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Experiences of young drivers and accompanying persons in Denmark: A qualitative study

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ABSTRACT

The safety effect of accompanied driving depends on the level of practice and on compliance with restrictions. On January 1st 2017, Denmark introduced accompanied driving as a voluntary option from age 17 and after passing the national driving test. Up to age 18, driving is only allowed when supervised, but after the age of 18 unrestricted access to solo driving is automatically provided. This study investigates user experiences among young drivers (YDs) and accompanying persons (APs), and the impact on engagement and compliance. It uses a socio-ecological model (S-EM) as a framework to identify facilitators and constrainers, taking into account all social levels, from the individual to the legislative. Information was obtained through semi-structured telephone interviews with 28 YDs who had received their licences through L17, and 24 APs. Thematic analyses identified nine themes and 12 sub-themes operating at different levels of the social environment and associated with differences in engagement. Overall, the results suggest that leaving it to the participating YDs and APs to decide on the amount and type of accompanied driving may not achieve the intended safety benefit due to influence of unhelpful motivations, limited knowledge, mismatched expectations of YDs and APs, a limited amount of, and limited variation in, driving, and a lack of support and compliance with the unaccompanied driving ban. In conclusion, results suggest that a guided approach that addresses the barriers at different levels of the social environment is needed to optimise the safety effect of accompanied driving as a voluntary option.

1. Introduction

Despite great improvements in road safety in many motorised countries, young drivers continue to be overrepresented in road traffic crashes (Elvik, 2010; Toroyan, 2015). This is also the case in relatively safe countries such as Denmark, where the risk of being seriously injured or killed in a road traffic crash is 12 times higher for an 18-year old driver than for a driver aged 44 (Christiansen & Warnecke, 2018). The inclusion of a phase in the licensing procedure in which candidate drivers practise driving while being accompanied by a more experienced driver is widely used in many western countries to counteract the negative influences of young drivers’ psychological immaturity and lack of experience (e.g., Møller et al., 2021; Senserrick et al., 2021; Williams, 2017). However, this phase – also known as the supervised or accompanied driving phase – will only improve safety if young drivers use it to practise driving and if there is compliance with the ban on driving solo. Unfortunately, some young drivers practise far less than they should, in traffic conditions that are too simple or too familiar, and engage in illegal solo driving (e.g., Langley et al., 2013; Møller et al., 2021; Scott-Parker et al., 2011). Thus, a deeper understanding of the factors facilitating or constraining adequate accompanied practice is called for.

Although a need to broaden the traditional driver-centred approach to young driver safety has been identified (Scott-Parker, 2018; Scott-Parker et al., 2016), most studies about the accompanied or supervised driving phase explore facilitators and constrainers solely from the young driver’s perspective (e.g. Taubman-Ben-Ari, 2010; Williams, 2017), and sometimes include parental influence (e.g. Bates et al., 2014; Taubman-Ben-Ari, 2016). As a novel contribution, this qualitative study expands current knowledge by analysing the impact of the broad social environment on experiences of accompanied driving. The study applies the socio-ecological model (S-EM) as the conceptual framework because this supports the identification of facilitators and constrainers beyond a driver-centric approach by also taking interpersonal, organisational, community and policy factors into account (McLeroy et al., 1988).

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Previous applications of the S-EM in the area of young drivers include work by Runyan and Yonas (2008), who identified S-EM as a relevant means for including multiple perspectives in intervention development. Sigurdardottir et al. (2014) applied the S-EM in a study that explored the motivations for obtaining a licence, Berg et al. (2018) applied the S-EM to identify multiple factors influencing driving under the influence of marijuana, and Ersan (2020) applied the S-EM in a study on risky driving among young drivers. In general, the relevance of a holistic or ecological approach to young driver safety is increasingly acknowledged and applied. For an overview, see the work by Cassarino and Murphy (2018).

