older persons and, according to Yardley et al. (18), not all of it is followed, partly because fall-prevention, from an older person’s point of view, is linked to hazard-reduction approaches and the use of mobility aids.

Thus, the aim of the study reported herein was to acquire knowledge about fall-prevention strategies that are used in daily life by old persons and healthcare staff. The research questions were as follows:

- How do persons older than 75 cope with falling accidents, and how do they attempt to prevent prospective falls?
- How does the social and healthcare staff cope with the falling accidents, and how do the personnel attempt to prevent prospective falls?

Methodology
The research design was inspired by Yin’s methodology for conducting case studies (19). This involved investigating two cases with embedded units of analysis. The case-study method was chosen out of a wish to understand falls and their prevention as complex social phenomena in which the boundaries between phenomenon and contexts are not clear and with focus on interdependencies (20). The overall analytical strategy was to rely on the data and acquire knowledge about coherence, similarities, and variations in the perception of the complex field of falling accidents and the prevention of falls. Within the case-study framework, a qualitative method based on different hermeneutic approaches was used to understand the different types of data; interviews, documentary analysis, and observations. The various sources of evidence were triangulated, to strengthen the validity and reliability of the study.

Heterogeneous and strategic sampling was used to obtain a sample population, in order to get a variation of coping strategies. The sampling criteria included gender, age, background, and course of events. The study focused on one woman and one man (Ingrid and Henry), who had experienced falls in the 12 months prior to the study. The two protagonists were chosen on the basis of fall registration sheets. To conduct the research the data, the evidence from each case gathered in a protocol to maintain overview over the processes.

Individual in-depth interviews were conducted with Henry (15 pages) and Ingrid (18 pages) and with two health and social workers (12 and 13 pages) who had visited and helped Henry and Ingrid. The staffs were interviewed as a group (15 pages) in a focus group interview (21). The staff provided stories about the falling accidents, using the context of daily life as their frame of reference. The interviews were taped and transcribed verbatim by the interviewer/first author.

The documents analysed (25 pages) were the registration forms for the falls, home-care diaries situated in the dwellings, nurses’ home-
care journals, physiotherapists’ training journals, and hospital discharge papers.

Henry’s and Ingrid’s narratives were analysed with a view to understanding their life experiences. The analyses comprised hermeneutic analyses and interpretation according to Ricoeur’s theory of interpretation in order to understand how a person’s life is rooted in daily life (22, 23). Horsdal (24) has made the theory manageable and implemented it. According to Ricoeur, the story is created by both what the narrator says and what the listener hears, and the interaction between them, indicated by nonverbal and verbal cues, facial expressions, and laughter. Following Ricoeur (23), the first step in the analysis was a naive reading and determination of the chronology of the events narrated in the story. The next step was a semantic and semiotic analysis of the text. The final step was acquiring a comprehensive understanding of the narration.

The analysis of the focus group interview was based on the principle of content analysis, sorting the data into categories and then finding patterns (25). It was done inductively and deductively in order to identify what the participants said during the interviews about preventing falls (26).

The documents were studied using Fairclough’s critical discourse analysis (27-30).

Ethical considerations

The old persons were first contacted by telephone in order to determine whether or not they were prepared to participate in the research study. It was made clear that participation was voluntarily and they were informed about the purpose of the study. After they had stated that they were interested in participating, they were sent a letter that described the study and informed them of their legal rights. The participants were promised confidentiality and anonymity. Prior to the interviews, they were given information on the research and a consent form to sign if they wanted to participate. The study was approved by the internal security system of the municipality and followed the Ethical Guidelines for Nursing Research in the Nordic Countries (31).

Findings

The findings constitute answers to the research questions posed above. First: how the two old persons talked about, experienced and handled their falling accidents are presented; then, the health-care staff’s approaches.

Henry’s and Ingrid’s strategies for preventing falls

The two protagonists talked about falls and their prevention as part of everyday life. The findings are presented in the order in which the steps in the narrative analyses were followed.

