

Title:

Road safety of older drivers and the nursing profession: A scoping review

Abstract

Background: Population aging will lead to an increase in the number of older drivers. The aging process can affect older adults' driving ability. Nurses can play a major role in identifying potentially at-risk drivers and providing guidance about driving safety and cessation, but their role remains somewhat unknown.

Objective: This scoping review aims to present the scientific literature in relation to the nursing profession in the field of road safety.

Design: CINAHL and PubMed databases were used to identify quantitative, qualitative, mixed methods or clinical practice guideline articles that referred to the role of nurses in older people's road safety and were published in English or French languages between January 1990 and August 2020. Ten (10) articles met the inclusion criteria and were analyzed.

Results: Analysis of included articles revealed one main theme: *Nurses' and NPs' roles in the mobility continuum*. Results showed that nurses and nurse practitioners (NPs) often see older drivers in their clinical practice and that they have the competencies to screen and assess their fitness to drive. They are well-positioned to discuss age-related changes, fitness to drive and a driving retirement plan with their older patients, but they are not confident when addressing this issue. Few older adults have discussed their driving abilities with healthcare professionals, but they would be willing to discuss this if the subject were brought up.

Conclusions: This scoping review highlighted the paucity of research addressing the role of the nurse in road safety. More research is needed to adequately document this role.

Keywords

Mobility

Instrumental activities of daily living

Preventive healthcare

Driving competencies

Nursing care

Older adult care

Implications for practice

What does this research add to existing knowledge in gerontology?

- Older drivers place a high value on the nurse's advice and guidance. Therefore, it is important for nurses to discuss this topic with their older patients.
- Older people are not prepared for driving cessation. However, the consequences associated with the loss of a driver's license for older people are well-known.

What are the implications of this new knowledge for nursing care with older people?

- In their work, nurses and nurse practitioners already assess their clients about the parameters related to driving ability. They therefore have the skills to determine their older patients' driving risk.
- The therapeutic and trusting relationship that nurses establish with their patients allows them to approach the delicate subject of driving with older drivers, in a non-threatening manner.
- Nurses can play a leading role in road safety by identifying, assessing and supporting older drivers.

How could the findings be used to influence policy, practice, research or education?

- The nurse's role in road safety is not well-known to the profession. The topic of road safety should be addressed in the nursing education curriculum.
- Little research has been done on the topic of driving and nursing. Thus, more research is needed on the nurses' role in road safety.

Main text

Introduction

Population aging is a global demographic trend that will intensify in the coming years. According to the World Health Organization (2020), the proportion of the world's population over the age of 60 will double between 2000 and 2050. By 2050, one person out of six will be aged 65 and over (16%), compared to one in eleven in 2019 (9%). The number of people aged 80 and over is also expected to triple, going from 143 million in 2019 to 426 million in 2050 (United Nations, 2020). This increase in society's age is inevitably accompanied by an increase in the number of older individuals who wish to maintain their driving privilege. As an example, it is expected that one out of every four licensed drivers will be an older adult by 2050 in the United States (American Geriatrics Society & Pomidor, 2019). Similar trends are observed in Canada (Turcotte, 2012).

Overall, older drivers have a lower injury accident rate than all drivers, but they have a higher accident rate per kilometer driven (Wiese & Wolff, 2016), especially among the drivers who drive low distances, yearly. This phenomenon has been coined as *the low mileage bias* (Langford, Methorst, & Hakamies-Blomqvist, 2006). They are also more likely to be fatally injured in an accident (Singletary et al., 2017), due in part to their physical fragility, which makes them more vulnerable to injury in a collision (Langford et al., 2008; Mitchell, 2013), and subsequently die from this crash, due to potential frailty. On the other hand, research has clearly shown that, despite being associated with the advancement in age itself, it is more the various health conditions that are associated with aging that are linked with increased risk factors for being involved in motor vehicle collisions (Dickerson, Meuel, Ridenour, & Cooper, 2014; Turcotte, 2012). Advancing age is associated with an increase in the presence of health problems that may affect the driving ability of older persons, such as dementia, stroke, or macular degeneration (Dickerson et al., 2014; Dobbs, Carr, & Morris, 2002; Langford et al., 2008; Turcotte, 2012; Wiese & Wolff, 2016).

Moreover, an automobile is, for a certain group of older citizens or in particular areas, the only available and viable means of transportation. People aged 65 to 74 years are more likely to live in rural areas where public transportation is scarce, or non-existent (Turcotte, 2012). In addition, the inability to drive a car may mean that some older persons are also unable to use public transit services, due to the disabilities or the health conditions that caused them to lose their driver's license in the first place. Thus, the challenge is to understand how and when to identify at-risk older drivers without limiting the mobility of those who are safe (Betz, Jones, Petroff, & Schwartz, 2013).

Healthcare professionals play a key role in identifying potentially at-risk drivers and providing guidance about driving safety and cessation, if necessary (Betz, Scott, Jones, & Diguseppi, 2016). Even though, as part of their practice, healthcare professionals are regularly in contact with older drivers, driving evaluation and its importance might be unintentionally left out (Dow & Jacques, 2012). First, their close and regular contact with older drivers allows them to evaluate their health and their fitness to drive over time, and potentially identify drivers who may be at risk in terms of their ability to drive. In addition, they are trusted by patients and families, which makes it easier for them to discuss the delicate subject of driving with older people (Betz et al., 2013). Nurses are one of these professionals. For example, registered nurses can judge a person's fitness to drive in certain provinces of Canada, such as Quebec, Ontario, British Columbia, and Saskatchewan. Despite the legal authority to do so, the nurse is rarely included in the discussions surrounding older persons' road safety (Johnson, J. E., 2000). Because of their skills in assessing physical and mental condition of a person, nurses are well positioned to do the driving assessment to identify the at-risk older drivers. In primary care, registered nurses are crucial to the team's achievement of health promotion, initiating conversations regarding unsafe driving practices and early detection of at-risk older patients (Johnson, J. E., 2000; Wiese & Wolff, 2016). Nurses' holistic approach is characterized by accompanying the older person, and providing emotional support and assistance with the changes and adaptations that the assessment process entails. Their disease prevention and health promotion roles allow them to accompany and follow up with older persons and their families in the process of assessment and possible loss of their driver's license, and

also in the process of decision-making regarding safety and transportation. In today's healthcare environment, they are among the primary caregivers for older people (Johnson, J. E., 2000). Moreover, little is known about the role of nurses in road safety, both by all healthcare professionals and even within the nursing profession. For these reasons, the objective of this scoping review is to present a global portrait of the scientific literature regarding the nursing profession in the field of road safety, to systematically map the research done in this field and identify potential existing gaps in knowledge.

