



Social desirability and self-reported driving behaviours: Should we be worried?

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ABSTRACT

There is widespread use of self-report measures of driving behaviour in the traffic psychology literature, despite the frequent criticism that such measures are subject to social desirability bias. However, no research has yet investigated the more recently developed measures of driving anxiety and avoidance behaviour for socially desirable responding. Furthermore, relatively little research has investigated the issue of socially desirable responding on self-reported driver behaviour in general, and that which does exist has several shortcomings. The present study used a repeated measures design to assess the effect of social desirability on a measure of driving avoidance, the Driving and Riding Avoidance Scale (DRAS), and the Driver Behaviour Questionnaire (DBQ). A sample of 228 undergraduate students completed the DRAS, DBQ and a measure of socially desirable responding in class, which constituted a public place, and then again 2 months later in the privacy of their homes. None of the DBQ items were significantly different across the two locations. However, two of the DRAS general avoidance items were higher in the public setting, perhaps demonstrating the effect of socially desirable responding on driving avoidance due to environmental or practical concern. Nevertheless, overall it appears as though the DRAS and DBQ are not particularly vulnerable to socially desirable responding, although further well-designed research on the effects of such bias on these and other self-report measures of driving behaviour should be undertaken.

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1. Introduction

Self-report questionnaires and surveys are extensively used in research on driving behaviour (e.g., Lajunen & Summala, 2003; Reason, Manstead, Stradling, Baxter, & Campbell, 1990; Strahan, Watson, & Lennonb, 2008; Sullman, 2006; Sullman & Mann, 2009; Wallén, Warner, & Åberg, 2008; Şimşekoğlu & Lajunen, 2008). Over the last few decades, a number of self-report scales have been developed to measure aberrant driving behaviour, as well as drivers' attitudes, emotions, and personality styles. Additionally, self-report measures of driving anxiety and avoidance behaviour have been developed, following the increased awareness of these kinds of psychological effects following motor vehicle crashes (for a review, see Taylor (2008)). Self-report methodology has several advantages over other approaches, particularly in terms of low cost, efficiency of data collection, providing information about infrequent behaviour, and being able to investigate relationships between driving behaviour and factors such as attitude, emotion, and personality characteristics. However, some important criticisms have been levelled at self-report questionnaires as measures of driving behaviour, in terms of possible problems with

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reliability and external validity due to self-report being more vulnerable to social desirability than other methods such as behavioural observation (Paulhus, 1991).

A series of studies over the last decade by Lajunen, Summala, and their colleagues has investigated the effect of social desirability on self-reported driving behaviour using the two types of socially desirable responding, impression management and self-deception (Paulhus, 1984, 1991). Impression management refers to the deliberate tendency to give favourable self-descriptions to others, while self-deception is a positively biased but subjectively honest self-description (Lajunen, Corry, Summala, & Hartley, 1997; Lajunen & Summala, 2003; Paulhus, 1984, 1991). Lajunen et al. (1997) found that impression management biased self-reported traffic violations, such as self-reported speeding, along with the number of accidents and infringement notices. On the Driver Skill Inventory, impression management correlated positively with self-reported safety skills (e.g., avoiding unnecessary risks, conforming to the speed limits, avoiding competition in traffic) and negatively with perceptual–motor skills (e.g., perceiving traffic hazards, prediction of traffic situations ahead, fast reactions), suggesting that impression management can distort self-reported driving skills related to safety (Lajunen, Corry, Summala, & Hartley, 1998). These results are consistent with the notion that social desirability bias tends to appear more as under-reporting undesirable behaviours rather than over-reporting desirable ones (Lindeman & Verkasalo, 1995). One important limitation of these two studies is that the self-report questionnaires were completed only in private settings, in the form of large groups of participants in which anonymity was emphasised. Lajunen and Summala (2003) argued that the effects of social desirability would be expected to be most apparent in public settings, but only for impression management scores (see also Paulhus, 1984). On this basis, they considered that a more accurate assessment of the effects of social desirability would be gleaned from a comparison of self-reports that were completed in public with those completed in private. In a subsequent study, constituting the public setting were 47 applicants for a driving instructor training course who completed the Driver Behaviour Questionnaire (DBQ; Reason et al., 1990) as part of the entrance examination (Lajunen & Summala, 2003). In order to maximise the effects of the “public” setting the applicants were also asked to write their names, addresses and social security numbers on the forms. In the private setting condition, 54 first-year students of the same driving instructor training course completed the DBQ anonymously during lecture time.

Using total mileage as a covariate in ANOVA analyses, the effects of social desirability on DBQ responses was relatively small (Lajunen & Summala, 2003). Results showed a significant difference between the two settings in only six of the 28 items, such that aberrant driving behaviours (such as forgetting where the car is parked, having no recollection of the road travelled, not noticing a pedestrian crossing, underestimating the speed of an oncoming vehicle, drinking and driving, and racing away from traffic lights) were reported less frequently in public than private settings. The strongest effect was for the drinking and driving item, which had a moderate effect size ($\eta^2 = .11$), while the remaining effects were small ($\eta^2 = .05$ – $.07$; Cohen, 1988). There were no differences for any of the aggressive violations (i.e., showing hostility to other drivers, sounding the horn to indicate annoyance, giving chase) or for the four subscale scores (lapses, errors, ordinary violations, and aggressive violations). Lajunen and Summala concluded that there was little social desirability bias in self-reported driving behaviour.

Despite the improvement in study design with the comparison between public and private settings, one significant limitation of Lajunen and Summala's (2003) study was the use of a between-subjects design, where different groups of participants constituted the public and private settings. While some variables were controlled to a greater or lesser degree (e.g., total mileage was a covariate, and the two groups were similar in age and gender), other unmeasured variables that could have affected the results may have systematically varied between the groups, such as attitudes and personality characteristics. Furthermore, although this would have been acceptable with a large sample size and random allocation to groups, random allocation was not undertaken and both groups were relatively small. For these reasons a more stringent test of the effects of social desirability on self-reported driving behaviour would be afforded by using a repeated measures design, with the same participants completing the questionnaire in both public and private settings.

Although there has been some research investigating the effect of socially desirable responding on the DBQ, there is currently no research which has examined any of the measures of driving anxiety and avoidance for socially desirable responding (Driving and Riding Avoidance Scale – DRAS; Stewart & St. Peter, 2004). Therefore, the present study aimed to investigate whether the DRAS is subject to socially desirable responding and to further examine the effect of socially desirable responding on the DBQ.

2. Method

2.1. Participants

Undergraduate university students were approached in class and briefly informed about the study. Those who agreed to participate were asked to complete two questionnaires, the first in class one week after the initial class visit (Time 1: public setting), and the second 2 months later in their own homes (Time 2: private setting). There were 307 students who completed the Time 1 questionnaire, and 228 who continued on in the study to complete the Time 2 questionnaire, representing a retention rate of 74%. Of the 228 students, nearly 65% were women ($n = 147$) and the average age was 24 years ($SD = 8$). Participants had held their driver's licence for an average of 7.2 years ($SD = 7.6$) and the average mileage over the last year was 12,747 km ($SD = 8.035$). Most (73.2%) of the sample held a full driver's licence, while 17.1% had a restricted and 8.8% a learner's licence (two participants had missing data for licence status).

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