

Exploring Perceptions and Attitudes of Older Adults with Cognitive Impairment on GPS-based Driving Monitoring Systems

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BACKGROUND

- Remote monitoring technologies are increasingly being integrated into older adult healthcare
- In the context of driving, GPS-based Driving Monitoring System (DMS) technologies are in the early stages of being used to assess the driving of older adults with cognitive impairment whose driving may be negatively impacted
- The aim of the present study was to explore perceptions and attitudes of older adults with mild cognitive impairment (MCI) towards using DMS technologies to assess their driving

METHODS

- Twelve older adults took part in virtual semi-structured interviews after using a DMS in their vehicle for 8 weeks
- Interviews were audio-recorded and transcribed verbatim before being analyzed using a hybrid deductive-inductive thematic approach involving 2 coders

Figure 1. Participant Demographics (N=12)



RESULTS

- Each interview lasted about 30 minutes and was conducted between the participant and 1 of 2 research assistants who were also the coders for the analysis
- Based on a refined set of codes and repeated discussion between the coders, 4 themes emerged from the data

1. The DMS is a better representation of driving compared to standard on-road assessments

“What it does is it takes away that short term proximity thing [at one point in time]... it makes it much longer proximity [over weeks or months]. So, I think it picks up the idiosyncrasies of your driving ability a lot better...”

Older adults with cognitive impairment have positive attitudes towards Driving Monitoring Systems and perceive them as useful to assess driving for different purposes

“I would say the device is a very good method... you’re seeing us whenever we drive. And you can’t have somebody all the time to do that. I felt this was a very, very efficient way to do it.”

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RESULTS (Cont'd)

2. There are few concerns around privacy and safety aspects of the DMS

“I didn't have any concerns [with privacy or safety]... like, your initial response would be how is this going to affect me [in terms of being recorded] if something does happen. But once I got in there, it really didn't concern me...”

3. The DMS has little perceived impact on driving patterns and behaviours

“As I say, for the first hour [with the device] I was aware what I was doing was being recorded [and so was more conscious of my driving]. But then after the hour, just... I behaved from a driving point of view as if it wasn't there...”

4. The DMS can be used to assess driving for different purposes

“I'm quite aware that I need to keep an eye on myself... that's why I'm very open to this assessment...”

“My partner got to a point where they shouldn't be driving and we had to inform their doctor... So I agree with these technologies for that purpose...”

“It's hard for the police to know... they have to wait until something happens. And so the advantage of this technology is you can stop something before it happens...”

Figure 2. GPS-based Driving Monitoring System



CONCLUSIONS

- These findings suggest that older adults with MCI have positive attitudes towards DMS technologies and perceive them as useful to assess driving for different purposes
- Further research is needed to determine if these perceptions and attitudes related to the DMS are shared among larger populations with MCI and those with more advanced forms of cognitive impairment

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