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*Published in:*  
Scandinavian Journal of Occupational Therapy

*DOI:*  
[10.3109/11038128.2013.779321](https://doi.org/10.3109/11038128.2013.779321)

2013

[Link to publication](#)

*Citation for published version (APA):*

Kylberg, M., Löfqvist, C., Phillips, J., & Iwarsson, S. (2013). Three very old men's experiences of mobility device use over time. *Scandinavian Journal of Occupational Therapy*, 20(5), 397-405.  
<https://doi.org/10.3109/11038128.2013.779321>

*Total number of authors:*  
4

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Running headline: Very old men's experiences of mobility device use

## **Three very old men's experiences of mobility device use over time**

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## **Abstract**

The aim of this study was to explore experiences of mobility device (MD) use among very old single-living Swedish men. A multiple case study of three men, involving quantitative and qualitative data was used in an embedded mixed methods design and presented in three narrative stories. To capture differences and similarities in the use of MDs a cross case analysis was conducted. The findings show that the devices were important for retaining independence in everyday life and for participation in social activities. Use of MDs impacted on everyday activities by enabling, restricting or changing the performance. Planning and careful thinking were new strategies developed for managing everyday life. The devices were purchased, received from relatives or prescribed by professionals at a time point when there was a need. The function and form of the devices and a supportive environment were considered important for optimal use. In conclusion, these narrative stories, nurture our understanding of complex and multifaceted aspects impacting on MD use in everyday life for very old men. To support active ageing, occupational therapists and other health professionals need to seek information on personal needs and expectations, in order to understand individual perspectives on MD use.

**Keywords:** active ageing, cane, case study, longitudinal, mixed methods, occupational therapy, rollator

## Introduction

Mobility devices (MDs), such as canes and rollators, improve activity and participation (1) yet different factors affect the use. For older people the use of MDs can be related to positive as well as negative aspects. On the positive side there are expressions of satisfaction when being able to participate in activities and not having to rely on the help of others, however, older people also have to overcome a threshold to accept being a user (2). Experiences of ambivalence in getting used to assistive devices (ADs) are also expressed (3); even if the devices provide security and create opportunities for performing activities in everyday life, they also cause limitations and raise concerns. There is also a question of whether devices support or undermine personal self-image (4). Since the supply of MDs is an important service in Sweden and other western countries, it is necessary to increase the understanding and experiences of the use of MDs, to support independence in activities in everyday life for different subgroups among the ageing population.

According to several authors (5-7), the gerontology literature is insensitive to gender issues, especially to the situation of men. Many community-based services are dominated by female staff, which in turn could affect some men (8) in the use of MDs. Among the few studies concentrating on the specific situation of one of the sexes, Löfqvist et al. (9) showed that very old women's use of MDs meant incorporating their devices in activities in everyday life. That is, the MDs were not only a support for walking but embedded in their activity performance, playing a major role in enabling them to remain active in everyday life. However, the MD use was experienced by the women as a reminder of functional decline and something they had to accept. Using MDs can also be cumbersome, especially if the need is inconsistent (10-12). If MDs only are used occasionally it is difficult to remember to use them or judge whether there is a need for the device in a specific situation or not.

Ageing requires adaptation to different kinds of changes, for example physical decline, loss of energy, or to the use of ADs, in particular for people in very old age. For those very old, aged 85 years and older, also often referred to the fourth age (13), such changes are more frequent. If a person has not been able to adapt to the new situation, i. e. being a user of ADs in activities in everyday life, the use can be seen as a sign of dependence and physical decline (14) and can under-mine self-identity. However, with feelings of acceptance and support from others, the use of ADs can become more integrated in everyday life. This is important and in line with the European Union's vision of Active ageing and solidarity between Generations 2012 (15), where older people are encouraged to participate in society and able to lead quality lives. Walker (16) argued that the "youth good/old age-bad culture" that dominates society today contributes to ageism by not valuing older people to the same extent as younger people. To avoid such ageism and enable and support active ageing it is important to gain more knowledge of the process of becoming a MD user and how old people think of themselves in this situation.