1.1. Function and formats of accompanied driving

The aim of accompanied driving is to overcome the intertwined detrimental effects of psychological immaturity and limited driving experience. Through extensive driving practice in a wide variety of driving situations, accompanied driving may counteract age-related risk-taking tendencies by strengthening higher-order driving skills such as hazard perception (Vlakveld et al., 2011; Abele et al., 2019) and situation awareness (De Craen et al., 2008; Scott-Parker et al., 2020).

In recent decades, many countries have included some form of accompanied practice in their licensing process, but the timing and format of this differ between jurisdictions. Overall, there are three possible formats. 1) A compulsory accompanied driving phase that is mandatory before the driving test as part of the full licence requirement. This format is standard in Australia (Senserick et al., 2021) and the US (Curry et al., 2017). All young drivers need to go through this procedure. 2) A voluntary accompanied driving phase before the final driver test, alongside a traditional training option that includes professional driver training in a dual control car. In this format, candidate drivers do not pass their driving test before they enter the accompanied driving phase. This format is used in countries such as Sweden (Nyberg et al., 2007) and Norway (Tronsmoen, 2011). 3) The third format is similar to the second, but there is an accompanied driving phase after the driving test. When entering the accompanied driving phase, a driver is fully licensed from age 17 but is banned from driving solo until their 18th birthday. This format is implemented in Germany (Schrauth & Funk, 2021), the Netherlands (Schagen & Craen, 2015) and, since January 1st 2017, in Denmark (BEK nr 1594 af 15/12/2016). It is a voluntary option, and sits alongside a traditional licensing procedure without an accompanied driving phase but with a driving test for 18-year-olds that is identical to that for 17-year-olds.

1.2. Practice and compliance

For all the formats with accompanied driving practice, the amount and quality of the practice is key to its effects on safety. The Danish L17 format creates an inherent dilemma between allowing younger and less mature drivers to enter traffic and requiring fully licensed drivers to drive with an accompanying person. Thus, the Danish scheme can only improve road safety if the negative influences of immaturity are offset by the positive effects of extra driving practice, and if young drivers (YDs) comply with the ban on solo driving even after they have passed the national driving test.

On the level of practice, Møller and Jensen (2022) showed that, on average, YDs enter the accompanied driving phase only 5.3 months before they start driving solo at the age of 18. A majority (75%) drive a total distance of less than 1680 km in the accompanied phase. Because of methodological differences, a cross-country comparison is challenging. Nevertheless, looking at Germany and the Netherlands, the distance of accompanied driving among Danish youths is similar to the 1700 km driven in the Netherlands (Schagen & De Craen, 2015) but lower than the 2400 km driven in Germany (Schade & Heinzmnn, 2013). Several studies have explored the factors influencing engagement, given the importance of accompanied practice hours for safety. Limitations in the available time and access to a car or an AP were identified as potential barriers (Møller & Jensen, 2022; Scott-Parker et al., 2011), but even more important were social factors, including the relationship and interactions between the YD, the AP and their friends. A German study found that having friends who were participating in the accompanied driving scheme predicted participation among 17-year-olds (Schrauth & Funk, 2021). In the USA, Mirman et al. (2014b) showed that mutual support between the young driver and the accompanying parent was associated with a higher number of accompanied driving hours. In Norway, self-assessed skills were higher if the atmosphere between the YD and the AP was secure and confident (Tronsmoen, 2011). In Denmark, L17 drivers who had experienced a supportive atmosphere during trips were more likely to indicate that accompanied driving had improved their driving skills (Møller et al., 2021). Finally, the impact of a positive relationship on skill development was further supported by the finding that a positive relationship with a driving instructor increased the likelihood of passing the Swedish driving test (Nybøg et al., 2007).