Henry’s life story

Henry was born in the countryside in 1928. As a young man, he came to the capital and worked as a sailor on shore in one of the big shipping companies. He advanced to a good position as goods manager before the company closed down. The Danish princes would often visit him at his office. After the firm closed, Henry found work as a mechanic. Unfortunately, this involved working with organic solvent-based paint and varnish, which damaged his brain. Due to this industrial injury, he was forced to stop work at the age of 52. Henry married at the age of 42. They lived together in a small apartment with access to a garden. It was fourteen and thereafter she lived with her father. As a young girl, she started nurses’ training, but had to stop because of varicose veins. Eleven years ago, they moved to a more comfortable flat. Five months prior to the interview, Ingrid’s husband died. He fell at home and, with the help of the Iranian neighbours, an ambulance was called to take him to hospital. The funeral took place at the beginning of January. Shortly after this, Ingrid had a falling accident at home. She was taken to hospital again and admitted for observation of her condition. Three weeks later, she was discharged, but after this it was difficult to regain strength. Ingrid had a weakened heart but had no paralyses after former cerebral thromboses. She took four different types of medicine, including nutritional supplements as vitamins with extra Vitamin D. She had an operation for cataracts, and received help every morning dispensing eye drops. Every morning and evening, a person from the home-care unit came to her home. Ingrid received meals on wheels every other day. Because of her tendency to fall, Ingrid got an emergency call button installed while her husband was in hospital. She had one wheeled walker for indoor use and another for outdoor use. Ingrid’s BMI was 16 although she had gained weight since returning from hospital.

Ingrid’s opening answer when asked to tell about the falling accident was the story of her husband’s death and then, “Two days after the funeral, I fell on the floor...”

The protagonists’ messages and arguments about falling are shown in Table 1 as quotations and condensed interpretations.

Similarieties – see Table 1

Both persons talked about falling accidents in connection with the bereavement of their spouses. On the nearness of death, Henry said, “It would have been better if I had passed away when my wife died, having the thromboses; you get tired of all this fuss.”

Ingrid’s opening answer was asked to tell about the falling accident was the story of her husband’s death and then, “Two days after the funeral, I fell on the floor...”

The protagonists’ messages and arguments about falling are shown in Table 1 as quotations and condensed interpretations.

Variations – see Table 2

Ingrid born at the beginning of the 20th century, and Henry from the 1930s, had led different gendered lives. Table 2 presents the factors that were important for maintaining and establishing balance, and quotations from the interviews that showed the protagonist’s attitudes towards and actions taken to promote the establishment and maintenance of balance.

The health-care staff: stories about falling and the prevention of falls.

Handling the falling accident.

Henry’s helper filled in the fall registration form after she found Henry on the floor unable to get up. The registration form was filled in using short, tense messages in which words rather than sentences signaled the intended meaning to other professionals: “He fell, not hurt”, “Emergency team”. No arguments were presented and no contextual factors were indicated; the busy staff observed and reacted according to how they see themselves as professionals. Henry was the object of this discursive praxis. In Henry’s home-care diary, the staff wrote: “Henry had an accidental fall yesterday, but OK today. Is having breakfast, and lunch has been prepared”. The book was characterised by the daily message discourse, written in spoken daily language in which longer
sentences and statements were used to communicate with colleagues than in the urgent messages.

When Ingrid had her falling accident, she called the emergency base. The comments in the written documentation were “fall” and “daughter in the home” and later on “Nurse informed at home care unit at 11.15; emergency ambulance”. The falling incident was mentioned neither in Ingrid’s book nor in the hospital discharge paper. The daily message discourse in the healthcare book was in contrast to the hospital discharge paper. Employing medical discourse, it stated that: “The patient manages her medicine”; “has been mobility trained and is self-reliant”.