Research on activities in everyday life show that old people strive for continuity in their lives, and the performance of activities in everyday life gives feelings of independence and self-confidence (2, 9, 17). Changes occur, however, as part of the ageing process, both in relation to the variety, frequency and time spent on these activities (18). Even if older people's days usually consist of activities that always have been done, they also strive to perform these activities in a well-known way (19). For older men living alone it is important to have balance in everyday life and in social interaction with other men, but also to maintain a sense of purpose in life, for example, by helping other people or to perform different kinds of leisure activities (20).

Very old men have often been socialised into not admitting to having problems, showing fear or seeking assistance from others (8), which could influence the willingness to articulate their

needs for social support. Since social support is an important factor impacting on people's willingness to use compensatory strategies in everyday life (21), for example the use of MDs, more knowledge of everyday life among very old people is crucial. Such research is however limited and does not take into account the diversity of older people (8). Instead much research focuses on older people in relation to functional capacity; physical or cognitive decline, which results in insufficient knowledge of, for example, gender differences and the impact on MDs use in activities of everyday life. Although the proportion of women is higher in the older population, there are many very old men with different kinds of needs within the health care system. To understand the diversity among very old people, more knowledge on very old men's everyday life is needed. Consequently, the aim of this study was to explore very old men's over time experiences of MD use in everyday life.

## **Methods**

A longitudinal multiple case study design (22, 23) employing a mixed methods (24) approach was used. That is, we utilised longitudinal quantitative data (primary data set) collected at three occasions over nine years, as well as retrospective qualitative data (secondary data set) collected for the present study at one occasion. The primary data set was used to describe and contextualise the cases, and the secondary data set added information on MD use and experiences of use over time. Similarities and differences between cases were explored in a cross case analysis (23).

### ***Sampling and participants***

The participants were selected from the Swedish part of the ENABLE-AGE Survey Study (25) that at baseline involved 397 very old single-living people. Out of those, 101 were men and fourteen had participated in all three ENABLE-AGE Survey Study data collection waves

(2002, T1; 2008, T2; 2011, T3). At the time of the present study, ten fulfilled the inclusion criterion; having experiences of MD use, for this study limited to MDs for walking. Six men used a cane, one used a rollator, and three used both types. One man used a wheelchair in addition and was therefore excluded. A purposeful sampling (26) strategy was used in order to capture a broad picture of experiences of MD use, resulting in that the three men using a combination of MDs were selected and contacted for interviews. The participants received written and oral information and gave informed consent. They were assured confidentiality, thus pseudonyms for the three participants were used.

Socio-demographic-, environmental- and health aspects did not differ substantially between the three participants and those eleven not selected for the study (see Table I).

- Insert Table I about here -

## ***Data collection***

### **Primary data set – Quantitative data**

A subset of the comprehensive ENABLE-AGE Survey Study longitudinal database was utilized, comprising variables based on study-specific questions as well as well-established instruments (25), collected at home visits by experienced occupational therapists. For socio-demographics, variables on age and education were used. For environment, data on type of housing and use and need of MDs such as cane, crutches, walking-frame, rollators and wheelchairs were used. Finally for health variables, functional limitations were collected by means of the Housing Enabler (HE) instrument (27). Four questions from the Mini-Mental State Examination (MMSE) (28) were used to capture signs of cognitive dysfunction (29). Perceived health was self-evaluated on a scale ranging from 1 “poor” to 5 “excellent” (30). Independence in ADL was assessed by means of the ADL Staircase (31). In addition, study-

specific questions on time spent outdoors and leisure activities were used to capture changes in everyday life (25).

#### **Secondary data set – Qualitative data**

An interview guide with semi-structured open-ended questions (26) was constructed, focusing on experiences over time of MD use and the performance of activities in everyday life. The questions covered when and why MD use was initiated, different MDs used over time, and how the use was perceived. Moreover, the questions captured if and in what way the use of MDs changed the performance of activities in everyday life over the nine years and how these changes were experienced.

The interviews were performed at one occasion in 2011, at home visits by a skilled occupational therapist experienced in observing and assessing old people performing activities in different kinds of settings (first author). At the end of the interview, the participant was asked to choose and perform an activity in which MDs were used. The purpose of this was to let the participants perform and reflect on their use of MDs in an everyday activity, and to facilitate the interviewer's understanding of the participants' use and reflections on MDs use. The interviewer encouraged the participants to comment and verbally reflect on their MD use in relation to the activities performed. After each interview field notes were written, summarising impressions and reflections throughout the interview and during the performance of the everyday activity. The interviews were audiotaped and lasted around one hour each, including 10-15 minutes performance of a chosen activity.



