

Socioeconomic status, sense of entitlement and self-reported driver attitudes and behaviour

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PREFACE

After getting my drivers license I've frequently wondered why some drivers act as if they 'own the road'. This was the basis of my motivation for carrying out this study. Could it be because they feel more important than other road users? Then why do they feel more important? Is it because of their perceived social status and wealth, or is it all due to personality? Hopefully this study comes some way at answering these questions.

I would like to thank my supervisor Professor Torbjørn Rundmo for invaluable support, encouragement and guidance on this project, as well as during my time as a psychology student. Specifically I would like to thank him for directing my attention towards the field of traffic psychology, but also for valuable discussions and help with data analysis and manuscript preparations. I would also like to thank Kyrre Svarva at SVT-IT for help with data collection and advice on data management and analysis.

The research questions posed in this study was formulated by the author. Questionnaire construction and data preparation was carried out with the assistance of Kyrre Svarva. Data collection, data analysis and manuscript preparation was carried out by the author, under the supervision of Professor Rundmo.

Hans Brende Lind Trondheim, 10.08.14

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Abstract

The aim of the current study is to examine the possible relationship between socioeconomic status, the personality trait sense of entitlement and driver attitudes and behaviour. Previous research have shown that individuals high in sense of entitlement are less inclined to abide by the rules and norms that normally govern social interactions. They might be aware of what the rules are, but they see themselves as exempt from these rules due to their perceived special status. They also show increased levels of aggression in situations with perceived ego threat, and show less concern for the welfare of others. The same kinds of behaviour has also been associated with having a high socioeconomic position, and it could be that these variables are related. The results are based on the responses to a mail questionnaire survey carried out among a representative sample of the Norwegian public (n = 159). Sense of entitlement was found to predict attitudes towards violations and speeding, self-reported violations and aggressive behaviour in traffic, in addition to positive behaviour towards other road users. Unexpectedly, an inverse relationship between socioeconomic status and sense of entitlement was found. Income had a direct effect on attitudes and behaviour, and moderated the effect of entitlement on attitudes towards violations. Sense of entitlement and socioeconomic status could be important predictors of driver behaviour and road crash involvement. Socioeconomic status has been overlooked in traffic research, and should be a topic of future

INTRODUCTION

1.1 BACKGROUND

A large body of research has investigated the association between individual difference variables and driver behaviour. Several studies suggest that personality variables are important in predicting driver behaviour (e.g. Dahlen & White, 2006; Nordfjærn & Rundmo, 2013; Oltedal & Rundmo, 2006; Schwebel, Severson, Ball, & Rizzo, 2006; Ulleberg & Rundmo, 2003). They show that certain personality traits can dispose individuals to disregard formal and informal rules, regulations and safe practices in traffic, exposing themselves and others to a higher risk of road crash involvement. Examples of personality variables that have shown to be related to driver behaviour and road crash involvement are sensation seeking and willingness to take risk (Jonah, 1997), normlessness (Iversen & Rundmo, 2002), and the Big Five factors (Dahlen & White, 2006; Schwebel et al., 2006). A personality trait that has yet to be examined in relation to driver behaviour is sense of entitlement—a facet of the broader concept of narcissism (Campbell, Bonacci, Shelton, Exline, & Bushman, 2004). Sense of entitlement has been found to predict a range of interpersonal consequences, including lack of cooperation with others, hostility, and self-serving behaviours. Based on this, it is of interest to examine whether this can be generalised to the context of road traffic and if sense of entitlement can predict different types of driver behaviour.

In addition to personality variables, sociodemographic variables are a set of individual difference variables that have been associated with driver behaviour and risk of road crash involvement. Male gender and low age have shown to be robust predictors of both self-reported driver behaviour and fatal road traffic crash involvement (e.g. Lonczak, Neighbors, & Donovan, 2007; Massie, Campbell, & Williams, 1995, 1997; Mesken, Lajunen, & Summala, 2002; Oltedal & Rundmo, 2006; Özkan & Lajunen, 2006). Less research exists on the relationship between socioeconomic status and driver behaviour. There seems to be a relationship be-

tween socioeconomic status and accident involvement (Kristensen, Kristiansen, Rehn, Gravseth, & Bjerkedal, 2012), but we do not know whether this relationship is mediated by driver behaviour or is the result of other factors. There is therefore a need for research that investigates the relationship between socioeconomic status and driver behaviour.

