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ORIGINAL RESEARCH

Loss of driving licence after stroke: The lived experiences of older men

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ABSTRACT

Purpose: The aim of this study was to illuminate the lived experience of older men who stop driving after a stroke and how they adapt to life without driving.

Background: Stroke survivors who cease driving, and men in particular, may experience reduced participation in activities, changes in social roles and increased dependency.

Methods: A phenomenological hermeneutical study with in-depth interviews of six men who have experienced stroke. The data analysis involved a text-interpretation procedure.

Results: Three main themes were identified: (i) driving as an integral part of life and the basis for work and leisure activities; (ii) relief and punishment, representing diverse experiences of driving cessation; and (iii) becoming independent and active without a car - a difficult transition.

Conclusions: Driving cessation can be experienced as an obstacle to the goals of rehabilitation that requires adaptation. The rehabilitation process should include use of public transportation, with the aim of increasing participation in various activities.

Key Words: Driving licence, Activities, Driving cessation, Stroke, Rehabilitation, Phenomenological hermeneutics, Qualitative research

1. INTRODUCTION

Driving is one of the most common forms of transportation in the Western world. The prevalence of car use among the older population is similar to that for the rest of the population if work-related travel is not included.^[1] Driving provides the freedom to participate in different activities at will, including shopping and social events.^[2-5] Men tend to drive more often, for longer distances and for more years than do women.^[1] It is reported that 80% of older men live in a household with access to a car, compared to only 30% of women.^[6,7] Many older persons do not like using public transportation or taxis, and so prefer to drive if they are

able to.^[1] The cessation of driving can be experienced as a harbinger of future impairments and increased dependency.^[6]

Older drivers overall do not represent a greater traffic risk than other drivers, but those with physical and cognitive impairments have a higher frequency of traffic collisions.^[8] Stroke is one cause of such physical and cognitive impairment.^[9] In Norway and other industrialized countries, stroke is the third leading cause of death and the most common cause of disability, and the incidence of stroke increases with age.^[10-12]

Older age, cognitive impairment, vision impairment, a high

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degree of physical impairment and stroke-related epilepsy predict driving cessation following a stroke.^[13] Stroke patients who wish to continue driving are often given a temporarily ban until their skills have been assessed by a general practitioner or specialist.^[9,14-16] Few studies have investigated the prevalence of driving cessation after a stroke, but 19%-30% of stroke patients reportedly resume driving within the first 6 months,^[17,18] and up to 50% have returned to driving by 5 years post-stroke.^[19]

Non-driving stroke survivors experience reduced community integration and activity, and increased dependency compared to their driving counterparts.^[20-22] The negative consequences of driving cessation are reportedly decreased when women have access to extensive social support, but this is not the case for male stroke survivors.^[20] Driving cessation after a stroke is described by patients as a surprising consequence that has a negative connotation for their mental abilities.^[3] Moreover, they reportedly feel unhappy with their lack of participation in the decision-making, and do not believe that the neuropsychological tests they submit to accurately predict their driving ability.^[2,23]

The personal consequences of driving cessation are greater for men than for women.^[20,25] This is due to the associations between identity, self-esteem, and being independent and able to participate in valued activities. Two studies of older men's experiences living with chronic illness, including stroke, found that maintaining traditional masculine roles and tasks is important for both adapting to getting older and the challenges associated with the illness.^[25,26]

The treatment and rehabilitation of stroke requires a multidisciplinary approach,^[27,28] in which nurses are essential from the acute stage through to rehabilitation, in- and outpatient care, and patient follow-up and education.^[9,28] Moreover, the needs of stroke patients change during the illness trajectory, requiring nurses to customize their interventions.^[28,29] At stroke onset the patient is concerned only about surviving, and is reliant on medical specialists to help them recover. Although the initial goal of subsequent rehabilitation is often to return to the prestroke life, the focus shifts over time as patients gradually recognize that it will be difficult to return to their former functional level and that they will need to adapt to a new lifestyle. It is particularly important to understand how older men experience losing their driving licence so that all of the health-care professionals involved in a multidisciplinary approach can actively participate in improving the adaptation process.

Some studies have suggested that the experience of driving cessation has a great impact on the daily lives of affected people, but how older men experience driving cessation after

a stroke is poorly understood. The present study therefore aimed to illuminate the lived experience of driving cessation after a stroke among older men and how they adapt to life without driving.

2. METHODS

2.1 Study design

A good understanding of the lived experience of driving cessation after a stroke among older men crucially requires input from the men themselves, and so we aimed to elucidate the essential meaning as it is lived in human experience. Lindseth and Norberg^[30] stated that "the essential meaning is something with which humans are familiar in the practices of life, and this familiarity has to be expressed through the way of living, through actions, through narratives and through reflection" (p 147).^[30] In phenomenological research, everyday life has to be taken as a point of departure;^[31] it is in the daily life and everyday practical tasks that a stroke and its consequences are experienced. Studies of lived experiences involve interpreting the stories of subjects that have been reported as texts. The interpretation and understanding of such texts have been the central focus within the tradition of hermeneutics represented by Western philosophers such as Hans Georg Gadamer and Paul Ricoeur.