## ***Data analysis***

Analysing the primary data set, descriptive statistics were used to describe the men at T3 according to socio-demographic, environment and health aspects, and time spent outdoors. Moreover, variables within this data set were used to illustrate changes over time according to MD use and leisure activities, and were embedded in the secondary data set for each of the three cases.

To analyse the secondary data set, each interview was listened to repeatedly and then transcribed verbatim by the first author. To condense raw data, separate case records (26) were made, comprising text from the interviews focusing on present as well as retrospective statements regarding activities in everyday life, functional decline, and support from others in relation to MDs use over time, as well as survey data and field notes. The embedded mixed methods design (24) resulted in a narrative story for each case, where interview data were woven together with descriptive quantitative data from T1-T3.

In order to further explore the complexity of MDs use, a cross-case analysis (23) was performed. For this a conventional content analysis (32) was undertaken to gain direct information for each of the three participants without imposing defined categories or theoretical perspectives. The first author read the transcribed interviews repeatedly to get a sense of the whole. Citations reflecting use and experiences of use of MDs were picked out and coded. Based on how they were related, the different codes were sorted into three categories, reflecting core aspects of the findings.

Triangulation by analysts (26) was used to reduce the possible biases that come with one person doing data collection and analysis. All four authors have experiences of working with very old people. The first and second authors (with Swedish as their native language) both have an occupational therapy perspective on the findings, while the third author (a social

worker by training, with English as her native language) gave input from a social gerontology perspective. Initially, each case record was read by the first and second authors, and adjustments of the narrative stories were made after joint discussions. As the texts evolved in English, the third author read each of the narrative stories thoroughly followed by questions for clarification and discussions together with the first author, resulting in further adjustments. For validation of the cross-case analysis, the citations, coding and categorisation initially made by the first author, were discussed by the first and second author, and adjustments were made to optimise the categories. Finally, the fourth author (with an occupational therapy perspective and senior competence in gerontology; Swedish as her native language) without any previous engagement in the analysing process, compared and validated the categories and underlying statements against a draft version of the results. Taking her input into account the final version of the results was completed.

## **Results**

### ***The story of Carl***

Carl, nearly 98 years old, lives nearby his family with whom he has daily contact and regular visits from. His children help out with grocery shopping, errands and gardening, but when it comes to indoor activities such as cooking, washing up and cleaning, Carl still manages independently. Carl spends his day watching television and doing ordinary household work. He describes himself as hard-working and used to renovate the house he and his wife moved into as a newly-married couple and where he still lives. He also used to keep the garden in a perfect shape.

At the age of eighty Carl bought himself a cane *"when walking outdoors it was good to have the cane to support myself"*. At T1 Carl used the cane indoors and outdoors, one year later he used the cane and the rollator he received from the health care services, indoors as well as outdoors. The reason for starting to use MDs was old age and overall need for support. At the

time when Carl stopped driving the car and bicycling, the rollator was used for shopping and enabled him to continue performing activities in everyday life. Carl did not express any concerns about starting to use MDs *“no, no, no one has to feel oneself, when it’s needed one has to take it as it comes...”* The MDs are nowadays integrated in the activity performance and are always kept close. Over time activities had gradually decreased. Nine years ago Carl was engaged in gardening, shopping and taking short walks. One year later none of these activities were performed. Likewise at T1, he was independent in grocery shopping, cooking and cleaning, but at T2 he had become partly dependent in grocery shopping, and at T3 he was independent in cooking only. The changes, however, were not related to the use of MDs, according to Carl instead it was old age. *“I’m getting used to it – one can’t change anything now, well one shouldn’t try to do more than one can manage...”*

Today Carl uses the cane and the rollator when moving around in the house *“if there is a problem to use the rollator there are things to hold on to, if you get near the walls there are no problems”*. However, in the kitchen Carl moves around without any MDs, he puts the rollator in the middle of the kitchen floor, where he can reach it from the sink, stove, refrigerator or the kitchen table. This is a strategy for staying close to the MDs that has turned into to a habit. If Carl cannot carry pots or food, he uses the rollator for its transportation from one place to another. He has the cane hanging from the rollator. The cane is used to reach things fallen on the floor or at places not accessible for the rollator, for example, the basement where he goes to do the laundry. When observing Carl going down to the basement, it was noted that he puts the rollator nearby the basement door, takes the cane and holds it in his right hand, opens the door and starts going down the stairs holding his cane and the handrail with his right hand while supporting with his left hand at the opposite wall. Down in the basement he walks perfectly well with the cane. On the question why he chooses to use the rollator instead of the cane he says *“it’s steadier to hold with two hands, that’s*

*why...* “ The use of MDs had change over time, both in terms of the kinds of devices and the activities performed. However he does not foresee any further changes in use.