**Prevention of falls expressed in the interviews and documents.**

**Exercise, activity, physical strength, and training.**

Henry’s home-helper made some observations of Henry’s activities: “After his wife’s death, his health started to decline. He had always run to the supermarket; he did this two or three times a day because he was a fighter. “Although I can’t manage, I must” he often said. Ingrid’s

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<th>Table 1. Similarities</th>
<th>Henry</th>
<th>Ingrid</th>
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<td>The absence of mentioning the falls</td>
<td>Henry did not tell the staff about his many falling accidents. He believed that they were his own secret. Henry believed in an inner wisdom which will support his balance.</td>
<td>Ingrid did not like to talk about the times when she felt dizzy, woozy and queasy and in danger of falling. She struggled to keep balance on her feet and in her life.</td>
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<td>Activity, exercise, physical strength and training</td>
<td>“It is OK; I have got the muscles trained.” (pointed at the fibula)</td>
<td>In spite of her daughters’ warnings, Ingrid wished to extend her territory. She has been to the bakery with her walker. It was hard, and she had brought money to take a taxi if she did not have strength enough to succeed. But she did succeed.</td>
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<td>Wishes for daily life at home</td>
<td>In order to prevent prospective falls, Henry relied on his body and his arm muscles, and his wishes were to continue being able to stay at home, do his shopping at the local supermarket and, in between, visit his wife’s grave.</td>
<td>Ingrid wished to stay at home, manage her daily life and travel by bus. She would also like to have someone from one of the voluntary organizations to join her on her walks.</td>
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<th>Table 2. Variations</th>
<th>Henry</th>
<th>Ingrid</th>
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<td>Fall prevention</td>
<td>“I don’t know how much I eat, but my body has demanded what it needed. We should let the body decide.”</td>
<td>“When my husband died, I had no strength. My weight was down to 37 kilos, and now I have reached 43 kilos... quite good, isn’t it?” Ingrid showed the interviewer how much water she drank every day.</td>
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<td>Taking and handling of medicine</td>
<td>Henry did not allow district nurses to check his medicine consumption or help him with the administration of it.</td>
<td>“I take a vitamin tablet, a capsule against thromboses and a sleeping pill. Actually, I hate medicine.” “When I am in hospital, I strictly follow everything they do with the medicine. You know, it is in the fingers, I learned something from my time as a student nurse”.</td>
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<td>Coping with prospective falling accidents</td>
<td>“… If you resist, you will hurt yourself, you should never resist. I have learned that from many falls. You have an inner brain guiding and protecting you”.</td>
<td>Ingrid made clear that she would need a therapeutic group to talk about her sorrows. Throughout the interview, she experienced release by talking freely about her situation. Telling her story made her remember things she did not know had happened and made her feel optimistic and confident.</td>
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<td>Social relations</td>
<td>Henry was isolated after the start of the falling episodes.</td>
<td>Ingrid regarded herself as a woman with special skills in relating to other human beings. She practiced her skills in her daily contact with the family and with the different members of the health system she met.</td>
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<td>Mood and temper</td>
<td>Henry was a bitter man, first destroyed in his working life by an industrial injury, then destroyed by his wife’s dead – and now destroyed by the weakening of his body. Only when talking about the happy past his mood did soften.</td>
<td>(Ingrid laughed). “You must make some jokes! You are welcome to read the fine recommendation I got from the hospital.” Ingrid pointed out the discharge paper from the hospital, which says she can manage on her own.</td>
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home-helper and former hairdresser was interested in doing her best. Talking about Ingrid, she stated: “If she does things too quickly, they will fall”; “I tell her to take it easy”.

Nutrition, food, meals, and drink.
When Henry’s home-helper was asked to explain what measures have been taken to prevent falls she answered: “When we prevent falling accidents, we say that they must drink plenty of water. You are not there around the clock, so the usual!” It was the only time the home-helper talked about herself as a part of a team. She used “we” for herself and the staff and the impersonal “they” for the older person. Saying this, she recognized herself as a professional, co-responsible for the prevention of Henry’s falls. In the sentence she reflected on knowledge of skills. Ingrid was a tiny woman and her helper’s reflections on her intake were: “I came one day when she was dizzy and in bad shape. I followed her to the kitchen and she got something to drink”.

Taking and handling medicine.
In Henry’s journal, it was stated that the medicine was a matter for the GP. Ingrid was enthusiastic about taking her medicine. The assistant did the dispensation of eye drops; thereafter Ingrid managed on her own and prepared her medicine intake in a dosage box.