Methods

This literature review was developed in the form of a scoping review of the research evidence. This type of review aims to identify, summarize, analyze, and critique a body of literature on a topic to draw certain conclusions (Cronin, Ryan, & Coughlan, 2008). It can be useful for seeking new study areas that have not yet been addressed, and for highlighting the significance of new research (Cronin et al., 2008; Ferrari, 2015). The review is presented in accordance with the preferred Reporting Items for Systematic reviews and Meta-analysis extension for Scoping Reviews (PRISMA-ScR) Checklist.

The search strategy was determined by the first author and an experienced librarian. In August 2020, a comprehensive search strategy was undertaken in the CINAHL and PubMed databases using search terms built upon three concepts: Nurse, senior, and driving. For the search in PubMed, the terms were comprised of Medical Subject Headings (MeSH) and free text words. For the search in CINAHL, MeSH terms were replaced with a combination of text words. Using the two logical operators 'AND' and 'OR', Boolean logic was applied to ensure that the search focused on the specific key terms. See Appendix 1 for the full CINAHL search strategy and a detailed search narrative.

The inclusion criteria were: (a) Research studies referring to the role of nurses in older people's road safety; (b) Published in English or French languages; (c) Published between January 1990 and August 2020 and (d) quantitative, qualitative, mixed methods or clinical practice guideline articles. The literature search was cross-referenced with references of the included studies. Records retrieved that did not meet these criteria were excluded.

Due to the nature of data gathered in the identified papers, a data charting process and a list of data items were not requested. The first author performed an initial sorting of the articles, to only keep those meeting the inclusion criteria. Subsequently, two of the authors worked in pairs and have evaluated titles, abstracts, and then full texts of all potentially relevant publications. The remaining articles were summarized according to the following information: Year, country, study design, populations, and aims, along with the type of data collection used and main findings. The findings from each paper were then extracted by two of the authors for summary and comparison purposes. Data were subject to a narrative synthesis with the findings presented as a narrative summary organized into themes. In relation to our scoping review aim, information (when available) regarding the nursing profession in the field of road safety were extracted. Commonalities and patterns in the extracted data were identified and presented below.

Results

A flow chart of the literature search is presented in Figure 1, showing the study selection process based on PRISMA (Moher, Liberati, Tetzlaff, & Altman, 2009). Some 693 articles were retrieved by the first author and a librarian technician from the initial database search once all the duplicates were removed (n=46). The title and abstract of these articles were screened by the first author against inclusion criteria, and 680 articles were then rejected. The remaining 13 articles were read by 2 of the authors to assess their relevance to answer the main objective. Further 3 articles were removed based on content, meaning that they didn't meet the research objective. No more studies were identified by examining the reference list of full-text articles.

[Figure 1. Flow chart of the literature search based on PRISMA.](#)

In the end, a total of 10 articles met the inclusion criteria. The included studies are summarized in Table 1, in which results are described by the study's place of origin, aim, design, sample sizes, main findings and methodological quality appraisal (Appendix 2). The 10 included studies were published between 1998 and 2016. All the retrieved studies

originated from the United States. These articles mostly include qualitative studies and clinical practice guideline articles. Sample sizes varied greatly, ranging from 8 to 75 participants (mean: 52,6). Participants were clinicians (nurses, nurse practitioners, physicians, social workers, etc.) or older drivers. In qualitative studies, data were collected via interviews or through focus groups. Three (3) articles are more specifically about the role of the nurse or nurse practitioner in older drivers' road safety (Arms, 2016; Johnson, J. E., 1998, 2000). Other articles are more general and focus on healthcare professionals, including the nursing profession, and their role with older drivers (Betz, Jones, & Carr, 2015; Betz et al., 2013). Some articles are intended for nurses, to inform them and raise their awareness about the age-related physiological changes and health conditions affecting driving performance in older adults (Brown, 2006; Johnson, E. E., 2003; Snyder, 2005; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). Finally, two different critical methodological quality appraisal tools were used to assess the methodological quality of the selected articles: 1) the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018) and 2) the JBI Critical Appraisal Checklist for Text and Opinion Papers (McArthur et al., 2015). It was possible to carry out the methodological quality assessment only for two articles using the MMAT, as presented in Appendix 2. These two articles met 100% of the methodological quality criteria qualitative designs, meaning these are high quality qualitative articles. The other three qualitative articles don't have any research questions. Thus, further appraisal cannot be done using the MMAT. The remaining five articles are clinical practice guideline articles, so the JBI Critical Appraisal Checklist for Text and Opinion Papers was used. Based on the aforementioned checklist, all the five articles were included in this scoping review.

Following the analysis, comparison, and discussion of these articles, results were grouped according to one main theme: Nurses' and NPs' roles in the mobility continuum. Four sub-themes are presented within the main theme, namely 1) Nurses' and NPs' role in screening and assessing older drivers, 2) Nurses' and NPs' role in counselling older drivers, 3) Barriers to discussing older drivers' safety, and 4) Older adults' perceptions on mobility continuum.

Nurses' and NPs' roles in the mobility continuum

The selected articles made it possible to discuss the role of the nurse in the mobility continuum of older drivers. First, it seems that nurses and NPs have a role in screening and assessing older drivers, as well as a role in counselling them. However, some barriers to discussing older drivers' safety emerged from the selected articles. Finally, some articles included older drivers' participation to get their perception on the mobility continuum. All these elements will be discussed more in details in the following sub-themes.

Nurses' and NPs' role in screening and assessing older drivers

Nurses can play a key role in screening and assessing older drivers. In their clinical practice, nurses and nurse practitioners see older adults who are still driving at least once a week, or more (Arms, 2016). Findings in Johnson, J. E. (1998)'s study revealed that 38% of the nurse participants assessed their older clients for factors related to driving abilities. Indeed, nurses and NPs were already assessing their clients regarding vision, hearing, reflexes and mental status, parameters that are all related to driving ability. These parameters were all assessed due to a concern arising from the patient's complaints other than their driving ability. Even more conclusive results were obtained in Johnson, J. E. (2000)'s study about nurse practitioners. 72% of NPs reported assessing their older clients for factors related to driving ability. However, as for the results obtained in 1998, the reasons behind these clinical evaluations did not have as primary purpose the evaluation of one's ability to drive.