### ***The story of Eric***

Eric, previously a managing director of a national company, has just turned 90 years. He lives in a one bedroom apartment in a senior housing facility, located in the same town he moved to with his family years ago. He has daily contact with his children. Eric stated that he was used to hard work and late working hours before retirement. He was engaged in many sport activities together with friends and family, and travelled. Last year he went to the Canaries with his daughter, a trip he would like to do again to enjoy food, drinking and swimming. After retirement he engaged even more in tennis, golf and bridge, where he also had his circle of friends. At T1 reading, playing bridge, taking walks and playing golf occupied his time. He would have liked to play more golf but it was difficult to find golf partners. Nowadays playing bridge is the only activity, though dancing is desirable.

Eric’s first MD, a collapsible cane, was a gift from his daughter. He received it a few years ago when he had a fractured leg and used it during his rehabilitation “*I needed it for the pain and for safety*”. At T2 he still had the cane but did not use it at all. At T3 Eric used the cane and the rollator to move inside his apartment. He kept the rollator close. Eric had thoughts of having a scooter for transportation and outdoor activities. “*It’s my grandson he thinks I should have one*”. The scooter would enable him to go down town to meet friends or to the seaside where he liked to spend time. Eric had never thought of starting to use a rollator, but when moving to the senior housing facility, where all the other residents had a rollator, the director wanted him to have one for safety. He then started to do so without any second thought. Concerning the scooter he hesitates “*all the people, what should they think? why do you have one of these?, why can’t you do as we do?- but on the other hand I don’t care...*”

Nowadays Eric spends the mornings in his apartment, getting ready for the day and reading the newspaper. For lunch he goes to the restaurant located in the house and socialises with the other residents of the senior house. In the last few years Eric has paid for cleaning and laundering. Buying food and cooking a light evening meal are activities Eric still performs on a daily basis. When taking outdoor walks Eric prefers to use his cane, since the rollator is causing trouble when using public transportation. *“Once I had to wait for three buses before I could get on the bus, they were crowded with rollators and strollers...”* He also expresses difficulties using the rollator during wintertime and bad weather. *“Last winter it really was hard to walk with that “guy” from the bus stop to the bridge club, you couldn’t see any curbs because of the snow, you had to fumble your way ahead and that was tough”*. When going for groceries the rollator is useful for transportation of goods and if he needs to sit down and rest. Before a fall two months ago, Eric used the cane indoors and the rollator outdoors; today he uses the rollator indoors as well. This causes some trouble in the small kitchen *“it’s a bit tricky to use it in the kitchen since it takes so much room, I cannot open the cupboards”*. Being a user of MDs has had an effect on everyday life in the sense that Eric carefully plans before going out. Nowadays, he has to think of places to sit down and rest or places where he can use the rollator.

### ***The story of Fredric***

Since the 1950s Fredric, 90 years of age, has lived in a house with a garden, near the sea. He spends his days in various ways, at home as well as in other places, alone or together with friends. Fredric did not have or use any devices either at T1 or one year later. However, nine years later, he had experiences of cane use, in- and outdoors, and of rollator use outdoors. Nowadays the cane is being used outdoors only, and the rollator is primarily used as a bedside table and for grasping when getting out of bed. Fredric began to use the cane because of pain in one knee. He used it for outdoor activities, especially for walks and for going to

meetings. The use became a habit and gave him a feeling of safety. *“Well, I guess you could say that I felt a little bit safer with the cane...”* The rollator was prescribed by the health services after he had a fall. It was used indoors during his rehabilitation, but shortly thereafter he used the cane only.