Non-compliance with the ban on solo driving is the second factor expected to affect safety. Møller et al. (2021) showed that 17% of L17 drivers had driven unsupervised, while 58% had friends who had done so. This proportion is higher than the 10% in Australia (Scott-Parker et al., 2012) but lower than the 33% in New Zealand (Langley et al., 2013). However, in contrast to young drivers in Australia and New Zealand, L17 drivers hold a full licence before they enter the accompanied driving phase. Therefore the temptation for L17 drivers to violate the solo driving ban might be relatively strong, and the perceived safety risk relatively low. However, compliance with accompanied driving systems in which drivers are already fully qualified and yet are banned from solo driving, such as L17, has not yet been explored. To date, most studies have addressed compliance in other formats, showing, for instance, the influence of parental attitude and behaviour on compliance with restrictions in the first stages of solo driving in the graduated driver licensing scheme (Brookland et al., 2014; Scott-Parker et al., 2012).

1.3. This study: Setting, aims and approach

Denmark’s L17 scheme is of specific interest. In contrast with the way other countries use this format, L17 does not set or communicate standards on the amount or type of practice. In addition, no official information or formal procedures are provided on the preconditions for young drivers’ safety. Information regarding licensing, the requirements associated with the accompanying person, insurance, and so on is available on the website of the Danish Road Safety Council (sikkertrafik.dk) and the Danish Road Traffic Authority (DRTA), but it is up to the individual to seek out this information. These conditions present a unique possibility of exploring the factors influencing user experience and engagement in accompanied driving in more or less ‘natural’ conditions, without rules or guidance from organisations such as governments or licensing authorities. In this context, the aim of this study is to investigate experiences of accompanied driving among YDs and APs in order to identify facilitators and constrainers operating at different levels of the broad social environment. The results facilitate an identification of mismatches between policy objectives and actual practice, and of areas that should be addressed to achieve the policy objectives. The study presented here is part of a larger programme, funded by the DRTA, evaluating the implementation of L17 in Denmark. The evaluation programme includes several sub-studies addressing different aspects of L17. For the published results from the other sub-studies, see Møller et al. (2021) and Møller and Jensen (2022).

The study uses the S-EM as its theoretical framework. This framework was developed by Bronfenbrenner, who was motivated to develop it by a perceived need to understand human development and behaviour in a broad context, taking into account the interaction between multiple systems surrounding the individual (Bronfenbrenner, 1977). As described by Kilanowski (2017), the model was later refined into a theory in which three influencing systems are defined: the mesosystem,
the exosystem and the chronosystem (Bronfenbrenner, 1986). In the context of health promotion programmes, McLeroy et al. (1988) further developed the conceptual framework to include five domains, which covered the different levels of influence in health promotion strategies: the Intrapersonal, the Interpersonal, the Institutional, the Community and the Policy domains. For the present study, the five domains are operationalised as follows. The Intrapersonal domain is concerned with aspects related to the individual, such as attitudes towards accompanied driving. The Interpersonal domain concerns the interpersonal processes between the individual and his or her friends and family, such as interaction during driving. The Institutional domain deals with the individual’s interaction with relevant institutions, such as the driving school. The Community domain covers the interaction with media and social norms, generally rather than personally. Finally, the Policy domain concerns the individual’s interaction with the regulations of the Danish driver licensing scheme. We apply this approach in order to support the identification of facilitating and constraining factors at the different levels of the social environment, and their association with the user experience of accompanied driving. The contribution of this approach is a broadening of the traditional driver-centred approach, thereby supporting the identification of aspects in the young driver’s social environment that can be adjusted to improve young driver safety through accompanied driving. To collect the information, we conducted semi-structured telephone interviews with novice drivers and APs, covering motivations, experiences and reflections. This qualitative approach allowed participants to share individual experiences from their own lives. The narratives were analysed and interpreted in each of the five domains of the socio-ecological model.

2. Method

2.1. Data collection and participants

The data were collected from December 2018 to January 2019 using semi-structured telephone interviews that each lasted approximately 30 min. The sample included 52 people, of whom 28 were YDs who had participated in L17 and 24 were APs. The YDs and APs were independently recruited and were not each other’s ‘accompanying partners’. EPINION (a market research institute) recruited the participants from among those who had responded positively in an online survey to a request to be included in future follow-up studies on L17. The participants received a voucher worth 200 DK (25 EUR). For an overview of the participant characteristics, see Table 1.