In the study by Arms (2016), NPs reported 6 major assessment categories and circumstances that trigger them to assess their older clients' driving ability: 1) Assessing older drivers' mental status, 2) identifying changes in physical status, 3) hearing concerns from family members, 4) evaluating medications, 5) retrieving driving information and 6) assessing drug and alcohol abuse. Some authors wrote articles related to this, to inform and raise nurses' and NPs' awareness about the age-related physiological changes and health conditions affecting the driving performance of older adults (Brown, 2006; Johnson, E. E., 2003; Snyder, 2005; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). First, some "warning signs" or "red flags" were highlighted by the authors as being helpful to

the nurse in identifying at-risk older drivers (Brown, 2006; Johnson, E. E., 2003; Snyder, 2005; Towner & Yanochko-Horsley, 2007). Nurses and NPs can screen these red flags during interviews with their clients and family. For example, some red flags that were highlighted are medical history and health conditions, using drugs and medication, previous vehicle accidents or driving incidents, the concern of family or relatives, and recent traffic tickets. Authors mentioned that nurses and NPs can screen for potential at-risk older drivers. This step is important for nurses to identify older drivers that may be at higher risk, and therefore would benefit from a driving evaluation or tailored recommendations (Wiese & Wolff, 2016).

Three main areas emerged from the studies for assessing older adults' ability to drive. These are cognition, vision/hearing, and motor assessment (Brown, 2006; Johnson, E. E., 2003; Towner & Yanochko-Horsley, 2007). Older drivers must be able to properly operate the vehicle, understand signs and road rules and remember their destination and how to get there, all at the same time (Towner & Yanochko-Horsley, 2007). Cognition assessment must include executive function, attention, concentration, memory, cognitive flexibility, and hazard perception (Snyder, 2005; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). Visual assessment is also important, because the ability to see clearly is essential to safe driving. Visual acuity, visual fields and contrast sensitivity can be assessed (Brown, 2006; Towner & Yanochko-Horsley, 2007). Driving requires motor abilities, to turn the wheel, look over one's shoulder, and move between the gas and brake pedals (Brown, 2006; Johnson, E. E., 2003). The motor assessment can include muscle strength, coordination, endurance, and balance, as well as range of motion of legs, arms, and neck (Brown, 2006; Johnson, E. E., 2003; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). In addition to their role in screening and assessing, nurses and NPs can play a key role in counselling older drivers on the risks and benefits of driving and on a driving cessation plan.

Nurses' and NPs' role in counselling older drivers

Concerns about the older adult's safety were evident for nurses and NPs. 58% of nurses in Johnson, J. E. (1998)'s study said that they were concerned about their older client's

driving safety. Results showed that they were using strategies to broach the topic of driving with their clients (Arms, 2016; Johnson, J. E., 1998). Some said that they were using therapeutic communication and an empathetic approach to initiate a nonthreatening conversation about safe driving with their older clients (Arms, 2016; Johnson, J. E., 1998). Others expressed their concerns about the older adult's driving safety or presented objective exam data to support this discussion (Arms, 2016; Johnson, J. E., 1998). NPs reported that the most helpful intervention to manage the safety of older drivers was to involve family members (Arms, 2016).

Other articles reported that the nursing profession was well-positioned to inform older adults about age-related changes and the influence that these might have on driving. Nurses and NPs can enhance the older drivers' awareness of their health problems (Towner & Yanochko-Horsley, 2007) and initiate the conversation about the declining driving skills associated with these conditions (Wiese & Wolff, 2016). They can discuss the risks and/or the benefits to continue driving with their older clients and relatives (Snyder, 2005). Finally, they can explore alternative modes of transportation and carefully plan for driving cessation, when necessary (Johnson, E. E., 2003; Towner & Yanochko-Horsley, 2007). Indeed, providing alternatives to driving can reduce the potential isolation and depression associated with driving cessation, and will positively influence older people to look at alternatives and stop driving (Brown, 2006). Conversations were less emotionally charged for older persons when they focused on prevention and happened before driving concerns arise (Betz et al., 2013).

Barriers to discussing older drivers' safety

Despite being proactive assessing components that are associated with driving abilities, few nurses reported speaking about their concerns with their clients regarding their ability to drive safely (Johnson, J. E., 1998, 2000). Similar results were observed with nurse practitioners (Johnson, J. E., 2000). Various factors were raised by nurses as barriers to discussing the topic of driving with their older patients. They identified a lack of skills or confidence to perform a complete client assessment (Johnson, J. E., 1998), while nurse practitioners reported feeling confident about their assessment skills (Johnson, J. E., 2000).

However, both reported a lack of communication skills and confidence to discuss the difficult topic surrounding driving cessation (Johnson, J. E., 1998). Especially in rural areas, the availability of public transportation impacted the willingness of nurses and NPs to assess their older driver patients, being afraid that a negative evaluation would lead them to a loss of mobility (Arms, 2016; Johnson, J. E., 1998). They are sometimes aware that public transportation does not exist, and that this older driver has no family or friends to assist in travel needs. They are therefore more reluctant to intervene with these older persons, afraid of the potential for isolation, loneliness, and inaccessibility of essential services. Indeed, social workers have been identified in one study as a key resource in driving discussions, because they were most informed about the options for driving assessment and alternative transportation (Betz et al., 2015). In Johnson, J. E. (2000)'s studies, NPs reported a lack of time as an obstacle to talking with older clients about driving. They usually only have 15 to 20 minutes with their clients, which is a rather short time to talk about this subject in addition to the main health problem that is present and for which the patient initially consulted. Some NPs said that discussing driving safety with their older clients was not part of their role (Johnson, J. E., 2000). As Snyder (2005) said, breaking the trust relationship and taking the risk to potentially lose a patient at the time that they may need medical care, are ethical dilemmas that nurses and NPs must face.

These factors were the same for nurses and for other healthcare professionals, such as physicians and social workers. They identified the negative reactions from patients as a barrier to discussing driving issues (Betz et al., 2013). Clinicians also reported time constraints and the uncertainty about local transportation options as an additional barrier (Betz et al., 2015; Betz et al., 2013). Adding driving assessment to a routine visit was difficult because they do not have enough time to discuss this subject in addition to initial complaints. Betz et al. (2015) reported that physicians were identified as leaders for driving discussions, with support from other staff. Otherwise, physicians mentioned that they did not receive adequate training on the topic of older driver assessment and counselling.

