Are there alternatives to scrutinising elderly drivers?

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Abstract

As a pre-requisite to continue driving at a certain age, several EU member states impose regular health checks or fitness-to-drive screenings. In Austria, where no age limits exist for drivers, the KFV (Austrian Road Safety Board) has developed voluntary risk competence trainings for elderly motorists. It is the first time that risk competence – an approach that originates from the field of drug prevention among adolescents – is used to improve road safety for the group of the elderly. Instructors are selected following the peer-to-peer education principle and receive special training. The goal is to encourage critical self-assessment in the light of gradual loss of cognitive and motoric skills and/or focus on enhancing individual strengths and compensation strategies. The training was piloted with 300 workshops and 3,000 participants in the time period between 2011 and 2013.

The paper introduces the theoretical background and evaluation of the trainings and provides practical insights into the methods and tools applied.

Keywords: elderly road users; fitness to drive; driving performance; risk competence.

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Abstrait

Comme prérequis pour continuer à conduire à un certain âge, plusieurs États membres de l’Union Européenne imposent des contrôles de santé réguliers ou des tests pratiques d’aptitude à la conduite. En Autriche, où aucune limite d’âge n’existe pour les conducteurs, la Kuratorium für Verkehrssicherheit, KFV (Conseil de la sécurité routière autrichienne) a développé des formations sur la capacité à évaluer les risques de la conduite routière de manière volontaire pour les automobilistes âgés. C’est la première fois que la capacité à évaluer les risques - une approche qui provient du domaine de la prévention de la toxicomanie chez les adolescents - est utilisée pour améliorer la sécurité routière pour les personnes âgées. Les instructeurs sont choisis selon le principe de l'éducation par les pairs et reçoivent une formation spéciale. L’objectif est d’encourager l’auto-évaluation critique de la perte progressive des capacités cognitives et motrices et se concentrer sur l'amélioration des forces individuelles et les stratégies de compensation. La formation a été mis à l’essai avec 300 ateliers et 3,000 participants dans la période entre 2011 et 2013.

Le document présente le contexte théorique et l'évaluation des formations. De plus, il fournit des informations pratiques sur les méthodes et les outils utilisés.

Mots-clés: les conducteurs âgés; capacité physique à conduire ; qualité de la conduite routière ; capacité à évaluer les risques.
Introduction

The risk competence training for elderly motorists, called “bewusst.sicher.werkstatt. – Verkehrskompetenz für SeniorInnen” is an initiative of the KFV (Austrian Road Safety Board) for drivers 65+. It is a four-hour workshop with six to twelve participants and a trained instructor who meets the peer-to-peer education principle.

Motoric, sensory and cognitive abilities decrease with age. However, it is important to acknowledge that ageing is an individual process that progresses differently from person to person, making the elderly population a very heterogeneous group. Increased insecurities and anxieties while driving may contribute to an increased risk of accidents. Moreover, they limit the mobility of the elderly population, which significantly impacts self-sufficiency. The decreased mobility, increased risk of accidents and demographic changes established a need for action and led to the development of this risk competence training. The workshop is based on prevention, pro-actively recognising and meeting the risks and hazards of participating in traffic. The focus is on a controlled and self-conscious approach toward risks (meaning the outcome of a situation is not pre-determined and the actions of a person have an influence on it) and hazards (hazards exist independently of individual actions and cannot be influenced by a person) based on the driver’s personal resources and strengths.

By the end of 2013, approximately 3,000 individuals had attended the trainings across Austria. An evaluation was carried out for quality control and to ensure sustainable success. The results suggest that the workshops were very well received by participants and that self-assessment and self-reported driving behaviour have improved in a sustainable manner.

1. Background

Statistics show that by 2030, every third driver will be over the age of 60. This fact has led to EU road safety policies that allow member states to choose among three options: (1) drivers of a certain age and under certain conditions have to participate in compulsory tests; (2) drivers 50+ have to submit to regular health checks or refresher courses; and (3) no compulsory measures. Austria decided against compulsory measures and KFV developed the risk competence training as an voluntary measure to meet the desire and necessity of the elderly population to continue participating in road traffic despite limited public transportation in rural areas.