Social relations: mood and temper.
Concerning his network and participation in daily life, Henry’s helper reflected: “He had a sense of humour, we laughed together”; “During the past year... perhaps one year and a half, it went really wrong with Henry. His mood got worse; he got depressed and sad... very, very sad.” From her daily visits, Ingrid’s assistant had gained knowledge of Ingrid’s relations with her family and she was well aware of their importance.

Henry’s and Ingrid’s wishes for daily life at home.
The staff was unaware of Henry’s and Ingrid’s wishes for their daily lives and for their futures. However, the home care summary of visits contains a short history of events in Henry’s life: the loss of his wife and the decline of his functional level. It stated: “The citizen wishes to return to his home”.

There is no recognition in this note of Henry’s status as a person. The note considered only Henry’s social identity, which was that of a citizen with certain rights, who was recognized to have wishes. The tone was authoritative, impersonal, and distanced. Ingrid’s assistant said the following about Ingrid: “She is very talkative. Most times, it is something about her children, and it is something... it is very... not concerning illnesses, not deep subjects. She wants to talk about how well her children are managing or that the window cleaner will come tomorrow”. The assistant had a clear conception of her role as a health-care professional: “We have five minutes for the eye dripping, so we can’t have very long conversations.” The nurse thought of Ingrid is an “easy patient” and the nurse let the assistant be in charge of the treatment and care.

Interpretation and discussion

Falling as a metaphor for death
The accidents happened at a time when the protagonists were touched by the nearness of death; the bereavement of their spouses had brought imbalance into their lives. Spousal bereavement is a serious life event which can imbalance life and increase the likelihood of early death. The fall had even disrupted the protagonists’ bodily experiences of daily life. The body could no longer be relied upon to support them in the way it had done in the past, so it had to be relearned (32, 33). In spite of this, they incorporated the risk of falling, falling and the prevention of falls as an ongoing process of facing existential challenges; and in their reluctance to talk about their falls, they attempted to escape from loss of independence and dignity (34, 35).
Ingrid recognized the healing effect of telling her story (36), and she was aware that strengthening her bodily capabilities was important for her quality of life. To be listened to, encouraged and understood were essential in her search for balance (37, 38). Henry and Ingrid represented a polarity on a suffering-resilience scale. Nevertheless, they shared threefold vulnerability (39): vulnerability of life, nearness of death and dependence on healthcare support.

The prevention of falls using personal and professional skills
The health staff encouraged the protagonists to prevent falls. These results correspond to the findings of therapists in the study of Ballinger and Payne (40), where therapists constructed their accounts through risk discourse, describing themselves as expert and the older persons as unknowing and vulnerable. The home-helpers valued knowledge of the older persons’ life stories and valued the socially supportive contact and relationships. They showed respect for the older persons’ choices and did not use their power to stereotype older adults (41, 42). The home-helpers balanced between personal and professional contact with the older adults but preferred the personal approach and the feeling of being liked. They supported daily life and they negotiated acceptable solutions (43). The assistants undertook the role of experts whose main interest was the older adults’ medical condition. The care was not spoken about in a professional language, but could be interpreted by the context. This type of knowledge is not particularly convenient in an organisation based on person-centred care and communication (44).
Difficulties in implementing falls-prevention programmes are well known, and rethinking individual and community fall-prevention strategies is needed (43, 45, 46). Registration of falls and screenings appear to be modifiable in real-world settings, but systematising attention to the complexity of the multifactorial fall-prevention is a challenge (47).

Conclusions
The older adults expected fall prevention to be disseminated with mutual respect and with the possibility of choice. Among healthcare staff, home-helpers spent the longest time with the older persons, made observations, helped, encouraged and negotiated elements of multifactorial-fall prevention. In order to learn and relearn, the helpers were also interested in knowing about the older persons’ stories and lives. This study indicates that implementation of fall prevention in community care implies health-care staff skilled in finding acceptable solutions through respectful negotiations between staff and persons at risk of falling. Nevertheless, it is a challenge for health professionals to create coherence between professional and performed care. To strengthen fall-prevention efforts nurses could be used to contribute both person-centred and narrative approaches by incorporating evidence-based knowledge and reflective knowhow.

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