Older adults' perceptions on mobility continuum

Some articles included in this review recruited older drivers. Older adults were hesitant to initiate the conversation about driving abilities because it was a sensitive subject for them (Johnson, J. E., 1998). Moreover, they did not want to alert their nurse or nurse practitioner to a potential problem that might otherwise go unnoticed (Johnson, J. E., 1998, 2000). If nurses did not initiate the discussion about driving issues and capacities, some older persons may have perceived it as unimportant (Johnson, J. E., 1998). Findings show that 68% of older people had not discussed driving cessation with any healthcare provider, including nurses (Johnson, J. E., 1998). Older adults identified barriers to discuss driving with clinicians, including time constraints and limited transportation options. They also said that they did not want to be a burden for their family members (Betz et al., 2013). However, they were willing to discuss it when the subject was raised by the nurse. Indeed, some older people spoke about their driving abilities with a nurse or NP. These older persons said that the information and recommendations from the nurse were important to them. Similar results were obtained with NPs (Johnson, J. E., 2000).

Discussion

In this scoping review, we identified 10 studies regarding the nursing profession in the field of road safety, published between 1990 and 2020. First, the results showed that the screening of risk factors and the assessment of the physical and mental condition of people was an activity performed by nurses and NPs as part of their work, in which the assessment of the ability to drive is included. Beyond the evaluation, the results also showed that nurses could play a leading role, particularly in road safety, through prevention and support in driving cessation. On the other hand, some issues emerged and hindered the full occupation of their role. Finally, few older drivers discussed the topic of road safety with a nurse or an healthcare professional, despite their openness to do so.

More precisely, our findings showed that nurses and NPs can vigilantly screen and assess older patient's driving ability, as they are frequently in contact with this clientele. Furthermore, this scoping review showed that nurses and NPs were doing clinical assessment in their work, such as vision, hearing and physical assessment. Their clinical assessment is all related to driving ability and can be used in the typical determination of

one's ability and capacity to drive safely. Indeed, assessment of the physiological and mental condition signs and symptoms of a stable and unstable condition is part of a nurse's activity (Canadian Association of Schools of Nursing, 2015). Nurse practitioners are also allowed to participate in the assessment of a person's state of health (Canadian Association of Schools of Nursing, 2012). Traditionally viewed as part of the doctor's role, physical and mental assessment is now an integral part of the nursing practice (Lesa & Dixon, 2007). In the same way, risk factors have been raised in some articles as potentially informing and raising the awareness of nurses and NPs about potentially at-risk older drivers (Arms, 2016; Brown, 2006; Johnson, E. E., 2003; Snyder, 2005; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). Indeed, the identification of risk factors, commonly called "red flags", aims to identify older drivers who could be at risk of dangerous driving. Several researchers have addressed these risk factors (Joseph et al., 2014; LeRoy & Morse, 2008; Molnar et al., 2013; Rudisill, Zhu, Kelley, Pilkerton, & Rudisill, 2016; Scott et al., 2017; Wheatley & Di Stefano, 2008). The most common factors that are reported by nurses and NPs are medical conditions, medications that could potentially impair driving, changes in driving habits or avoidance of driving situations, history of falls in the last year, driving incident or traffic tickets in the past two years, and older adult driver's or caregiver's concerns. For this purpose, the presence of several risk factors should be accompanied by closer monitoring of the older driver. All these red flags can easily be spotted by the nurses or NPs in numerous clinical settings.

This scoping review also highlighted the fact that nurses are concerned about their older patients' safety and fitness to drive. They used some strategies to address the sensitive topic of driving, such as therapeutic communications or empathetic approach. On this topic, nurses are well-positioned to discuss age-related changes with their older patients, the eventual decline of driving skills associated with these changes, and a plan to retire from driving (Johnson, J. E., 2000; Snyder, 2005; Towner & Yanochko-Horsley, 2007; Wiese & Wolff, 2016). Some authors suggest talking with older patients about driving early in the aging process, so the discussion can be focused on prevention and can be done before driving concerns arise leading to the person's driver's license, and hence their right to drive, being abruptly removed (Betz et al., 2013). Other research has focused on the

experiences of older drivers and their families in the driving assessment and cessation continuum. Researchers point out the importance of talking early in the aging process about the possibility of losing one's driver's license (Arms, 2016; Liddle, Reaston, Pachana, Mitchell, & Gustafsson, 2014). Liddle, Turpin, Carlson, and McKenna (2008) suggest that it is more difficult for older people to accept the driving cessation when they have not had the opportunity to change their transportation habits or to adjust their lives before driving retirement. Finding new means of transportation to get around and maintain their lifestyle was fundamental to the older persons' acceptance of driving retirement (Liddle et al., 2008). Finally, Levasseur et al. (2014) have developed an awareness tool to foster and maintain the mobility of older drivers through safe driving (OSCAR). This tool directly leads older people to question the changes that may have occurred because of aging that have been shown to be related to safe driving. Therefore, older drivers can modify their driving habits and behavior and can realize the impact of aging on their driving capacity, on their own. It can help older drivers to be aware of their capacity and have an easier time accepting driving cessation when the moment has come to do so. A similar tool (OSCARPA) has been developed for caregivers, family members and relatives (Vigeant et al., 2017).

This scoping review also highlighted the difficulties encountered by nurses and NPs when discussing the subject of fitness to drive with their older patients (Arms, 2016; Betz et al., 2015; Johnson, J. E., 1998, 2000; Snyder, 2005). Various factors were raised by nurses and NPs as barriers. Moreover, Johnson, J. E. (1998) suggests the inclusion of health assessment and communications courses in the basic nursing curriculum. This review also showed that there were similarities between the barriers reported by health professionals and older drivers. Indeed, two studies included in this scoping review recruited healthcare professionals, such as physicians, physician's assistants, medical assistants, social workers, and administrative staff (Betz et al., 2015; Betz et al., 2013). These healthcare professionals reported the same factors as nurses and NPs, such as lack of time, lack of training on assessing and counselling older drivers, lack of local transportation options other than driving, and the fear of negative reactions from older adults. Other researchers have addressed these elements (Brooks et al., 2011; Jang et al., 2007; Novak, McGee, & Curry,

2012; Woolnough et al., 2013). Despite the legal responsibility of nurses and other healthcare professionals in driving screening and assessment, little reliable scientific data is available on which they can base their decision during the assessment (Woolnough et al., 2013). Few professionals are trained and confident in assessing whether an older adult is at risk (Brooks et al., 2011; Jang et al., 2007). Indeed, although professionals recognize that the assessment of fitness to drive is a central element in geriatric evaluation, their lack of expertise in this area leads them to immediately refer older adults to legal authorities (Novak et al., 2012). Moreover, several authors have pointed out the absence of objective clinical assessment tools or clinical practice guidelines available to healthcare professionals to help them determine whether an older person can drive safely and to enable them to conduct a standardized screening, assessment and follow-up process (Dickerson et al., 2017; MacDonald & Hebert, 2010; Novak et al., 2012; Sims, Rouse-Watson, Schattner, Beveridge, & Jones, 2012; Wiese & Wolff, 2016). Other researchers argue that healthcare professionals need to be sensitized and prepared for the emotional reactions of patients and family members to the recommendation to cease driving (Byszewski, Molnar, & Aminzadeh, 2010).

Finally, studies included in this review showed that few older adults have talked about driving issues and capacities with healthcare professionals, possibly because healthcare professionals do not feel sufficiently trained to bring up the topic. They also identified barriers that prevent them from raising such an important issue such as lack of time, limited transportation options, and fear of being a burden for their family. Older adults mentioned that the nurse's recommendations were important to them, arguing that older persons are receptive to the nurse's role in road safety.

Considering the results of this scoping review, an open dialogue aimed specifically at the safety and the autonomy of older drivers should be prioritized. Based on this scoping review, we suggest including the topic of road safety in the nursing education curriculum. We believe that including the topic of driving in the initial and continuing education of nurses is the first step in enabling them to fully occupy their role in this regard and to feel comfortable in their role. Educational, research and health institutions should all mobilize

themselves to provide education for this purpose. This scoping review highlighted the paucity of research addressing the role of the nurse in road safety. More research on this topic is needed and it would contribute to the deployment of the nurse's role in this field of practice and to the demonstration of the nurse's unique contribution in road safety. Based on this review, policies relating to the nurse's role in road safety should be adjusted to allow their greater professional autonomy. Finally, we believe that it is essential to question ourselves as a society on the offer of other means of transport than the car, and on the accessibility of those other means of transport (Government of Canada, 2019). As demonstrated in this review, the limited options in terms of means of transport represent a major issue that must be addressed with the aging of population.

Limitations

This scoping review has some limitations. Half of the reviewed articles were clinical practice guideline articles. The other half used qualitative methodology with rather small sample sizes. Even if methodological quality was assessed in the articles, the results of this scoping review should be critically analyzed before being applied. While revealing rich data, the findings of this scoping review cannot be generalized. It was restricted to papers published in English and French, and excluded papers in other languages, which may have limited access to certain crucial insights. Finally, only 3 of the 10 articles interviewed nurses or NPs about their role in road safety. All 3 studies were conducted in the United States. Two (2) of the 3 articles were published over 20 years ago. This raises the need for more research on this topic in the future.

Conclusion

This scoping review delivers an overview of the scientific literature related to the nursing profession in the area of road safety. It highlights the important role that nurses can play with older drivers. To fulfill this role to their full potential and capacities, nurses need to be more aware of the effects of aging and disease on the ability to drive. They also need training to be adequately prepared to screen and assess older drivers. Further research on this topic is thus needed.

References

- American Geriatrics Society, & Pomidor, A. (2019). *Clinician's Guide to Assessing and Counseling Older Drivers*. Retrieved from <https://geriatricscareonline.org/ProductAbstract/clinicians-guide-to-assessing-and-counseling-older-drivers-4th-edition/B047>
- Arms, T. (2016). The NPs Role of Assessing and Intervening with Older Adult Drivers. *Nurs Res Pract*, 2016, 3254857. doi:10.1155/2016/3254857
- Betz, M. E., Jones, J., & Carr, D. B. (2015). System facilitators and barriers to discussing older driver safety in primary care settings. *Injury Prevention*, 21(4), 231-237. doi:10.1136/injuryprev-2014-041450
- Betz, M. E., Jones, J., Petroff, E., & Schwartz, R. (2013). "I wish we could normalize driving health:" a qualitative study of clinician discussions with older drivers. *J Gen Intern Med*, 28(12), 1573-1580. doi:10.1007/s11606-013-2498-x
- Betz, M. E., Scott, K., Jones, J., & Diguisseppi, C. (2016). "Are you still driving?" Metasynthesis of patient preferences for communication with health care providers. *Traffic Inj Prev*, 17(4), 367-373. doi:10.1080/15389588.2015.1101078
- Brooks, J. O., Dickerson, A., Crisler, M. C., Logan, W. C., Beeco, R. W., & Witte, J. C. (2011). Physician knowledge, assessment, and reporting of older driver fitness. *Occup Ther Health Care*, 25(4), 213-224. doi:10.3109/07380577.2011.607227
- Brown, L. H. (2006). Senior drivers: risks, interventions, and safety. *Nurse Practitioner*, 31(3), 38-49. doi:10.1097/00006205-200603000-00011
- Byszewski, A. M., Molnar, F. J., & Aminzadeh, F. (2010). The impact of disclosure of unfitness to drive in persons with newly diagnosed dementia: patient and caregiver perspectives. *Clinical Gerontologist*, 33(2), 152-163. doi:10.1080/07317110903552198
- Canadian Association of Schools of Nursing. (2012). *Nurse Practitioner Education in Canada – National Framework of Guiding Principles and Essential Components*. Retrieved from <https://casn.ca/wp-content/uploads/2014/12/FINALNPFrameworkEN20130131.pdf>
- Canadian Association of Schools of Nursing. (2015). *Practice Domain for Baccalaureate Nursing Education: Guidelines for Clinical Placements and Simulation*. Retrieved from <https://www.casn.ca/wp-content/uploads/2018/07/FINAL-clinical-sim-2015-revised-nov-2016.pdf>
- Cronin, P., Ryan, F., & Coughlan, M. (2008). Undertaking a literature review: a step-by-step approach. *British Journal of Nursing*, 17(1), 38-43. doi:10.12968/bjon.2008.17.1.28059
- Dickerson, A. E., Meuel, D. B., Ridenour, C. D., & Cooper, K. (2014). Assessment tools predicting fitness to drive in older adults: a systematic review. *Am J Occup Ther*, 68(6), 670-680. doi :10.5014/ajot.2014.011833
- Dickerson, A. E., Molnar, L., Bedard, M., Eby, D. W., Classen, S., & Polgar, J. (2017). Transportation and Aging- An Updated Research Agenda for Advancing Safe Mobility. *J Appl Gerontol*, 1(19). doi:10.1177/0733464817739154
- Dobbs, B. M., Carr, D. B., & Morris, J. C. (2002). Evaluation and management of the driver with dementia. *Neurologist*, 8(2), 61-70. doi:10.1097/00127893-200203000-00001

- Dow, J., & Jacques, A. (2012). Educating doctors on evaluation of fitness to drive: impact of a case-based workshop. *Journal of Continuing Education in the Health Professions*, 32(1), 68-73. doi:10.1002/chp.21124
- Ferrari, R. (2015). Writing narrative style literature reviews. *Medical Writing*, 24(4), 230-235. doi:10.1179/2047480615z.000000000329
- Government of Canada. (2019). *Achieving a Sustainable Future: A Federal Sustainable Development Strategy for Canada 2019 to 2022*. Gatineau, Canada Retrieved from <https://www.fsds-sfdd.ca/en/goals>
- Hong, Q. N., Pluye, P., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.-P., Griffiths, F., Nicolau, B., O’Cathain, A., Rousseau, M.-C., & Vedel, I. (2018). *Mixed Methods Appraisal tool (MMAT)*. <http://mixedmethodsappraisaltoolpublic.pbworks.com/w/page/24607821/FrontPage>
- Jang, R. W., Man-Son-Hing, M., Molnar, F. J., Hogan, D. B., Marshall, S. C., Auger, J., . . . Naglie, G. (2007). Family physicians' attitudes and practices regarding assessments of medical fitness to drive in older persons. *J Gen Intern Med*, 22(4), 531-543. doi:10.1007/s11606-006-0043-x
- Johnson, E. E. (2003). Transportation mobility and older drivers. *J Gerontol Nurs*, 29(4), 34-41. doi:10.3928/0098-9134-20030401-09
- Johnson, J. E. (1998). Nursing assessment of older rural drivers. *J Community Health Nurs*, 15(4), 217-224. doi:10.1207/s15327655jchn1504_3
- Johnson, J. E. (2000). Assessment of older urban drivers by nurse practitioners. *J Community Health Nurs*, 17(2), 107-114. doi:10.1207/S15327655JCHN1702_5
- Joseph, P. G., O'Donnell, M. J., Teo, K. K., Gao, P., Anderson, C., Probstfield, J. L., . . . Yusuf, S. (2014). The mini-mental state examination, clinical factors, and motor vehicle crash risk. *J Am Geriatr Soc*, 62(8), 1419-1426. doi:10.1111/jgs.12936
- Langford, J., Braitman, K., Charlton, J., Eberhard, J., O'Neill, D., Staplin, L., & Stutts, J. (2008). TRB Workshop 2007: Licensing authorities' options for managing older driver safety--practical advice from the researchers. *Traffic Inj Prev*, 9(4), 278-281. doi:10.1080/15389580801895210
- Langford, J., Methorst, R., & Hakamies-Blomqvist, L. (2006). Older drivers do not have a high crash risk-a replication of low mileage bias. *Accid Anal Prev*, 38(3), 574-578. doi:10.1016/j.aap.2005.12.002
- LeRoy, A. A., & Morse, M. L. (2008). *Multiple Medications and Vehicule Crashes: analysis of databases*. Retrieved from <https://rosap.ntl.bts.gov/view/dot/1836>
- Lesa, R., & Dixon, A. (2007). Physical assessment: implications for nurse educators and nursing practice. *International Nursing Review*, 54(2), 166-172. doi:10.1111/j.1466-7657.2007.00536.x
- Levasseur, M., Audet, T., Gélinas, I., Bédard, M., Langlais, M.-E., Therrien, F.-H., . . . D'Amours, M. (2014). Development and Validation of an Awareness Tool for Safe and Responsible Driving (OSCAR). *Journal of Scientific Research & Reports*, 3(18), 2422-2433. doi: [10.9734/JSRR/2014/12261](https://doi.org/10.9734/JSRR/2014/12261)
- Liddle, J., Reaston, T., Pachana, N., Mitchell, G., & Gustafsson, L. (2014). Is planning for driving cessation critical for the well-being and lifestyle of older drivers? *Int Psychogeriatr*, 26(7), 1111-1120. doi:10.1017/s104161021400060x

- Liddle, J., Turpin, M., Carlson, G., & McKenna, K. (2008). The Needs and Experiences Related to Driving Cessation for Older People. *The British Journal of Occupational Therapy*, 71(9), 379-388. doi:10.1177/030802260807100905
- MacDonald, N., & Hebert, P. C. (2010). Driving retirement program for seniors: long overdue. *CMAJ*, 182(7), 645. doi:10.1503/cmaj.100273
- McArthur, A., Klugarova, J., Yan, H., & Florescu, S. (2015). Innovations in the systematic review of text and opinion. *Int J Evid Based Healthc*, 13(3), 188-195. doi: 10.1097/XEB.0000000000000060
- Mitchell, C. G. B. (2013). The licensing and safety of older drivers in Britain. *Accident Analysis and Prevention*, 50(C), 732-741. doi:10.1016/j.aap.2012.06.027
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. *PLoS Med*, 6(7), e1000097. doi:10.1371/journal.pmed.1000097
- Molnar, L. J., Charlton, J. L., Eby, D. W., Bogard, S. E., Langford, J., Koppel, S., . . . Manson-Hing, M. (2013). Self-regulation of driving by older adults: Comparison of self-report and objective driving data. *Transportation Research Part F: Traffic Psychology and Behaviour*, 20, 29-38. doi:http://doi.org/10.1016/j.trf.2013.05.001
- Novak, J., McGee, C., & Curry, K. (2012). Older Adults and Driving: NP Role in Assessment and Management. *American Journal for Nurse Practitioners*, 16(1/2), 26-32.
- Rudisill, T. M., Zhu, M., Kelley, G. A., Pilkerton, C., & Rudisill, B. R. (2016). Medication use and the risk of motor vehicle collisions among licensed drivers: A systematic review. *Accid Anal Prev*, 96, 255-270. doi:10.1016/j.aap.2016.08.001
- Scott, K. A., Rogers, E., Betz, M. E., Hoffecker, L., Li, G., & DiGuseppi, C. (2017). Associations Between Falls and Driving Outcomes in Older Adults: Systematic Review and Meta-Analysis. *J Am Geriatr Soc*, 65(12), 2596-2602. doi:10.1111/jgs.15047
- Sims, J., Rouse-Watson, S., Schattner, P., Beveridge, A., & Jones, K. M. (2012). To Drive or Not to Drive: Assessment Dilemmas for GPs. *Int J Family Med*, 2012, 417512. doi:10.1155/2012/417512
- Singletary, B. A., Do, A. N., Donnelly, J. P., Huisinigh, C., Mefford, M. T., Modi, R., . . . McGwin, G. (2017). Self-reported vs state-recorded motor vehicle collisions among older community dwelling individuals. *Accid Anal Prev*, 101, 22-27. doi:10.1016/j.aap.2017.01.021
- Snyder, C. H. (2005). Dementia and driving: autonomy versus safety. *J Am Acad Nurse Pract*, 17(10), 393-402. doi:10.1111/j.1745-7599.2005.00070.x
- Towner, B., & Yanochko-Horsley, P. (2007). Nurse practitioner role in safe senior mobility. *Journal for Nurse Practitioners*, 3(2), 91-96. doi:10.1016/j.nurpra.2006.10.004
- Turcotte, M. (2012). Profil des habitudes liées au transport chez les aînés. *Tendances sociales canadiennes - Statistique Canada*, 1-18. Retrieved from <https://www150.statcan.gc.ca/n1/fr/pub/11-008-x/2012001/article/11619-fra.pdf?st=eYZaPGF3>
- United Nations. (2020). Ageing. Retrieved from <https://www.un.org/en/sections/issues-depth/ageing/index.html>