The aim of the present study is to examine the relationship between socioeconomic status, psychological entitlement and driver attitudes and behaviour. First, we will review research on dimensions or types of driver behaviour. We will then review research on behaviours associated with sense of entitlement and socioeconomic status. Hypotheses regarding the ways these variables might be related will be presented. Specifically we suggest that high socioeconomic status is associated with higher sense of entitlement, which again is associated with driver attitudes and behaviour. Finally, these hypotheses will be tested on a representative sample of the Norwegian public by means of a mail survey questionnaire. The results of the survey will be presented and discussed.

1.2 DIMENSIONS OF DRIVER BEHAVIOUR

In characterising risky driver behaviour, Reason, Manstead, Stradling, Baxter, and Campbell (1990) have suggested distinguishing between errors and violations as distinct types of aberrant driver behaviour. Errors are defined as the failure of planned actions to achieve their intended consequences, while violations are defined as deliberate deviations from safe practices. Examples of driver errors are failure to notice pedestrians crossing the street, breaking too quickly on slippery roads, or underestimating the speed of an oncoming vehicle when overtaking, leading to potentially dangerous situations. Examples of violations are deliberate unsafe behaviours such as exceeding the designated speed limit or tailgating. Errors and violations are assumed to be the result of different psychological mechanisms. According to Reason et al. (1990), driver errors can be accounted for by perceptual, attentional or information-processing characteristics of the driver, while violations

can be explained by social or motivational factors. The interest of this study is therefore to investigate predictors of violations, as we are mainly concerned with intentional behaviours.

Based on the distinction between errors and violations, Reason et al. (1990) have developed the Manchester Driver Behaviour Questionnaire (DBQ) to measure self-reported driver behaviour. Lawton, Parker, Manstead, and Stradling (1997) found that violations could be further distinguished into ordinary violations and interpersonally aggressive violations. While ordinary violations are thought to be mainly instrumentally motivated, aggressive violations have a strong emotional component, and involve retaliation or vengeful behaviour towards other road users.

Arguing that driving style includes both negative and positive behaviours, Özkan and Lajunen (2005) has developed an additional scale to the DBQ, intended to measure “positive” driver behaviours. The main intention behind positive behaviour in traffic is to “take care of the traffic environment or other road users, to help and to be polite” (Özkan & Lajunen, 2005, p. 357). These positive driver behaviours are not based on formal rules or regulations, or directly motivated by concerns for safety. The scale includes such items as “avoiding close following not to disturb the car driver in front” and “paying attention to puddle not to splash water on pedestrians or other road users”. They found that positive driver behaviour was negatively related to ordinary violations. It could be fair to assume safe and efficient driving is dependent on a certain degree of cooperation between drivers. When drivers do not cooperate, for instance by not giving right of way, not using turn signals, or act aggressively towards other road users, they create an unsafe driving environment. However, while this might not be reflected in an increased risk for the uncooperative driver, it could put other road users at risk. It is therefore of interest to investigate possible determinants of positive driver behaviour.

The DBQ has been used extensively in international research and has shown

to be valid across different cultures (Lajunen, Parker, & Summala, 2004; Özkan, Lajunen, Chliaoutakis, Parker, & Summala, 2006), but has rarely been applied to a Norwegian sample. It is therefore necessary to investigate the psychometric properties of the measure on a Norwegian sample to be able to compare the results across different countries.

Studies have shown that DBQ scores can reflect actual risk of road crash involvement, although some findings are inconsistent. Both violations and errors have been found to be associated with accident involvement (e.g. De Winter & Dodou, 2010; Parker, West, Stradling, & Manstead, 1995). Others have found no such association (Davey, Wishart, Freeman, & Watson, 2007; Stephens & Groeger, 2009). However, a meta-analysis of 174 studies that have investigated the association between DBQ and self-reported crashes found that both errors and violations were small, but significant, predictors of crash involvement (De Winter & Dodou, 2010). That intentional violations can predict road crash risk involvement have important implications, as this suggests that a target for intervention should be the attitudes and motivations that underly risky driving behaviour.

1.3 PREDICTORS OF DRIVER BEHAVIOUR

Male gender and lower age have been found to be important predictors of self-reported driver behaviour and road crash involvement (e.g. Lonczak et al., 2007; