

Exploring how characteristics of cyclists' personal items affect phone use in traffic

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Background

WHO recognize distraction as a key risk factor in traffic. The use of phones while cycling can cause visual, auditive, cognitive, and motoric distractions. Due to their lack of exterior protection, cyclists are particularly at risk of both severe injuries and fatalities and face a higher relative risk of death than car drivers. Therefore, phone use while cycling is likely to be a severe safety risk in traffic. The use of phones is a self-paced activity, which means, it might be possible to prevent the risk.

Aim

This study aims to identify underlying factors of cyclists' phone use while cycling. We distinguish between (intra) psychological, social, material, and structural factors, and specifically focus on the characteristics of the cyclists' personal artefacts, an aspect underexposed in existing research literature. The results are relevant for the development of interventions targeting unsafe use of phones in traffic.

Method

The study is based on qualitative semi-structured interviews conducted with cyclists above 16 years in Denmark (Greater Copenhagen, N=9) and the Netherlands (South Holland, N=10) from December 2018 to May 2019. All participants filled in a mini-questionnaire on their demographic characteristics, and transport behaviours. We used a semi-structured interview guide for all interviews, which covered the topics: risk compensatory strategies, perceived risk of the behaviour, habitual or deliberate use, social acceptance, and the role of the legislation. We conducted the interviews in Danish or English, recorded them digitally. Each interview had a duration of 30-50 min. We transcribed the interviews verbatim, then coded the transcriptions, and analysed the content inductively into themes using the software Atlas.ti8.

Results

The analysis show that a wide range of physical and psychological factors affects cyclists' use of phones in traffic. The use varies both from person to person, and within each cyclist. Personal items like clothing and non-material factors like music streaming subscriptions affected when, where, and for what they would use their phone. In example, cyclists with multiple bikes reported to adjust their phone use to each specific bike type. Clothing features like pockets, enabled a proximate position of the phone, which increased habitual, handheld use for some cyclists. Furthermore, the results support earlier findings on cyclists' compensatory strategies and control beliefs.

Conclusions

The results indicate that there are great individual differences in cyclists' phone use and related considerations. While some cyclists use the phone rarely and cautiously, others describe the practice as habitual or as a task they do automatically, without thinking about it. The characteristics of personal, material items like headphone design, pocket size, backpacks, and more, has a direct influence on cyclists use and non-use of phones in traffic. The material artefacts also affected how they used their phone, and for which purposes.