- Vigeant, A., Arseneault-Legault, M., Boily, R., Buchanan, S., Carosella, J. F., & Levasseur, M. (2017). Outil de sensibilisation des proches à la conduite automobile des aînés. *Canadian Journal on Aging, 36*(3), 328-341. doi:10.1017/S0714980817000174
- Wheatley, C. J., & Di Stefano, M. (2008). Individualized assessment of driving fitness for older individuals with health, disability, and age-related concerns. *Traffic Inj Prev, 9*(4), 320-327. doi:10.1080/15389580801895269
- Wiese, L. K., & Wolff, L. (2016). Supporting Safety in the Older Adult Driver: A Public Health Nursing Opportunity. *Public Health Nursing, 33*(5), 460-471. doi:10.1111/phn.12274
- Woolnough, A., Salim, D., Marshall, S. C., Weegar, K., Porter, M. M., Rapoport, M. J., . . . Vrkljan, B. (2013). Determining the validity of the AMA guide: A historical cohort analysis of the assessment of driving related skills and crash rate among older drivers. *Accid Anal Prev, 61*, 311-316. doi:10.1016/j.aap.2013.03.020
- World Health Organization. (2020). Ageing and Life Course. Retrieved from <https://www.who.int/ageing/about/facts/fr/>

Appendix 1

Search Strategy Documentation

This strategy was developed in CINAHL and translated to the PubMed database. The literature search was performed in August 2020.

S1 nurse or nurses
S2 (older* OR senior* OR elder*)
S3 (driver* OR driving)
S4 S1 AND S2 AND S3

Appendix 2

Table 1. Articles included in the review.

Author, date, country, and title	Study aim	Study design and sample sizes	Main findings	Methodological quality (based on the criteria from the Mixed Methods Appraisal tool (MMAT) (Hong et al., 2018) and the JBI Critical Appraisal Checklist for Text and Opinion Papers (McArthur et al., 2015))
Johnson J.E. (1998), United States, Nursing Assessment of Older Rural Drivers	1) Explore the perceptions of rural nurses regarding their role in assessing the driving abilities of rural elders and 2) Describe the nurse's influence on rural elders' decision to stop driving.	Qualitative: semi-structured interviews. Sample: 50 rural nurses (mean age: 43,4 years old) and 75 rural elders (mean age: 83,6 years old)	38% of the nurses assessed their older clients for factors related to driving abilities, 58% had concerns about their older clients' driving safety and 22% spoke with the client regarding these concerns. Many nurses felt a lack of confidence in saying anything to the older adult. Among the older persons, 68% had not discussed driving cessation with any healthcare provider, including nurses. Of the remaining older persons, 71% had discussed their driving abilities with a nurse. These older adults revealed that what the nurse said was important to them.	This article doesn't mention any research questions. Further appraisal cannot be done using the MMAT.

<p>Johnson J.E. (2000), United States, Assessment of Older Urban Drivers by Nurse Practitioners</p>	<p>1) Explore the perceptions of NPs regarding their role in assessing the driving abilities of their older urban clients, 2) Describe the ways in which NPs assist older urban adults to cope with the loss of a driver's license and 3) Delineate the NP's influence on the urban elders' decision to forfeit a driver's license.</p>	<p>Qualitative: semi-structured interviews. Sample: 25 urban NPs (mean age: 44,3 years old) and 35 older clients who had forfeited a driver's license (mean age: 81,2 years old)</p>	<p>72% of the NPs assessed their older clients for factors related to driving ability and 84% had some concerns about their client's capacity to continue driving. 48% of the NPs spoke with their clients about their concerns, but only 36% recommended that they forfeit their driver's license. Most NPs routinely assessed their older clients for parameters related to driving safety. The main obstacles that NPs raised for not discussing road safety with their clients were lack of time, lack of training to do so, and feeling that it was not part of their role. Among the older persons, 48% had discussed their driving abilities with their NPs. 34% of the older participants indicated that their NP had recommended they forfeit their license and 58% of these persons said that what the NP said was important to them.</p>	<p>This article doesn't mention any research questions. Further appraisal cannot be done using the MMAT.</p>
<p>Johnson E.E. (2003), United States, Transportation Mobility and Older Drivers</p>	<p>Examine the age-related physiological changes and health conditions affecting older adult driving performance. Older adult driving behavior and guidelines for</p>	<p>Clinical practice guideline article Sample: NA</p>	<p>Conditions that affect driving ability: Age-related physiological changes, health conditions, drug use and older driving behavior. What nurses can do to decrease risk while maintaining transportation mobility: Initiate a discussion about driving with their older clients, review driving behavior, review current</p>	<p>Based on the JBI Critical Appraisal Checklist for Text and Opinion Papers, the overall appraisal was included, because 'Yes' was answered for the six questions of the checklist.</p>

	decreasing risk while maintaining transportation mobility are also discussed.		medications, refer clients with specific conditions (vision, cognition) to multidisciplinary specialized teams, refer clients to driver improvement courses and counsel them to modify their driving.	
Snyder (2005), United States, Dementia and Driving: Autonomy Versus Safety	1) Review the effects of various types of dementia on driving skills, the available assessment measures, legal considerations, and the important role played by the nurse practitioner (NP) in the process of recommending driving cessation and 2) Provide strategies and resources that may offer guidance to NPs who are attempting to balance the continued independence of patients with dementia, as represented by driving, with the safety not only of such patients, but	Clinical practice guideline article Sample: NA	Different types of dementia (Alzheimer's Disease, frontotemporal dementia, dementia with Lewy bodies, etc.) are discussed. Different assessment of driving competency for these types of older people are presented, such as neuropsychological testing, on-road testing and driving simulation. Other data can help to determine driving competency, such as patient history, driving history, functional assessment of activities of daily living, mental status examination and neurological examination. Some strategies to achieve driving cessation are proposed: Start discussing the eventuality of driving cessation as early as possible, honest communication, discussion based on objective findings, gradual approach, suggest alternative transportation. Finally, ethical and legal considerations for the NPs are discussed.	Based on the JBI Critical Appraisal Checklist for Text and Opinion Papers, the overall appraisal was included, because 'Yes' was answered for the six questions of the checklist.