We consider telephone interviews to be an appropriate method of data collection for several reasons. First, in accordance with the purpose of the study, the use of qualitative interviews allowed us to gather detailed in-depth information about individual experiences, reflections and motivations associated with accompanied driving (Rvale, 2000). Second, because of the cost-effectiveness of telephone interviews compared to face-to-face interviews conducted at the interviewee’s location of residence (Sturges & Hanrahan, 2004), telephone interviews allowed us to recruit participants from all over Denmark while complying with the budget and time restrictions associated with the project. In addition, telephone interviews increased flexibility when scheduling the interviews.

The participants were informed that 1) participation was voluntary, 2) withdrawal was possible at any time, 3) data would be stored in accordance with existing data protection rules, and 4) their identity would not be revealed in the results. We obtained their written consent confirming participation and agreeing to the audio recording of the interview. The regional scientific ethics committee in the capital region of Denmark informed us that ethical approval was not needed. The interviews were conducted by a research assistant (NB) using a semi-structured interview guide to allow participants to share individual experiences on the subject through narratives based on their own lives and experiences (Jovchelovitch & Bauer, 2000). The same interview guide was used for all interviews, but, because of the semi-structured approach, the topic order and depth of exploration varied between interviews.

A majority of the participants lived in rural areas (68%), and 68% of them took part in accompanied driving for six months or less. This mirrors the distribution of the general population, for whom the percentages are 69% and 68%. Regarding gender, our sample included a slight overrepresentation of males among the YDs (54%), while no gender difference in L17 in the general population is present (50.5% male, 49.5% female) (Møller & Jensen, 2022). Further, among the APs, women were slightly overrepresented (54%), with an estimated 50% in the AP population. Thus, all in all, our sample mirrors those who take part in accompanied driving in the general population.

2.2. Data analysis

During the interviews, the participants were invited to share their experiences and reflections regarding accompanied driving. However, the purpose of the study was not to map individual experiences as separate case studies, but rather to identify patterns in experiences across the participants. Thus, our study purpose was compatible with the purpose of thematic analysis, and we therefore chose thematic analysis as the method of analysis. In addition, thematic analysis does not presuppose a specific theoretical frame, which allowed us to apply the S-EM as the theoretical framework.

The interviews were transcribed verbatim, excluding paralinguistic characteristics and information that could identify an individual. Using the transcrips, we conducted a thematic analysis inspired by the guidelines outlined by Braun and Clarke (2006). We applied a top-down deductive approach because this approach allowed us to use the S-EM as the theoretical framework. The analysis involved six steps: 1) familiarising ourselves with the data, 2) initial coding, 3) searching for sub-themes, 4) reviewing sub-themes, 5) labelling and categorising of sub-themes, and 6) reporting the results (see Fig. 1 for an overview).

All the coding was done using the software Atlas.ti version 8. Atlas.ti is a tool for registering the text belonging to a theme as part of coding. For further information about Atlas.ti, see https://atlasti.com/. We
explain the actions associated with each step in the analysis in more detail in the following.

In step 1, two research assistants (IHN and KJS) and the senior researcher (MM) familiarised themselves with the data by reading through the transcripts. This provided an overview and an overall understanding of the data and the different experiences with accompanied driving described by the participants during the interviews. At this step, the two research assistants additionally familiarised themselves with the theoretical framework (the S-EM) that was to guide the coding of the transcripts in step 2. The senior researcher was already familiar with the S-EM. In step 2, the two research assistants conducted an initial coding of the transcripts using the S-EM as the theoretical framework, thereby applying a top-down deductive approach. At this step, the five themes predetermined by the S-EM framework were applied.