After finishing his morning routines Fredric reads the daily newspapers for a few hours and, later, he usually spends an hour in the garden. For Fredric gardening is a way of exercising and therefore he likes to spread the workload over time. He does not like to clean the house, and as a result he buys this service every second week. Twice a week he receives a food delivery, rather than spending so much time on cooking. Fredric is a member of a senior citizens organisation and goes to meetings and activities every week. Depending on the weather, he usually walks to the meetings using the cane. Even if the cane is being used sporadically, Fredric has no problems to remember it *“I always put it in the corner and hang my coat over it... when I’m going home I just have to count to two (cane and coat)...”* Fredric is interested in reading, history and genealogical research. He often goes to the local library, and for genealogical research he goes to a city one hour drive away. For shopping he usually drives to a nearby city, then he does not bring the cane; instead the shopping trolley is used for support and safety. There have not been any big changes in Fredric’s leisure activities during the latest nine years. Even if Fredric uses his cane for support and safety when taking walks, he chooses to walk to the sea rather than the forest *“it might be stupid to walk into the forest I never meet anybody there... if I should fall I probably would be caught there, but if I go the other way among the houses there will always be someone to find me, I think...”*

### ***Cross case findings***

Through the cases, MDs came into the lives of these three men for the purposes of support and safety and for managing everyday life. Based on the experiences overtime of MD use in everyday life, the following three categories reflect the core aspects of being a MD user.

### **MD use has consequences for activity and over time**

MDs were used for independence in everyday life, for example for support when going shopping, making errands, or for outdoor walks. Being a MDs user demanded planning in advance and thoughts about possible scenarios and solutions to problems that might occur. This sometimes gave feelings of being limited and housebound. The three men spoke differently about additional MD use, not being interested in any complementary devices, or with ideas for future use; either due to increased need or just for independent outdoor mobility. There were expressions of acceptance in relation to performing fewer activities over time, but there were also expressions of sadness. Even if old age and decline in physical mobility were reasons for MD use, the use was not permanent. The use gradually became a habit; once the MD was accepted for outdoor activities the use extended to indoor activities as well. The MDs were integrated in the performance of daily activities; keeping the MD close became a habit as well as the development of strategies for not forgetting the cane at different places.

### **Being a MD user in a social context**

The MD use was initiated in different ways; the devices were bought or received from relatives or initiated by professionals. The offer from the health service was simply accepted. To buy home services or get help from relatives and friends was also used to manage everyday life. Relatives, friends and other people in the social context were all important for supporting the men's use of MDs. The MDs were important for not being excluded from social life. Although most other people were respectful and helpful, there were some concerns about reactions from others especially due to very expensive MDs. The wish to be able to perform activities in everyday life was faced with the risk of be seen as different.

### **MD use and the physical environment**

Mobility devices were seen as crucial for the performance of activities in everyday life; consequently the form and function of the MDs was important. Different MDs complemented each other. Sometimes the cane was easier to use and at other times the rollator was easier, depending on the environment and the purpose. The cane was easy to use while the rollator was perceived to give more security. Collapsible MDs made it possible to transport them when travelling, or put them away when not needed. In most situations the rollator was seen as practical and easy to use, it enabled the men to transport things indoors and to bring home groceries or the possibility to sit down and rest when walking outdoors. However when space was limited or crowded, for example on the bus, the use was experienced as more complicated. The physical environment could either support or hinder the use of MDs, for example, open spaces without thresholds were experienced as supportive while stairs hindered. Even so, a narrow environment made it possible to perform activities without MDs, due to the possibility of leaning on fixtures such as the sink or kitchen cupboards. The use of MDs outdoors was sometime limited due to unpredictable weather like rain or snow. Slippery pavements were perceived as unsafe when walking and wet pavements due to rain reduced the function of the brakes. Muddy pavements also affected the indoor use, when using the same rollator both in and outdoors.

### **Discussion**

These findings add to the knowledge base on MD use from the perspectives of very old men. The men studied became MD users due to their perceived need or demands from others and revealed a pragmatic or rational use of MDs; when there was a need they accepted the devices. Even if the use was time consuming and demanded new habits and planning, the



MDs supported independence and enabled the men to perform activities in everyday life and were also important for participation in social life, i.e. MD use enhanced active ageing.