In accordance with Lindseth and Norberg,^[30] the subject matter to be investigated in the present study was the lived experience expressed in the texts, rather than the texts themselves. The experiences of the participants were expressed in narrative in-depth interviews, which were tape-recorded and transcribed. In order to grasp the essential meaning in their stories and thoroughly examine the meaning structure as part of the life world, the stories of the older men needed to be interpreted. Inspired by the theory of interpretation by Ricoeur,^[32] Lindseth and Norberg^[30] developed a phenomenological hermeneutical method for interpreting interview texts. According to Ricoeur,^[32] understanding a text is to follow its movement from sense to reference: from what it says to what it talks about. A reference in a phenomenological study forms the essence of the meaning, rather than standing outside that realm. The phenomenological hermeneutic approach has the advantage of shifting dialectically between understanding and explanation.

The first author has worked as a nurse in a stroke unit for several years and has a broad experience in caring for stroke patients. Over a time period of several years, we (colleagues) have noticed that when confronted with the temporarily suspension of driving after a stroke, male patients in particular frequently experience this as a surprise and consider it to be an unnecessary, additional burden. These reactions are often followed by discussions among colleagues at the unit

involving questions such as “Does a driving licence have different meanings for older men and older women?”, “Is using a car and having the ability to drive more a masculine than a feminine interest and activity?”, and “How will the cessation of driving influence the further rehabilitation process for this person?” It was assumed that there is a gender difference, resulting in us hypothesizing that the car holds a more masculine than feminine value. Moreover, among the Norwegian older generation, men were hypothesized as being more responsible than women for the family’s car and transportation needs, resulting in men finding a driving cessation more problematic. The research literature concerning the topic is scarce, but the assumptions at least partially support a gender difference. Our preunderstanding was thus informed by the experiences from working with stroke patients and a literature review.

Based on the phenomenological starting point (*i.e.* the lived experience), the interviewer in this study focused on moving from a natural attitude to a phenomenological attitude during the interviews. Lindseth and Norberg^[30] referred to Husserl’s^[33] explanation of our natural attitude as all we know about the phenomenon in such a way that the meaning is taken from granted. Inherent in the natural attitude is the attitude to judge. To shift to the phenomenological attitude implies that the interviewer must bracket the natural attitude, not by putting aside the preunderstanding, including since doing so would remove the meaning and essence, but “bracket the judgment about the factual, in order to become open to our own experience and to the understandable meaning implicit in the experience” (p 148).^[30] The experience of the first author functioned as a guide to keeping the phenomenon in focus by being aware and reflecting, asking questions related to examples of the lived experience. With this approach

the interviews in this study provided an opportunity to continually elaborate on the current preunderstanding. By asking non-leading, open questions, and inviting the older men to narrate their experiences, the interviewer and interviewee together freely participated in considering what the essential meaning was.

The QOREC (Criteria for Reporting Qualitative Research) checklist was used in this study to ensure transparency and thorough reporting of the study design and results.^[34]

2.2 Sample and setting

Purposive sampling was employed in this study. According to Patton,^[35] the logic and power of purposive sampling lie in selecting information-rich cases for performing an in-depth study. Information-rich cases are those that provide considerable data related to issues of central importance to the purpose of the study. The first author contacted a national organization for stroke survivors in order to recruit participants. Written information about the study was distributed to leaders in local groups of the organization, who then advertised this study at monthly meetings. Persons who fulfilled the inclusion criteria and expressed a desire to participate contacted the researcher by e-mail, postcard (precompleted) or telephone. The inclusion criteria were male stroke survivors, age ≥ 60 years, living at home, being a car driver before the stroke, having to stop driving due to the consequences of stroke, and able to provide informed consent and participate in an in-depth interview lasting about 60 minutes. The recruitment took place from December 2013 to April 2014. The required sample size was assessed in order to ensure that sufficient data were obtained. The interviews provided rich and varied descriptions, and therefore we considered a sample comprising six men aged 60–75 years to be appropriate (see Table 1).

Table 1. Characteristics of the participants

Participant number	Age (years)	Time since stroke (years)	Living with someone	Residence location	Able to use public transportation independently	Consequences of stroke that impair with driving
1	73	4	Yes	Rural	Yes	Loss of left-side peripheral vision
2	70	6	No	Urban	Yes	Reduced vision and attention
3	68	11	Yes	Urban	No	Reduced attention and physical strength
4	68	10	Yes	Urban	Yes	Reduced attention and physical strength
5	75	10	Yes	Urban	No	Reduced attention and orientation skills
6	60	4	No	Urban	No	Reduced attention and orientation skills

All except one of the interviews took place in the participants’ homes; that single participant was interviewed by videoconferencing due to geographic limitations. Two of the participants requested that their spouses assisted them during the interviews.

2.3 Data collection

A simple interview guide covering the following three themes was developed based on a review of the literature: (i) how the participants experienced the meaning of driving in their lives before the stroke, (ii) what it was like initially after the

stroke to experience a temporarily cessation of driving, and (iii) how they subsequently experienced the final decision about driving cessation and their “new” life without driving. The participants were invited to address these broad themes in their own words, and were also asked to reflect on other aspects of their lives that might influence their situation. The interviewer encouraged the participants to tell their story, and the interviews started with the following open invitation: “I am interested in what it is like to suffer from stroke and to lose your driving licence. Please tell me about your experience”. In an attempt to achieve a phenomenological attitude (i.e. to let the phenomenon to appear to the mind in its meaning structure), the interviewer focused on revealing the meaning of the lived experience and facilitating the interviewee to relate his own lived experience. The interview guide facilitated an unstructured interview that supported the researcher to follow the participant’s lead, to ask clarifying questions and to enable the expression of the participant’s experience with minimal interruptions. Sometimes questions such as “What did you feel?” and “What happened next?” were asked to encourage the participant to reflect on his narrative.

The interviews lasted between 30 and 75 minutes, and were conducted, recorded and transcribed by the first author.

2.4 Ethical considerations

The study was approved by the Norwegian Social Sciences Data Services. All participants were informed both verbally and in written form. Those who agreed to participate signed a consent form. Transcripts of the interviews did not include information that could identify the participants.

2.5 Data analysis

The analyses focused on the experiences of the participants written as text. Interpreting the text involved entering the hermeneutical circle. Drawing on Ricour’s phenomenological hermeneutical theory of interpretation, Lindseth and Norberg^[30] developed three methodological steps that involve building on a dialectic movement between understanding and explanation, as set out below.

The process starts with naïve reading, whereby the interpreter reads the text as a whole in order to grasp its immediate meaning. This step involves moving into the world of phenomenology, allowing the reader to be touched by the narrative. In line with the phenomenological approach, this step should be free from reflection and assessment in trying to understand the meaning as expressed in the interviews – the text should be allowed to speak to readers.^[30]

The second step is a structural analysis directed towards the structure in the text seeking to identify and formulate themes. According to Lindseth and Norberg,^[30] this step involves the methodology of interpretation. In order to identify patterns of meaningful consistency, the whole text (*i.e.* from all of the interviews) was divided into meaning units, each consisting of a text passage of any length that conveys a single meaning. The meaning units were continuously reflected on against the naïve understanding, and they were then condensed by expressing the essential meaning of each unit in everyday words. All of the condensed meaning units were reflected upon to identify their differences and similarities, and subsequently meaning units containing a common content were further condensed and abstracted to form subthemes and finally assembled into main themes. This process is presented in Table 2.

Table 2. Examples illustrating the structural analysis from the comments made by participants that form the subthemes and the subthemes that form the main themes

Meaning unit	Subtheme	Main theme
“They (health-care professionals) told me that I had to accept it. But I told them that I cannot do that. Just cannot. It is troubling my mind”. “If I had been drunk driving I would have accepted it, but I have done nothing wrong. I am just a number in their reports”.	Facing the regulations – a frustrating experience Bad meetings with health-care professionals	Relief and punishment, representing diverse experiences of driving cessation
“When the doctor brought up how the stroke could influence driving I told him immediately that if there is a possibility that I might have a stroke again I will give up driving and sell my car. The doctor supported this decision. And both of my sons thanked me and shook my hand”.	Good meetings with health-care professionals	

All levels of the analysis should reflect understanding of the naïve reading, and thus in this step it was important to reflect on and question whether the themes validated or invalidated the naïve understanding. The considerable experience of the

first author in the stroke field meant that we strove to avoid the risk of the analysis being influenced by his preunderstanding, being aware that some parts of it are subconscious and therefore difficult to reach.^[36] All of the authors worked

closely to validate the meaning contained in the text.

The third and final step of the interpretation is comprehensive understanding. It involves the interpreter re-reading the interview text while considering the results from the naïve reading and the structured analysis. The results can thus be viewed in context and analysed in the light of appropriate theory and research. The preunderstanding of the interpreter can contribute significantly when the results are seen as part of the bigger picture. In line with the recommendations of Lindseth and Norberg,^[30] we strived to communicate the results in everyday language that reflected the situations experienced by the participants as closely as possible.

3. RESULTS

3.1 Naïve reading and structured analysis

The naïve reading revealed that losing the opportunity to drive had led to a heightened awareness of the meaning of driving, indicating that driving appears to be an integrated part of life and a basis for work and leisure activities.

The structured analysis revealed seven subthemes and three main themes, as listed in Table 3 and described in detail in the following sections.