	also of the general public.			
Brown (2006), United States, Senior Drivers: Risks, Interventions, and Safety	Help nurse practitioners to recognize the obstacles faced by older drivers and help implement measures that will maintain independence and promote safety.	Clinical practice guideline article Sample: NA	Medical indicators that are reported as being found to increase crash incidents: Cataracts, history of falls over the previous 2 years, gait and balance problems, neurological disease, limited ability to ambulate, history of back pain, limited neck rotation, memory impairment with poor recall, poor performance drawing intersecting pentagons, dementia, compromised ability to recognize road signs, and some medications. It proposes to begin the assessment by collecting medical history, current medications, discussing functional limitations and previous accidents as well as traffic tickets. The assessment includes vision, physical and neurological examination. NPs must use an approach in maintaining older driver's fitness to drive with the use of health promotion options (ex: provide alternatives to driving, reduce potential isolation, provide refresher courses).	Based on the JBI Critical Appraisal Checklist for Text and Opinion Papers, the overall appraisal was included, because 'Yes' was answered for the six questions of the checklist.
Towner & Yanocho-Horsley (2007),	Present an overview of the online module <i>A Safe Senior Mobility Plan</i> .	Clinical practice guideline article Sample: NA	Presentation of the Safe Senior Mobility Plan and NPs' role in this plan. The 7 steps of the Safe Senior Mobility Plan are presented: 1) Be familiar with older	Based on the JBI Critical Appraisal Checklist for Text and Opinion Papers, the overall appraisal was

United States Nurse Practitioner Role in Safe Senior Mobility			driver statistics, 2) Observe senior patients, 3) Early prevention (anticipatory guidance, sensitive communication, self-evaluation), 4) Screening for functional driving ability (patient history, visual assessment, cognitive assessment, motor assessment), 5) Referral to community resources, 6) Driver retirement and alternative transportation and 7) Follow Department of Motor Vehicle regulations for healthcare providers.	included, because ‘Yes’ was answered for the six questions of the checklist.
Betz et al. (2013), United States, “I Wish We Could Normalize Driving Health:” A Qualitative Study of Clinician Discussions with Older Drivers	Explore the topic of advance mobility planning and identify barriers and facilitating factors to driving discussions between older drivers and their providers, including a potential role for Advance Driving Directives (ADDs).	Qualitative descriptive: Interviews and focus group Sample: 33 older drivers (mean age: 80 years old) and 8 clinicians (physicians, physician assistants, nurse practitioners) (mean age: 43,5 years old)	Clinicians and drivers avoid discussing driving until specific concerns arise. They both said that routine questions about driving or anticipatory guidance about mobility changes would be useful. Many drivers said their clinicians do not know if they currently drive or not. Many clinicians reported they do not routinely ask about driving. They identified barriers to not discuss driving issues, such as time constraints, negative reactions from patients, competing priorities and uncertainty about local transportation options or reporting requirements.	5***** (100% quality criteria met)
Betz et al. (2015), United States,	Explore key stakeholder-perceived system-level factors affecting	Qualitative descriptive: Semi-structured interviews.	Healthcare professionals recognized that they have a role to play in discussing driving with patients, but that this is not a role that they enjoy. Physicians were	5***** (100% quality criteria met)

<p>System facilitators and barriers to discussing older driver safety in primary care settings</p>	<p>driving discussions in primary care settings to inform the design and implementation of a program supporting routine conversations.</p>	<p>Sample: 10 physicians, 1 physician's assistant, 2 nurses, 1 medical assistant, 1 social worker, and 1 front-desk administrative staff (mean age: 40 years old)</p>	<p>identified as the leaders for discussions about driving, with support from others. Clinicians identified barriers to not discuss driving issues, such as time constraints, multiple competing priorities, and inadequate access to social workers and support staff. Clinicians said that they did not receive adequate training on the topic of older driver assessment and counselling.</p>	
<p>Arms (2016), United States, The NPs Role of Assessing and Intervening with Older Adult Drivers</p>	<p>1) Determine current practice of the NPs' assessment of and intervention strategies with older adult drivers in Southeastern North Carolina, 2) Assess the NPs' knowledge deficits in assessing the safe driving capability of the older adults and 3) Assess NPs' current knowledge of resources available for older adult</p>	<p>Qualitative: interviews Sample: 21 NPs (mean age: 48,3 years old)</p>	<p>95% of the NPs reported that they see older adults who are still driving at least once a week or more often in clinical practice settings. 90% NPs involved family members in discussions about driving safety. Six (6) elements of driver behavior prompted NPs to consider performing an evaluation for driving safety: 1) Changes in physical status, 2) Changes in mental status, 3) Concerns from family members, 4) Medications, 5) Driving information (self-report of impaired driving or accident) and 6) Drug and alcohol abuse. NPs used therapeutic communication to initiate a nonthreatening conversation about driving safety and to express</p>	<p>This article doesn't mention any research questions. Further appraisal cannot be done using the MMAT.</p>

	drivers and their families.		<p>concern about the older adult’s driving safety.</p> <p>NPs used strategies to increase safety in older adults, such as involving family members, using therapeutic communication, referring patients to occupational/physical therapy, and using a step approach to driving termination.</p>	
Wiese & Wolff (2016), United States Supporting Safety in the Older Adult Driver: A Public Health Nursing Opportunity	Increase nurses’ awareness of the cognitive factors inhibiting effective driving, recognition of older adults who may be at risk for unsafe driving, and facilitating a patient/family to seek a driving evaluation.	Clinical practice guideline article Sample: NA	<p>Information is provided to increase nurses’ awareness of the cognitive factors inhibiting effective driving, recognition of older adults who may be at risk for unsafe driving and facilitating a patient/family to seek a driving evaluation. Cognitive skills needed in driving are: Executive function, attention, cognitive flexibility, and hazard perception. Visual acuity, speed in processing visual information, visual perception and visuospatial and visuomotor skills are needed to drive safely.</p> <p>Nurses are well-positioned to support patients in maintaining independence, initiating a conversation about declining driving skills, do the driving assessment (health history, vision and hearing screening, review of medications, physical examination, cognitive</p>	Based on the JBI Critical Appraisal Checklist for Text and Opinion Papers, the overall appraisal was included, because ‘Yes’ was answered for the six questions of the checklist.

			assessment) and counseling older adults about driving cessation.	
--	--	--	--	--