For these men, family as well as others were supportive regarding use of MDs, and encouraged activity and participation. Social support has in previous research shown to have a strong impact on AD use (21). It is important for users to be included and accepted in different social settings and to be able to perform activities in everyday life. There were not much experiences of stigmatisation according to use, and limited notice was taken of other people's attitudes toward users, instead there seemed to be experiences of respect and helpful treatment from others. This is in contrast to previous research that has shown MD users' feelings of being in the way of others (3, 9). However, the men did mention activities they had stopped performing and the MD seemed to be one factor impacting. This indicates the importance to consider use in different activities and social settings, for men as well as for women in order to continue perform activities in everyday life.

From a life course perspective (33), it is important to recognise and understand the pathways of individual lives in terms of continuity as well as twists and turns. It is also important to view individuals as capable of making choices and constructing their own life journey, also in relation to MD use, illustrated in this study. Continuity in everyday life was important for the three men's use of MDs. They strived to keep routines and perform activities despite physical decline or diseases. According to Barker (34) it is important to consider previous lifestyle and values in order to enable users to accept MD use that provides opportunities for continuity.

The men in this study reflect quite different life journeys, and varied experiences of MDs use. Carl, who had spent most of his time working and taking care of his family and home, was pleased to stay at home and manage with a little help from his children. In contrast Eric, who used to socialise and engage in various activities outside the home, spoke of alternative devices for continuing an active lifestyle. Fredric did not see any problems due to further

MDs use, the continuity in everyday life was important and if further support was needed he would not hesitate to use the devices. The men reflect a variation of experiences and opinions. This is in line with variation in experiences of MD use according to personal and social aspects in Häggblom-Kronlöf's and Sonn's (12) research, where users revealed a 'pleasant-unpleasant' or 'safe-unsafe' understanding of use as well as a 'respect-afraid' or 'do not mind-embarrassing' aspects in relation to use. Therefore, to optimise use differences or variations in experiences and opinions are important to consider, not excluding non-users or those who have abandoned the devices, in order to understand the meaning of MDs in everyday life. It is also important to take the diversity among very old people into account when trying to understand the multifaceted aspects impacting on MD use, and increased knowledge on different experiences and expectations according to e.g. gender could nurture this understanding.

The fact that MD use is time consuming and requires new strategies and habits, as revealed in the findings of this study, is important knowledge for understanding difficulties in performing activities in everyday life when becoming a user. New strategies and habits can develop over time, but can also be forced by illness or an accident. How this process takes place can be understood from an occupational adaptation perspective (35). That is, adaptation of the performance emerges from challenges in performing activities in everyday life, and the individuals' desire for mastery of performance. In this study, the planning and careful thinking before performing outdoor activities could be understood as an adaptation, a way of mastery to overcome the challenges in outdoor activities. Initially, the men strived to adapt their performance of activities to the use of MDs but over time, they were forced to prioritise some activities in favour of others. However, the fact that the number of activities performed decreased might not be related to MD use; this could instead be understood as a part of the ageing process. Research on time use and activities of very old people shows how they

negotiate with themselves to use energy and resources efficiently to managing everyday life (36). The three men in our study expressed acceptance as well as sadness when having to let activities go. For older people, balancing the effort needed to maintain activities with the risk of losing activities can be seen as a question of mastery. The desire and competence to perform activities as a process over time must be understood in relation to the demands of the activity and the environment.

In line with previous research (3, 37), the physical environment hindered as well as supported MDs use. The functioning and form of the devices were important and enabled the men to incorporate the devices in performing activities in everyday life. The importance of function and form may even increase as a growing ageing population may have more demands on the services and products used for independent living. However, research often focuses on specific products or the relation between the person and environment, while Dahlin-Ivanoff and co-workers (38) argued for an increased focus on occupational performance, i.e. the transaction between person, environment and occupation in relation to AD use. For health services providing MDs as well as for professionals prescribing devices, it is important to understand the multifaceted and complex situation for older people being MD users. This understanding could increase use as well as users' satisfaction when performing activities in everyday life in the home as well as in outdoor environment.

A mixed methods approach is often used to get a better understanding of a research problem (24). To use both quantitative and qualitative data gives the researcher the possibility to take advantages of both methodologies, i.e. a multiple source of data provides more evidence than a single method. This study used a multiple case study design (23). The reason for using three cases was to achieve a deeper understanding of MD use by means of a broader contextualizing. These multiple cases were carried out in real life situations, i.e. activities in everyday life, which made it possible to understand the complexity of MDs use in different

social and physical contexts. The purpose of the narrative stories were to depict each participant and capture some of the changes over time in order to facilitate the understanding of each participant's experiences of MDs use from the values and life he had lived.