Table 3. Subthemes and main themes

Subthemes	Main themes
The meaning of driving – reflections of former valued activities and work Loss of driving licence – shrugged off or a great impairment	Driving as an integral part of life and a basis for work and leisure activities
Facing the regulations – a frustrating experience Good and bad meetings with health-care professionals From a feeling of loss towards acceptance – a gradually evolving process	Relief and punishment, representing diverse experiences of driving cessation
Creating new and meaningful activities – an important adaptation strategy Good and mediocre solutions for transportation	Becoming independent and active without a car – a difficult transition

3.2 Driving as an integral part of life and a basis for work and leisure activities

3.2.1 *The meaning of driving – reflections of former valued activities and work*

Driving was an integral part of the participants' prestroke history. The participants viewed their car simply as a means of transportation that allowed them to participate in work, leisure activities and holidays. When they talked about their life as drivers, they also provided other information about their prestroke life. Several of the men owned holiday cabins that could only be accessed by driving, which meant that

some of them felt forced to sell the cabins once they were no longer able to drive. Similarly, for some the car had been the only way to get to work, and for others their car was necessary for their work; these participants associated driving cessation with job cessation. Those still working when they suffered a stroke expressed the heavy loss of having to resign from their jobs and still, after several years, missed working life. One said:

While I was working it was always something that had to be done. That's the greatest loss... the whole world has been taken away from me. (Participant 5)

Others were soon to retire and had made plans for their life as a pensioner. No longer being able to drive meant broken dreams and altered plans, for themselves and also their wives, family and friends. In particular, the feeling of being unable to participate in activities outside the home was a source of sorrow and difficult to adapt to:

I miss the opportunity to go out and meet friends at a café to play cards, or just sit and talk. Now I am at home most of the day. (Participant 5)

3.2.2 *Loss of driving licence – shrugged off or a great impairment*

One participant explained that not being allowed to drive did not bother him; his main concerns were making progress, adapting to life and the everyday challenges of the great physical handicaps he suffered as a result of the stroke. Another emphasized his role as a caregiver for his mother and stressed that he could not take her out shopping or for leisure activities. This participant had suffered stroke-induced vision impairment and had himself realized that he could not safely continue to drive. He had received considerable support from his family and friends because he had handed in his driving licence even before the doctor had told him that resuming driving could be a problem:

I remember when I told my two sons, they both thanked me and shook my hand. (Participant 2)

Conversely, one participant fought what he described as a lonely battle to get his driving licence back. His family had advised him to stop thinking about it, which negatively affected his mood and his relationship with them:

...and so my wife and kids said to me: "You have to stop arguing about your licence. Stop wasting time and money." It's affecting my mood. (Participant 1)

Participants who lived with spouses experienced changes in their relationships. Their wives did not let them drive, and one said that his wife would not start the car until he was sitting in the passenger seat with his seatbelt on. He felt that her attitude still made his impairment difficult to handle, even after several years.

3.3 Relief and punishment, representing diverse experiences of driving cessation

3.3.1 Facing the regulations – a frustrating experience

The participants exhibited diverse reactions to the consequences of safe-driving regulations. While one agreed that the safety of others should be considered above his need to drive, another strongly disagreed with the regulations and how they were enforced, stating that he considered them too rigid, with no room for individual assessment or discretion. While the formal assessment and medical tests revealed that this participant had homonymous hemianopia (visual-field loss) on his left side, which would greatly impair driving, he felt that he was still able to drive safely, comparing himself to people who were blind in one eye and yet still allowed to drive. He described a feeling of being convicted without a crime. For the 4 years since his stroke he had attempted to prove that he is a safe driver, participating in driving classes and driver examinations. This was a very stressful and still-ongoing process for him:

You just have to learn to live with it, the doctor said. No, I can't do that, the whole thing drives me out of my mind. You know, I know how to do this and have been allowed to for years. If I had been drunk driving I would have accepted it, but I have done nothing wrong. I am just a number in their reports. (Participant 1)

He disagreed that a hypothetical danger to safe driving should be sufficient to stop him driving, and argued that the licencing agency should assess driving ability based on practical tests, rather than on medical assessments performed by the county administration (*i.e.* chief county medical officer).

3.3.2 Good and bad meetings with health-care professionals

The participants also reported diverse experiences with health-care professionals. For some, the assessment of vision and cognitive function was particularly complicated – challenging the trust between patient and doctor. One participant described the test situation and how the results were communicated to him in an unsympathetic way:

No, I cannot see anything I said, unless I turn my head a little. Yea, I wasn't allowed to

do that. My peripheral vision was about to be tested. Her (the doctor) statements were harsh. And then she said: Your vision to your left side is missing. Do you have a driving licence? I misunderstood her, thinking that she asked: Do you drive a car? No, I use the bus and ferry to get here. I didn't ask you that, she said. I'm asking if you have a car? Do you have a driving licence? Yes, I said. You will have to hand that in immediately. (Participant 1)

Others considered the tests reasonable and understood that they could no longer drive safely due to their lack of attention and impaired concentration. However, they simultaneously felt that very little separated them from safe drivers, but they had gradually accepted that the loss of their licence was a safety precaution.

Several of the participants stated that they first learned about the impact of their stroke on their driving abilities after they were discharged from the hospital and transferred for further rehabilitation. Most found this consequence difficult to handle. However, for one participant it was a relief:

He (the doctor) started to talk about it. Then I said: I feel that my sight isn't good and driving in the sun is the worst thing that I do. If there is a chance to get a seizure and maybe another stroke – I will tell you now that I am handing in my driving licence and selling my car. (Participant 2)

Three of the participants had not been asked to hand in their driving licences even though they had been assessed as unfit to drive. Although none of these participants has driven since the stroke, the possession of a driving licence made them unsure as to the finality of the decision that they could not drive. This was a cause of disagreements with their spouses.

3.4 Becoming independent and active without a car – a difficult transition

3.4.1 From a feeling of loss towards acceptance – a gradually evolving process

All of the participants had made considerable efforts to adapt to the loss of their driving licence. For some the adaptation started when they were told that they were no longer allowed to drive, while for others it was clear that the consequences of their stroke had rendered it impossible to drive. Their adaptation was a gradually evolving process that varied with their individual experiences. One participant who had suffered a stroke 10 years previously said that he had initially considered it a great loss, but had slowly realized that he must

adapt, learn to use public transportation and start searching for new activities:

I argued a lot about it in the beginning. But now it is OK. We just bought a new car and my wife said that I should try it. However, I don't want to. It's almost been a positive thing you know. Previously I did not walk a lot or use the bus. But now I do it all the time. There are a lot of activities available for me in which I have the opportunity to participate. (Participant 4)

Several of the men adopted that attitude of accepting the situation and not thinking about how things could have been. Knowing that other people were in even more difficult situations made it easier for them to accept their own problems.

3.4.2 *Creating new and meaningful activities – an important adaptation strategy*

A central mechanism for coping with the feeling of a sudden loss filling their everyday life with meaningful activities, either by resuming previously valued activities or creating new meaningful activities. One participant really wanted to get back to work, but his employer was not able to give him tasks that he could manage:

Initially I tried to get back to my job. But they didn't want me back. They didn't want the responsibility. So I just sat there with nothing to do. I had to find something... but at least I did! I started my own Internet store. Just a few sales through the year. I'm in there looking for orders every day. (Participant 4).

Some of the men participated in activities organized by public or private physical rehabilitation organizations to pass the time. One municipality supported a group for stroke survivors that met once a month. One of the men who valued such activities highly was sometimes unable to go on the longer trips because he needed an electrical wheelchair and the bus they use did not facilitate this. He felt sorry when being left behind:

You see the others getting picked up by the bus. But you know – they are walking on their feet... and I can't. That is sad. (Participant 3)

3.4.3 *Good and mediocre solutions for transportation*

None of the participants had used public transportation much prior to the stroke, but those who now used it found it good and reasonably priced. Only one of the participants lived in a rural area, and although he described the public transportation as good and versatile, he still felt trapped at home when

he had to stop driving. He missed the easy access, availability, spontaneous visits and the ability to complete several errands on one trip. One participant obtained a licence for a moped after 1 year, which was a radical shift in his life:

It all got easier when I got the moped. Then I don't have to sit and think about how depressing my situation is. (Participant 1)

Two of the participants felt that they were not able to use public transportation by themselves. They could walk without walking aids, but felt that using a bus demanded too much planning and orientation skills. They did not catch buses because they were afraid that they would get lost; their rehabilitation had no focus on using public transportation safely. They both missed the activities that would have been accessible with bus transportation. One participant was very happy driving with others, while another said:

It was a lot of talk about... that you can drive with him or her... But people are working and they don't have the time to drive me when I want them to. (Participant 1)

3.5 Comprehensive understanding

The structural analysis revealed the multitude of meanings constructed by the participants around the experience of driving cessation after having experienced stroke. The naïve reading revealed considerable variations in both the experience of and adaptation to the altered situation. As participants recognized and contemplated their inability to drive, the perceived significance of being able to drive increased substantially compared to the situation prestroke. The structural analysis further nuanced this interpretation by examining how the loss was experienced as both a relief and a punishment, and furthermore illuminated how driving played a fundamental part of everyday-life activities, such as work and leisure. A third theme revealed that the transition itself – adapting to the new situation while remaining independent and active – was both laborious and challenging. When we reconceptualized the text, a common theme expressed by the participants was that the effects of driving cessation are greater when driving forms an integral part of the individual's life – it means more than simply losing the ability to cover the basic needs of transportation.

The naïve reading yielded an intuitive impression of how the participants experienced the loss of their driving licence following stroke. One major impression was the considerable variation in these experiences and adaptations to their altered situation. Another was the modest place the car held in the participants' descriptions of their prestroke life. While none

of the participants considered themselves car enthusiasts, losing the opportunity to drive greatly increased the significance of cars in their lives.

4. DISCUSSION

The negative effects of driving cessation among men cannot be completely offset by an extensive social support network.^[14] All of the participants in this study were only interested in their cars as a means of transportation, but the loss of it greatly affected their life and their roles in it. Their tasks as the driver in the family, caregiver or worker were threatened, and they were left depending on others to participate in activities and having to adapt to this unfamiliar situation. It is important for men facing serious illness to retain their masculine roles and identity, including being a protector and supporter for their family.^[24-26] The participants in the present study found it particularly difficult when they were initially told to cease driving, but over time most of them had accepted that it was something they had to adapt to. Driving cessation can be an obstacle to stroke survivors initially wanting to get back to their prestroke life, and this becomes a symbol of their limitations.^[28,29]

The diverse experiences of the participants regarding driving cessation may reflect their individual stroke-related consequences. The participants with mild-to-moderate stroke had a greater struggle with driving cessation than those with more severe physical handicaps, who perhaps focused more on other physical challenges. Unilateral peripheral vision loss is a particular problem since many patients are not aware of the loss of vision because the brain fills in the missing information; it is often only identified when the patient is tested objectively.^[37]

The participants living with spouses found that they were more protective and concerned about safety after their stroke. The wives of stroke and heart-attack survivors became more vigilant and worried about their husbands, while simultaneously the men suppressed any negative feelings towards their wives.^[38,39]

Neurological and cognitive testing can impair the trust between health-care professionals and patients,^[2,3] as experienced by some of the participants in this study. The physician must allocate time to explain and discuss the outcome of the tests and its consequences for driving in order to establish trust in testing situations. Nurses need to be aware of the potential impact of this acknowledgement, and collaborate with the stroke survivors and their families in constructing coping strategies, preferably early during the rehabilitation process. Health-care professionals should be empathetic towards the circumstances of their patients while simulta-

neously enforcing the safety regulations. Knowledge both about the concerns that patients have regarding driving cessation and how this experience might influence their lives may assist professionals in offering adequate help throughout the recovery process and even beyond the established rehabilitation period.

The various effects of stroke, including on driving cessation, influence each other. Most of the participants had accepted their loss, but some still struggled to participate in valued activities due to transportation problems, even when they have the skills to use public transportation.^[40,41] Activities and social contacts that are lost in the initial phase after a stroke can be difficult to re-establish.^[24] Some of the present participants had made considerable efforts to create and participate in new activities, and understood the importance of meeting other people and engaging in meaningful new activities on an ongoing basis even many years after their stroke.

Little attention has been paid to the importance of public transportation in stroke rehabilitation.^[40,41] This was confirmed in the present study, with the participants who not feeling confident about using buses, presumably in part because the use of public transportation had not been a focus in their rehabilitation. A home-based rehabilitation follow-up could readily focus on the challenges that patients face regarding transportation. Early supported discharge with multidisciplinary rehabilitation is well documented as being beneficial to patients.^[42]

Methodological considerations

Only one of the participants in this study lived in a rural setting, and so the importance of the residence location may have been underestimated. Although public transportation is more readily available in urban areas, many older people still prefer to drive.^[1] The small number of participants included in the present study mean that the results cannot be extrapolated to the entire male stroke population. Furthermore, the participants were aged 60–75 years, and so the experiences of the oldest stroke patients were not obtained. In addition, the participants were recruited by a patient organization, and this may have influenced the results since their decision to be a member of an organization for stroke survivors may reflect their higher motivation.

Previous studies of experiences of driving cessation interviewed patients shortly after they were informed of the test results, while in the present study the participants had been living without a licence for 4–11 years. The post-stroke adaptation to their new life without a car has not previously been described for this population. The wide variations in their background and post-stroke functional impairments,

and their presentations of rich descriptions of their experiences strengthen the study findings.

5. CONCLUSION

This study has shown that driving cessation can be experienced as an obstacle to the goals of rehabilitation that demands adaptation. In terms of improving nursing practice, the findings have revealed a need for increased focus on the transportation needs of older men throughout stroke rehabilitation. Nurses in particular are encouraged to focus on how driving cessation might affect the participation of older men in social, work and leisure activities. We consider that this will help to better prepare both older men and their families to the new challenges and subsequently stimulate the process of adaptation. Nurses represent an essential part of the continuum of care provided to patients, and nurses are uniquely able to inform, educate and support older men in the challenges they experience with driving cessation. Nursing

education on stroke care should include the topic of driving cessation, and students should be encouraged to develop communication skills in order to understand what driving cessation means for the patient as well as his/her family, and how to manage this situation. Rehabilitation teams should encourage older men to participate in both existing and new activities, and focus on how they can adapt to participate fully in them. Rehabilitation should include the use of public transportation, with a focus on increasing patient participation in various activities. The participants in this study had – in different ways and with hard work – gradually found alternative ways to manage their transportation needs. Being unable to drive after a stroke can cause considerable distress, and nurses should acknowledge this distress as one of the important reactions to stroke.

CONFLICTS OF INTEREST DISCLOSURE

The authors declare that they have no conflicts of interest.