Each of the five themes covered one of the five S-EM domains (Intrapersonal, Interpersonal, Institutional, Community, Policy). Text that did not relate to any of these five domains (e.g. information about the age of the AP) was coded under the theme ‘background information’. The text to be coded as belonging to each of the five themes were mainly identified at the semantic level: for example, based on the explicit statements provided by the participants. One research assistant (IHN) coded the transcripts from the interviews with the young drivers, and one research assistant (KJS) coded the transcripts from the interviews with the APs. The research assistants coded the transcripts independently, but they, together with the senior researcher, continuously engaged in mutual reflexive dialogues before and during the process. The purpose of the reflexive dialogues was to ensure a common understanding of the theoretical framework and its application during the coding process, and to ensure consistency in coding decisions, as described by O’Connor and Joffe (2020). In step 3, the text coded within each of the five theory-based predetermined themes was reviewed separately to identify sub-themes capturing issues of importance for the research question within that domain. Again, the research assistants coded the transcripts independently using preliminary descriptive theme labels that indicated the content of the issue captured. In step 4, the research assistants and the senior researcher met to review the identified sub-themes in a reflexive dialogue.

The preliminary theme labels identified by the two research assistants were very similar for the data regarding the young drivers and the APs. In the few cases for which different theme labels were identified, the theme labels were discussed to see whether agreement on a common theme label could be reached or whether different theme labels were needed because the preliminary labels covered different issues. In step 5, the final sub-theme labels were decided following the discussions in step 4. In addition, the sub-themes and their descriptive theme labels were grouped, based on the issues they covered, to form more general analysis-based themes. This was done to facilitate the presentation of the results in a way that would support their application by relevant stakeholders. Thus, although the themes were generally identified using a semantic approach, step 5 also involved the identification of themes following a latent approach. In step 6, the results were presented, and relevant quotes were identified and translated into English.

3. Results

The analysis revealed nine themes and 12 sub-themes influencing the participants’ expectations, amount of accompanied practice, compliance and user experience (see Table 2). The results are presented in the following with no distinction between YDs and APs because the identified themes were found in both groups.

3.1. Aspects influencing accompanied driving practice

Table 2 provides an overview of the identified themes. The results for each domain are presented in the following, occasionally using quotes as an illustration.

3.1.1. Intrapersonal domain

The intrapersonal domain revealed two key themes which served either to support the aim of L17 or to support the use of L17 for other means: motivation and attitude.

Regarding motivation early access to solo driving was one of the YDs’ motives for enrolling in L17, as it allowed them to drive a car at an earlier age:

“I just wanted to get the licence. It [enrolling in L17] was a possibility to do it as early as possible”. (YD)

This desire also motivated APs to participate in L17 and support their YDs’ wish to drive as early as possible. In contrast, but consistent with its objectives, other YDs and APs enrolled in L17 to support the development of the YD’s skills to prepare for solo driving:

“My parents and I both believed that it would be a relevant experience to practise together and to avoid solo driving just after getting a licence”. (YD)

Regarding attitude, some YDs and APs perceived L17 as a gentle transition to solo driving. These YDs appreciated having someone in the car when they started driving without a driving instructor. Further, the APs positively valued witnessing their YD’s increasing confidence as a driver, and this increased their confidence in the YD’s ability to engage safely in solo driving:

“The perceived security one obtains as a parent. Having experienced one’s child driving and feeling comfortable about it. That is fabulous”. (AP)

Table 2

Overview of the themes associated with accompanied driving for each domain.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Theme</th>
<th>Sub-theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intrapersonal</td>
<td>Motivation</td>
<td>Want to drive, skill improvement</td>
</tr>
<tr>
<td></td>
<td>Attitude</td>
<td>Calm transition, requirement unjustified</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Friends</td>
<td>Inspiration</td>
</tr>
<tr>
<td></td>
<td>Family</td>
<td>Interaction, commitment</td>
</tr>
<tr>
<td>Institutional</td>
<td>Driving school</td>
<td>Information</td>
</tr>
<tr>
<td></td>
<td>School/leisure job</td>
<td>Workload</td>
</tr>
<tr>
<td>Community</td>
<td>Cultural norms</td>
<td>Gender, driving culture</td>
</tr>
<tr>
<td>Policy</td>
<td>Compliance</td>
<td>Unaccompanied driving</td>
</tr>
<tr>
<td></td>
<td>Confusion</td>
<td>Adjustments</td>
</tr>
</tbody>
</table>
In contrast, other YDs and APs perceived inconsistencies between the ban on solo driving and the fact that the YD had passed their driving test. In their view, the YD was already fully qualified to drive solo and the required additional practice was therefore unjustified:

“We all have the same licence and went through the same teaching programme at a driving school. So there are no differences in competences between persons getting their licence at age 17 and at age 18. It is all the same.”. (YD)

3.1.2. Interpersonal domain

The interpersonal domain revealed two themes: friends and family. Regarding “friends”, hearing about L17 from friends had inspired both YDs and APs to enrol in L17, but accompanied driving was not discussed in any detail, and influence from friends on the amount or type of practice was not mentioned.

Regarding family, the results revealed that interactions between YDs and APs influenced the type and amount of practice. Both APs and YDs highly valued a pleasant and positive atmosphere during a trip, and they both highlighted accompanied driving as presenting an opportunity, which they would not otherwise have had, to discuss safe driving. Negative experiences included YDs being reluctant to take advice from the AP or taking too long to react, in some cases causing dangerous situations or the need for the AP to interfere by stopping the car:

“We have been in [critical] situations. Glad to have the handbrake. He [the YD] believed he could make it through the intersection. I told him he could not, but I ended up using the handbrake to stop the car”. (AP)

Some APs had agreed with the YD not to comment during the drive. In contrast, other APs provided feedback during the trip because they believed it to be more helpful if applied in the relevant context. In addition, some YDs avoided driving with one of their parents because they found this person to be too nervous or aggressive during the trip:

“My mother was super worried, so I preferred to drive with my father. It made me nervous that she worried so much during the drive”. (YD)

Both YDs and APs mentioned a lack of commitment by themselves or the other party as barriers to enough practice. Low commitment resulted in the YD driving on trips that had to be made anyway, such as trips to school, to see family and to events. Only a few APs mentioned initiating trips specifically to practise challenging situations, such as driving in bad weather, on motorways, and at roundabouts, or to practise specific tasks such as parking.

3.1.3. The institutional domain

The institutional domain revealed two themes: driving school and school/leisure job. Regarding driving school, some YDs and APs mentioned receiving some written unofficial information about L17 from the driving school. However, in general, the information received was rather superficial, appeared somewhat random and did not influence practice.

“I think more information for the parents is needed. What is accompanied driving about, what to remember, and what the consequences for non-compliance are etc.”. (AP)

Regarding school/leisure job, a high time demand and workload at school and in leisure-time jobs inspired L17 practice during less busy times, and strongly decreased the amount of driving practice by YDs at more busy times.

3.1.4. The community domain

The community domain revealed the theme cultural norms, with individual assumptions about driving-related gender differences influencing the interpretation of the challenges associated with accompanied driving. For instance, one AP believed that her daughter’s lack of interest in accompanied driving was gender-related:

“I believe accompanied driving is easier with boys. I think they would like to drive as much as possible”. (AP)

In contrast, others expected young females to practise more because of a lack of confidence in their driving skills.

One barrier to practice concerned the Danish driving culture. Some APs perceived this culture as unfriendly and unforgiving, making accompanied driving an unpleasant experience. As a result, novice drivers quickly ended up in unpleasant and unsafe situations, even when not making mistakes themselves. YDs had similar reflections:

“There was an episode where I was to enter a larger road, and this other driver drove much too fast. Nothing happened, but I was shocked”. (YD)

Some, both YDs and APs, suggested that a symbol on the car, indicating that there was a novice driver behind the wheel, could possibly minimise unfriendly and aggressive responses from other road users, thereby creating a safer and more supportive learning environment for the YDs.

3.1.5. The policy domain

The policy domain revealed two themes: compliance and confusion. Regarding compliance, about half of the YDs had engaged in illegal solo driving, often with parental consent:

“My father told me it was ok, as long as I drove carefully”. (YD)

Most YDs had friends who had engaged in illegal unaccompanied driving. They knew it was happening and accepted it on special occasions, such as on well-known short distances in the neighbourhood. However, the YDs did not perceive it as showing-off, either for themselves or for their friends. One YD mentioned that they had driven unaccompanied without parental consent:

“My parents went away for a few days, and I decided to use the car despite their disapproval. I took the car without permission. I drove much too fast, I lost control and crashed”. (YD)

Also, APs knew about non-compliance among young drivers, and some had even encouraged their children to drive without accompanied on special occasions. For both YDs and APs, illegal solo driving was associated with the motives for enrolment in L17. While the desire to drive and strengthen driving skills initially stimulated practice, after approximately three months their support for the ban on solo driving was lost. Thus, when driving experience increased, the motivation and the perceived necessity of practice decreased, as did the motivation to comply with the ban on solo driving.

Regarding confusion, this theme covers the confusion expressed by YDs and APs about the requirements and reasons behind the system, and their related suggestions for change. There was said to be a need for readily available information about the requirements, and clear guidelines on effective practice were requested. Some APs were uncertain about their obligations during a trip and the best way to interact with YDs. This was supported by examples of dangerous situations caused by the unfortunate timing of the AP’s advice. Although overall support for minimum age limits for APs was expressed, it was also mentioned as a constrainer limiting access to accompanied driving when eligible APs (e.g. parents) were too busy. Lower age limits were suggested so that siblings could be included as potential APs. A majority indicated that the ban on solo driving until the age of 18, regardless of skill and the amount of practice, was unfortunate, and provoked non-compliance. Based on their experience with accompanied driving, three months of accompanied driving was frequently mentioned by the participants as sufficient to ensure safe solo driving.

Some additional regulations were also suggested. YDs would welcome measures to guarantee APs’ commitment. Both YDs and APs mentioned that the sanction of 400 EUR was too low to deter YDs from driving solo illegally. They perceived the likelihood of apprehension as extremely low and suggested that the sanction for illegal solo driving
accompanied driving was a means to make the transition from driving accompanied by a driving instructor to solo driving feel safer, and this also concurs with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving.

4. Discussion

Using the S-EM as the conceptual framework, this study explored the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving. Unlike the traditional driver-centred approach, this study explores the factors affecting engagement in accompanied driving and the compliance with the ban on solo driving.
potentially equally effective. For instance, Allen et al. (2017) showed that informal deterrence by parents improved compliance, whereas formal deterrence by police enforcement did not. Apart from the lack of formal and informal rule enforcement, poor knowledge of effective mechanisms of accompanied driving contributes to non-compliance. Our results show that participants do not understand the logic of the system, they question its legitimacy, and they lack knowledge to motivate their compliance.

Overall, the present study shows that the current L17 scheme lacks structure and therefore may have limited safety benefit. Moreover, it may short-track licensing at a lower age than through traditional licensing, and thereby even be counterproductive for safety. The inclusion of a guided approach, if it could address the constraining aspects identified in the present study within each domain, could strengthen the L17 scheme and increase its safety benefits. Interestingly, guided approaches have also proved to be effective in other areas, such as reducing reoffending by focusing on support rather than punishment and targeting the reasons for non-compliance (Weir et al., 2021). Concerning accompanied driving, its purpose should be to support dedicated and continuous engagement and to find solutions to reduce the negative impact of the identified barriers. For instance, a driving instructor or people appointed and educated by a municipality or another institution could be included to support the task. A guided approach could also address other safety-critical challenges, such as illegal solo driving. The need for a more guided approach to accompanied driving is supported by previous findings indicating the low priority given to higher-order skill guidance (e.g. hazard perception and risk avoidance) by non-professional supervisors (e.g. Goodwin et al., 2014; Tronsmoen, 2011), and suggesting that parents do not hand over sufficient responsibility for the driving task to the YD (Goodwin et al., 2014). In practical terms, a guided approach could include tools such as contracts between APs and YDs to guide expectations, and logbooks or similar tools to keep track of the practice efforts, such as the TeenDrivingPlan developed by Mirman et al. (2014a).

All in all, the evidence indicates that leaving it to YDs and APs to decide on the amount of accompanied driving may not ensure that YDs gain sufficient experience to support the intended safety effect through the enhancement of higher-order driving skills. The results indicate that a guided approach is needed, along with user-tailored information about mechanisms, requirements and supervision strategies.

4.1. Strengths and limitations

This study provides a unique contribution by exploring the factors influencing the users’ experience and engagement in accompanied driving in a setting in which there are no rules or guidance from organisations such as governments or licensing authorities. However, a few limitations associated with the study should be mentioned.

First, the quality of a research interview critically depends on the interaction between the researcher and the interviewee (Miller, 1995). In telephone interviews, there is a different interaction between the researcher and the interviewee from the interaction in a face-to-face interview, because visual and other non-verbal cues are not available. The lack of non-verbal cues increases the number of requests for clarification by the researcher during the interview (Irvine et al., 2012). However, knowing that telephone interviews generally provide high quality data with no significant difference regarding the information gathered compared to face-to-face interviews (Sturges & Hanrahan, 2004), and because we applied a semantic approach during the analysis, we believe that the lack of non-verbal cues did not compromise the quality of our data.

Second, the telephone interviews created retrospective data that could be subject to incorrect recall and post-rationalisations, including reasons for behavioural choices, that were not available when the behaviour occurred (Müggenburg, 2021). The extent to which this influenced our results is unknown. However, the telephone interviews supported recall of the whole context and not just specific details, which is known to support memory (Müggenburg, 2021). We therefore believe such effects to be limited.

Third, social desirability, and associated distortions of the descriptions in a socially desirable direction (Nederhof, 1985), was also a potential limitation in the study. However, telephone interviews increase anonymity, thereby possibly reducing social desirability bias. The fact that many interviewees voluntarily revealed unsafe and illegal behaviours supports the conclusion that social desirability did not prevent the interviewees from sharing potentially compromising experiences.

Fourth, the study relied on voluntary participation and was therefore vulnerable to sampling bias (Cheung et al., 2017). Although it is unjustified to claim that the study included a representative sample of L17 drivers in Denmark, the distribution regarding area of residence, gender and period of accompanied driving mirrors the population of L17 drivers (Møller & Jensen, 2022; Møller et al., 2021). Nevertheless, it is possible that some experiences, motivations or reasonings of relevance for engagement in accompanied driving are not covered by the results of this study. Additional studies are needed to assess this. Finally, it should be mentioned that, when conducting a thematic analysis, themes are generally not quantifiable (Braun & Clarke, 2006). Further, the semi-structured approach applied in the study allowed the topic order and depth of exploration to vary across interviews. Therefore, this study did not allow quantifiable conclusions to be drawn. Thus, although the number of participants in our study was in accordance with recommendations for qualitative studies (Marshall et al., 2013), additional studies using a survey approach and large samples are needed in order to quantify the prevalence of the identified themes.

5. Conclusion

To conclude, the results of this study suggest that leaving all decisions regarding the amount and type of accompanied driving to participating YDs and APs may not achieve the intended safety benefit because of the influence of unhelpful motivations, limited knowledge, mismatched expectations of YDs and APs, a limited amount of, and limited variation in, accompanied driving, and a lack of support and compliance with the unaccompanied driving ban. The results identify facilitators and constraints operating at different levels of the social environment, thereby confirming that implementing policy measures without sufficiently considering the broader social environment may compromise their intended safety effect. The results suggest that a structured and guided approach is needed to optimise the safety effect of accompanied driving as a voluntary option in a scheme such as the Danish L17 one.

Uncited references

CRedit authorship contribution statement


Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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