2. Approach

The risk competence training, tailored to the target audience of senior citizens, uses the principles of continued education for adults. The goal is to strengthen perception, assessment and decision making. Participants work on their ability to perceive and recognise risks, their cognitive and emotional ability to adequately assess the situation and, finally, to make responsible decisions in order to avoid damage. Currently applied compensation strategies are emphasised, possible mistakes are discussed and individual recommendations are made for participants.

The workshops are recommended for elderly drivers who want to increase their driving safety by increasing their personal strengths. In contrast to existing prevention approaches, the goal is not to eliminate risk or perform mandatory medical examinations or performance tests, but to increase risk awareness and dealing with risky situations consciously and deliberately.

Risk competence (see Fig. 1.) is built on three pillars, which provide the theoretical basis for the workshops: (1) perception – ability to perceive and differentiate between risks and hazards; (2) assessment – the ability to take a moment to adequately assess the situation, and (3) decision making – the ability to take responsibility for one self as well as social responsibility to make sound decisions and avoid damage.
2.1. Target audience 65+

Based on the proven assumption that motoric, sensory and cognitive skills decrease with age, KFV recommends the training for drivers 65+. The success of the training increases significantly when working with drivers that are still actively participating in traffic and are only experiencing the first signs of age-related changes. The focus is on active drivers who are eager to identify and promote their personal strengths. During the workshop, participants collaborate on working out an adequate strategy to deal with risks and hazards. The level of knowledge is increased through an exchange of experiences among participants and additional information provided by the instructor. Even younger participants who are particularly interested in this topic and want to refresh their knowledge and competences are welcome to take part because driving competence is not based solely on age but more so on personal health.

Self-efficacy is a fundamental motivator for participants – the feeling of having no power to change anything is not a good motivation to try. Nor do changes that seem coincidental lead to continued active engagement. Participants need to realise that they can independently solve problems in order to experience self-efficacy as students. For that reason, workshop exercises stress improvement strategies as solutions that participants can actively apply themselves. Technology in form of appliances such as navigation systems, self-parking systems etc. represent easy solutions. Instructors try to encourage participants to get past their initial dislike of technological devices and suggest involving grand children in becoming more familiar with them. Often, once elderly people get past the initial hurdle, they realise that they have no problem using these devices, which can open up many more opportunities for them.

3. The workshop – tools and methods

It seems obvious that changes that come with age affect driving capabilities. However, directing the focus toward using resources such as increased faculty of judgment and precision offers a great compensation strategy. To use this efficiently, it is important to identify:

- What are your strengths?
- How do you leverage them?
- What are the consequences of appropriate or inappropriate reactions when faced with risk?
- What is the connection between personality and risk behaviours?
- How do the human senses function?
- What influences response time and capability to correctly assess hazards?
- What options and methods exist to improve accuracy of assessments and risk avoidance?

In the discussion of these points, the potential of the entire group will be leveraged to motivate learning processes and ensure success.
3.1. Workshop structure

The workshop, designed for 6-12 participants, utilises experienced instructors who fit the peer-to-peer principle. Focused on active participation, the workshop also promotes small discussion groups, individual work and interactive video analysis to keep participants motivated and actively involved. The goal is to stay self-reflective and relevant.

There are five parts to the workshop:

- Part 1 – Becoming aware of personal changes.
- Part 2 – Promoting risk competence through special exercises in perception, assessment and decision making (using the specifically designed competence survey as a guideline).
- Part 3 – Learning compensation strategies.
- Part 4 – Assessing hazards by analysing traditional sources of hazards in traffic (using specifically developed video clips).
- Part 5 – Using resources motivates participants to be self-reflective. General recommendations are also provided.

At the end of the workshop, participants fill in the competence survey that is later evaluated at KFV. Recommendations based on the individual results are sent to participants individually after the workshop.

3.2. Instructors

Ten trained instructors were utilised for the pilot workshops. The particular functions of the trainers were as follows:

- Lead participants through workshop, ask questions, lead discussions, encourage analytical thinking, without digressing.
- Listen to participants and show empathy, which fosters a trusting relationship to help them develop the relevant competences.
- Play into the participants’ strengths instead of their weaknesses and deficiencies.
- Use the toolbox provided for the workshop.
- Work jointly with participants on learning strategies and processes.

The purpose of the instructor is to support participants in their self-directed studies in the areas of perception, assessment and decision making. The following points were particularly important in the development of the workshops:

- Relate to real-life experiences
- Work off of existing knowledge and capabilities
- Provide meaningful context
- Provide a learning environment free of pressure
- Present a voluntary path forward
- Repeat key words
- Adjust speed to the level of the participants
- Recognise participants’ skills and capabilities

3.3. Workshop materials

The workshop is focused on practical demonstrations rather than abstract theories. That decreases the gap between personal experiences and lesson plans. Simple exercises help to decrease anxieties and provide a concrete connection to individual experiences. This allows participants to apply what they learned to real life situations. The following considerations are particularly important:

- Contents of the workshop are useful and applicable immediately.
- Exercises are easy to solve.
- Encourage active participation: questions are a good indication that the information was understood.
- Ask participants directly for confirmation that they understood the presented information.
- Visualise and verbalise content: information presented by the instructor or provided by participants should be recorded on flip charts (key words or simple graphics). This benefits all participants, enabling them to better process the information.
- Simple and straight-forward presentation of content: instead of PowerPoint presentations, instructors use ready-made flip charts.
The manual for the instructors offers all the necessary information and provides a guideline. The first part of the manual – basics – provides some background information about the purpose of the workshop as well as scientific insights. The second part represents the actual workshop, including recommendations on how to present the five parts of the workshop. The third part offers an overview of all the materials that are provided to the instructors in a specifically designed tool kit (flip charts, games, videos, workbooks and writing utensils).

3.4. Competence survey

The competence survey, developed based on KFV’s extensive experience as well as literature on the topic, represents the core of the workshop and builds on the three pillars of risk competence (Fig. 1). The pillars are further broken down into the following topics: (1) perception – seeing, hearing, mobility, (2) assessment – self-perception, estimating speed and distance, memory; and (3) decision making – reaction rate, decision making process, coordinated movements. Every topic is further broken down into specific attributes like driving at night as part of seeing. Participants answer each statement on a scale of strongly agree, agree, disagree, strongly disagree. The results allow for conclusions about strengths and weaknesses for their active traffic participation. With that as a basis, existing competences are emphasized and recommendations and compensation strategies are offered.

3.5. Recommendations to participants

General recommendations were based on research findings about maintaining active traffic participation of elderly drivers (Bourauel, 2000).

- Informational event: refresh familiarity with traffic signs
- Brain jogging: concrete exercises to increase concentration and reaction rate
- Gymnastics: concrete exercises to increase fitness and flexibility
- Relaxation: concrete exercises to increase relaxation and allow for calm concentration
- Vision and hearing tests: to identify a potential need for compensation devices such as glasses or hearing aids to ensure best possible visual and acoustic perception
- Special driving lesson: presents an opportunity to ask specific questions and practice day-to-day situations
- Track training: presents an opportunity to analyse reaction rate and behaviour in extreme situations

4. Evaluation

The workshop was evaluated in three parts:

- Standardised feedback questionnaire for participants at the end of the workshop
- Telephone survey before and after the workshop to collect information about expectations, experiences and application of compensation strategies
- Additional telephone survey 12-18 months after the workshop to draw conclusions about sustainability.

Additionally, there was an opportunity for open discussion (including feedback, recommendations, etc) among instructors and participants during a closing meeting for lessons learned during the pilot phase. 60 workshops were evaluated between April and September 2012. A total of 638 elderly drivers participated, breaking down to 59 percent female and 41 percent male.

4.1. Results

The results of the workshop evaluation were very positive. More than 90% of workshop participants scored the workshop as very good. The results of the telephone survey also confirm the success of the workshops as an acceptable alternative to performance tests. Participants report being encouraged to critically deal with the topic of driving at a certain age and staying motivated to continue dealing with it. They also indicated recommending the workshop to others. The importance of the topic in terms of safety was also effectively communicated according to participant feedback. Moreover, the follow-up surveys 12-18 months later confirmed the initial feedback, leading us to believe that this is a sustainable approach. The survey results (Fig. 2) reflect the contributions the workshop has made according to participants.
The self-assessment of driving behaviours indicates that elderly drivers noticed changes after participating in the workshop, particularly in their application of compensation strategies and awareness of changes/self-reflection:

- 18% increase in awareness that driving has become more exhausting.
- 17% increase in awareness of their decreased reaction rate.
- 11% increase in recognition of side effects from medications as safety-relevant influences.
- 10% increase in awareness about changes to road safety regulations.
- 10% increase in use of technical devices.
- 8% increase in preparation before trips.
- 7% increase in avoidance of driving in adverse weather conditions.
- 7% more drivers are less likely to let themselves be rushed.
- 6% increase in likeliness to take regular breaks.

Instructors reported feeling well prepared and comfortable with their ability to present the workshop in an interesting and easy-to-understand manner. All surveyed instructors agreed that a majority of participants was actively engaged during the workshop. They estimated that 80% of participants will be able to meaningfully integrate what they learned in their daily lives.

4.2. Motivation for participation, expectations, fears

Most participants learned about the workshop through organisations for senior citizens as well as relatives and friends. They stated interest in new regulations, general interest and encouragement through their social circle as reasons for participation. They expected to learn about new road traffic regulations. A majority indicated that they had no fears connected to the workshops. A few admitted to worrying about losing their license or not meeting personal needs.

4.3. General recommendations for improvements

Based on the workshops that took place during the pilot phase, participants gave the following recommendations for improvements:

- Preceding the workshop, put more emphasis on communicating to participants that this will not be a test of their performance and instead a training that will be advantageous to them.
- More information on the topic of changes to road traffic regulations.
- In addition to a general part with information, it might be good to focus even more on individual expectations within the group.
- Also address gender differences and encourage particularly women to take advantage of driver assistance systems, taking away the fear from dealing with these devices.

5. Changes and insights based on feedback from the evaluation

Workshop structure and materials are continuously adapted based on the feedback received. The most notable changes are as follows:

- Ten is the ideal number of participants to ensure a lively discussion but allow for each individual to actively participate.
• Active participation is essential. Personal experiences and strategies from their day-to-day lives increase motivation.
• Every workshop is different. Engagement, expectations, degree of self-reflection, importance of owning a vehicle and degree of education vary widely. That means that instructors have to really focus on participants.
• The peer-to-peer principle for instructors had a very positive effect. Instructors can use their long-standing personal experiences, which creates a trusting environment and enables participants to openly discuss their experiences. That makes it possible to discuss near-accidents and precarious situations.
• Content and goals of the workshop have to be communicated clearly and in advance to potential participants. The informational pamphlet has been adapted.
• There is enough material and content for a 4-hour workshop. Longer duration would not work well in terms of attention spans. The optimal start time is 9 am.
• Breaks should be based on the needs of the participants. It has proven successful to have multiple breaks as well as some longer breaks. Participants often engage in discussions during the breaks, which offers a great opportunity to process information. A final break before the final round has been very well received as well.
• A few topics have been better adapted to the target audience.
• Based on a request by the instructors and participants, a new leaflet was created to provide an overview of changes to road traffic regulations.

Discussions and exchange of experiences during the closing meeting for instructors led to the following recommendations:
• Chinese whisper: play the game using a minimum of 5 words for a message to train participants’ memory
• Personal slogan: Similarly to some of the key phrases used, participants should create their own safety slogans
• Vision impairment goggles: some instructors used vision impairment goggles to demonstrate the effects of alcohol
• Laughing exercises: purposefully pull up the corners of your mouth repeatedly to simulate a good mood and as a result improve your mood

All instructors indicated having had a good time leading the workshops and experiencing personal growth as well as improving their own driving capabilities.

6. Summary & Conclusions

In terms of accident rates, drivers up to 65 years of age do not stand out. Many years of experience and age-related good sense guarantee successful driving. To meet the challenges of decreasing motoric, sensory and cognitive capabilities with age, KFV (Austrian Road Safety Board) recommends trainings to increase driving competence starting at an age of 65.

KFV created the risk competence training in response to this challenge. The workshop builds on personal resource of elderly drivers and fosters perception, assessment and decision making capabilities. The goal is to improve safety in traffic and maintain mobility for elderly drivers.

To ensure the success of the risk competence training for drivers 65 and up, the developed workshops were piloted and participants and instructors were surveyed. Between 2011 and 2013, more than 300 workshops were held throughout Austria, reaching more than 3,000 participants. The workshops were financed by KFV (at no cost to the participants) and the evaluation was funded by the Austrian Road Safety Fund. Since the beginning of 2014, courses have been sponsored by the regional branches of the Austrian Road Safety Fund.

The risk competence training proved to be an attractive alternative to conventional performance tests and supports drivers in maintaining mobility into old age. The goal is to offer the workshops on a voluntary basis through a wide range of channels appropriate for the target audience.
References