REFERENCES

- [1] Hjorthol R, Nordbakke S, Vågane L, *et al.* Eldres mobilitet og velferd - utvikling, reisebehov og tiltak [Mobility and welfare of the older people – development, travel needs and policy formation]. Transportøkonomisk institutt. 2011. <https://www.toi.no/getfile.php?mmfileid=22881>
- [2] Lister R. Loss of ability to drive following a stroke: the early experiences of three elderly people on discharge from hospital. *British Journal of Occupational Therapy.* 1999; 62: 514-520. <http://dx.doi.org/10.1177/030802269906201107>
- [3] Patomella AH, Johansson K, Tham K. Lived experience of driving ability following stroke. *Disability and Rehabilitation.* 2009; 31: 726-733. PMID:18946806. <http://dx.doi.org/10.1080/09638280802306539>
- [4] Robison J, Wiles R, Ellis-Hill C, *et al.* Resuming previously valued activities post-stroke: who or what helps? *Disability and Rehabilitation.* 2009; 31: 1555-1566. PMID:19479573. <http://dx.doi.org/10.1080/09638280802639327>
- [5] Oxley J, Whelan M. It cannot all be about safety: The benefits of prolonged mobility. *Traffic Injury Prevention.* 2008; 9: 367-378. PMID:18696394. <http://dx.doi.org/10.1080/15389580801895285>
- [6] Hjorthol R, Nordbakke S. Bilens betydning for eldre gruppers velferd og livskvalitet, [Impact of the car on the welfare and quality of life of the elderly], TØIRapport 1000/2008. Transportøkonomisk institutt. 2008. Available from: <https://www.toi.no/getfile.php?mmfileid=10634>
- [7] Rosenberg M, Everitt J. Planning for aging populations: inside or outside the walls. *Progress in planning.* 2001; 56(3): 119-168. [http://dx.doi.org/10.1016/S0305-9006\(01\)00014-9](http://dx.doi.org/10.1016/S0305-9006(01)00014-9)
- [8] Moe D, Nordtømme ME, Øvstedal LR. Aktiv og passiv sikkerhet – Studie av høyrisikogrupperne unge og eldre bilførere med forslag til risikoreduserende tiltak, [Active and passive safety - Study of high risk groups: young and elderly drivers with suggestions for risk mitigation] Rapport A15755, SINTEF Teknologi og samfunn 2010. http://www.vegvesen.no/_attachment/202959/binary/393295
- [9] Indredavik B, Salvesen R, Næss H, *et al.* Nasjonal retningslinje for behandling og rehabilitering ved hjerneslag [National Guidelines for treatment and rehabilitation of stroke]. Oslo, Norway: Norwegian Directorate of Health. 2010. <https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/55/IS-1688-Nasjonal-retningslinje-for-behandling-og-rehabilitering-ved-hjerneslag-fullversjon.pdf>
- [10] Feigin VL, Krishnamurthi RV, Parmar P, *et al.* Update on the global burden of ischemic and hemorrhagic stroke in 1990 - 2013: The GBD 2013 study. *Neuroepidemiology.* 2015; 45(3): 161-176. PMID:26505981. <http://dx.doi.org/10.1159/000441085>
- [11] Ellekjær H, Selmer R. Hjerneslag - like mange rammes, men prognosen er bedre [Stroke-similar incidence, better prognosis]. *Tidsskrift for den Norske Lægeforening.* 2007; 127: 740-743.
- [12] Perrier MJ, Korner-Bitensky N, Mayo NE. Patient factors associated with return to driving poststroke: findings from a multicenter cohort study. *Archives of Physical Medicine and Rehabilitation.* 2010; 91(6): 868-873. PMID:20510976. <http://dx.doi.org/10.1016/j.apmr.2010.03.009>
- [13] Truelsen T, Piechowski-Jóźwiak B, Bonita R, *et al.* Stroke incidence and prevalence in Europe: a review of available data. *European Journal of Neurology.* 2006; 13: 581-598. PMID:16796582. <http://dx.doi.org/10.1111/j.1468-1331.2006.01138.x>
- [14] Wright L, Hill KM, Bernhardt J, *et al.* Stroke management: updated recommendations for treatment along the care continuum. *Internal Medicine Journal.* 2012; 42(5): 562-569. <http://dx.doi.org/10.1111/j.1445-5994.2012.02774.x>
- [15] Drivers Medical Group DVLA For medical practitioners. At a glance guide to the current medical standards of fitness to drive. November 2014 edition (including August 2015 and January 2016 amendments). Swansea. www.gov.uk/government/publications/at-a-glance