Since qualitative research does not aim to create generalizable results, rather to show the diversity of the phenomena under study (26), the experiences expressed by the three men in this study cannot be transferred to very old men in general. However, the reason for using longitudinal quantitative data was to contextualise and compare the three participants with the remaining eleven men in the selection group. This aimed to give the reader an understanding of the consistency among the 14 men according to socio-demographics, environment, health and time spent out-doors (see Table I). We thereby argue that our results to some extent can be transferred also to very old men in similar contextual situations. In addition, using a cross case analysis searching for similarities between cases strengthens the transferability of the findings (23).

The qualitative data were collected at one occasion and aimed for retrospective as well as present information. Since the findings reveal a quite pragmatic view on MDs use, it is likely that the men had incorporated the MDs in their activities in everyday life, and therefore were limited in recalling all feelings and thoughts of becoming a user and experiences of early use of the devices. During the interview, the men also could have felt uncomfortable exposing decline and feelings of stigmatisation, since men in this age group not always are used to express feelings of vulnerability, which could have impacted their answers. Having the opportunity to interview more than once and having qualitative data from different occasions, on experiences of MDs use, would have increased the credibility of the result. On the other hand values and attitudes changes over time, and this could be true also for MDs use. The fact that the authors have different professional backgrounds, and were able to view the

research question in different ways (24), is however an asset and strength for the analysis and interpretation of the findings.

In conclusion, this study highlights aspects impacting on the MD use for very old men that can be used to support independence, participation and active ageing. Different experiences and expectations of MD use give implications for professionals and emphasize that each person's unique situation in terms of personal habits, social support and factors within the physical environment should be taken into account. The fact that need and use changed over time highlights the importance for professionals to continually follow up the devices prescribed, even in very old age.

## **Acknowledgements**

This study was financed by the Swedish Research Council and the Ribbing Foundation, Lund, Sweden. It was accomplished within the context of the Centre for Ageing and Supportive Environments (CASE), Lund University, financed by the Swedish Council for Working Life and Social Research. This study was partly based on data from the Swedish part of the project Enabling Autonomy, Participation, and Well-Being in Old Age: The Home Environment as a Determinant for Healthy Ageing, ENABLE-AGE (QLRT-2001-00334), financed by the European Commission. We thank all the consortium and national team members for their contributions. The authors would also like to thank the participants who took part in the interviews.

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Table I. Description of the selection group N=14, according to socio-demographics, environment and health.

Variables	n=11	Three cases		
		Carl	Eric	Fredric
Socio-demographics				
Age, M (SD)	91 (± 2.5)	97	90	90
Education, n (%)				
Basic	8 (73)	Basic		
High	3 (27)		High	High
Environment				
Housing, n (%)				
Multi-dwelling block	7 (64)		Multi-dwelling block	
One-/two-family house	4 (36)	One-/two-family house		One-/two-family house
Users of MDs <sup>1</sup> , n (%)				
Indoor	4 (36)	Yes	Yes	Yes
Outdoor	7 (64)	Yes	Yes	Yes
Health				
Functional limitations <sup>2</sup> , Md (q1-q3)	3 (1-5)	4	4	1
Cognition <sup>3</sup> , Md (q1-q3)*	3 (2-3)	2	3	4
Perceived health <sup>4</sup> , Md (q1-q3)	3 (3-4)	2	3	3
Independence in ADL <sup>5</sup> , Md (q1-q3)*				
P-ADL	5 (5-5)	5	5	5
I-ADL	3.5 (2-4)	2	2	3
Spending time outdoors <sup>6</sup> , n (%)*				
Every day	8		Every day	Every day
Once or twice a week	2	Once or twice a week		

\* one missing

1. MDs include cane and rollator; more than one kind of MDs could be in use per person.
2. Number of functional limitations (27), range 0-13.
3. Number of correct answers on four questions seen as an indication of cognitive dysfunction (29), range 0-4.
4. Perceived health rated on a scale ranging from 1 "poor" to 5 "excellent" (30).
5. Number of ADL performed independently (31); P-ADL range 0-5; I-ADL, range 0-4.
6. Number of men spending time outdoors; a study specific question with response options, every day, once or twice a week, once or twice a month, almost never and never (25).