- [16] Duncan PW, Zorowitz R, Bates B, *et al.* Management of adult stroke rehabilitation care. A Clinical Practice Guideline. *Stroke*. 2005; 36(9): 2049-2056. PMID:16120847.
- [17] Allen ZA, Halbert J, Huang L. Driving assessment and rehabilitation after stroke. *The Medical Journal of Australia*. 2007; 187(10): 599. PMID:18021060.
- [18] Aufman EL, Bland MD, Barco PP, *et al.* Predictors of return to driving after stroke. *American Journal of Physical and Medical Rehabilitation*. 2013; 92: 672-634.
- [19] Fisk GD, Owsley C, Pulley L. Driving following stroke: driving exposure, advice, and evaluations. *Archives of Physical and Medical Rehabilitation*. 1997; 78: 1338-1345. [http://dx.doi.org/10.1016/S0003-9993\(97\)90307-5](http://dx.doi.org/10.1016/S0003-9993(97)90307-5)
- [20] Griffen JA, Rapport LJ, Bryer RC, *et al.* Driving status and community integration after stroke. *Topics in Stroke Rehabilitation*. 2009; 16: 212-221. PMID:19632966. <http://dx.doi.org/10.1310/tsr1603-212>
- [21] Finestone HM, Guo M, O'Hara P, *et al.* Driving and reintegration into the community in patients after stroke. *PM & R: The Journal of Injury, Function and Rehabilitation*. 2010; 2: 497-503. PMID:20630436. <http://dx.doi.org/10.1016/j.pmrj.2010.03.030>
- [22] Finestone HM, Marshall SC, Rozenberg D, *et al.* Differences between poststroke drivers and nondrivers: demographic characteristics, medical status, and transportation use. *American Journal of Physical and Medical Rehabilitation*. 2009; 88: 904-923. PMID:19487920. <http://dx.doi.org/10.1097/PHM.0b013e3181aa001e>
- [23] Whitehead J, Howie L, Lovel R. Older people's experience of driver licence cancellation: a phenomenological study. *Australian Occupational Therapy Journal*. 2006; 53: 173-180. <http://dx.doi.org/10.1111/j.1440-1630.2006.00564.x>
- [24] White J, Miller B, Magin P, *et al.* Access and participation in the community: a prospective qualitative study of driving post-stroke. *Disability and Rehabilitation*. 2012; 34: 831-838. PMID:22035162. <http://dx.doi.org/10.3109/09638288.2011.623754>
- [25] Fleming AA. Older men working it out: a strong face of ageing and disability. [dissertation]. University of Sydney; 2001.
- [26] Fleming AA, Russell C. Older men's narratives of the chaos of stroke. *Journal of Australian Rehabilitation Nursing*. 2004; 7: 8-12.
- [27] Indredavik B, Bakke F, Solberg R, *et al.* Benefit of a stroke unit: a randomized controlled trial. *Stroke*. 1991; 22: 1026-1031. <http://dx.doi.org/10.1161/01.STR.22.8.1026>
- [28] Kirkevold M. The role of nursing in the rehabilitation of stroke survivors: an extended theoretical account. *Advances in Nursing Science*. 2010; 33: E27-40. PMID:20154522. <http://dx.doi.org/10.1097/ANS.0b013e3181cd837f>
- [29] Eilertsen G, Kirkevold M, Bjørk IT. Recovering from a Stroke: A longitudinal, qualitative study of elderly Norwegian women. *Journal of Clinical Nursing*. 2010; 19: 2004-2013. PMID:20920026. <http://dx.doi.org/10.1111/j.1365-2702.2009.03138.x>
- [30] Lindseth A, Nordberg A. A phenomenological hermeneutical method for researching lived experience. *Scandinavian Journal of Caring Science*. 2004; 18: 145-153. PMID:15147477. <http://dx.doi.org/10.1111/j.1471-6712.2004.00258.x>
- [31] Bengtsson, J. *Sammanflätningar. Husserls och Merleau Pontys fenomenologi [Weaving together: Husserl's and Merleau-Ponty's phenomenology]*. Göteborg, Sweden: Daidalos. 1993.
- [32] Ricoeur P. *Interpretation Theory: Discourse and the Surplus of Meaning*. Texas University Press; Fort Worth; 1976. p. 71-88.
- [33] Husserl E. *Introduction to logic and theory of Knowledge*. Edmund Husserl Collected Works, 13 Dordrecht: Springer; 2008.
- [34] Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007; 19(6): 349-357. PMID:17872937. <http://dx.doi.org/10.1093/intqhc/mzm042>
- [35] Patton M. Purposeful sampling. In: *Qualitative research and evaluation methods*. 3rd Ed. Sage Publications Thousand Oaks; California, 2002. p. 230-246.
- [36] Dahlberg K, Drew N, Nyström M. *Reflective Lifeworld Research*. Studentlitteratur, Lund, Sweden. 2001.
- [37] Wilhelmsen GB. *Å se er ikke alltid nok. [Seeing is not always enough]* Oslo: Unipub. 2003.
- [38] Lilleaas UB. Det sterke kjønns sårbarhet. [The vulnerability of the stronger sex]. *Sosiologisk Tidsskrift*. 2006; 14(04): 311-325.
- [39] Green T, King K. Experiences of male patients and wife-caregivers in the first year post-discharge following minor stroke: a descriptive qualitative study. *International Journal of Nursing Studies*. 2009; 46: 1194-1200. PMID:19303597. <http://dx.doi.org/10.1016/j.ijnurstu.2009.02.008>
- [40] Logan PA, Dyas J, Gladman JRF. Using an interview study of transport use by people who have had a stroke to inform rehabilitation. *Clinical Rehabilitation*. 2004; 18: 703-708. <http://dx.doi.org/10.1191/0269215504cr742oa>
- [41] Barnsley L, McCluskey A, Middleton S. What people say about travelling outdoors after their stroke: a qualitative study. *Australian Occupational Therapy Journal*. 2012; 59: 71-78. PMID:22272885. <http://dx.doi.org/10.1111/j.1440-1630.2011.00935.x>
- [42] Fearon P, Langhorne P. Early supported discharge trialists. Services for reducing duration of hospital care for acute stroke patients. *Cochrane Database Systematic Review (Online)*. 2012; (9): CD000443.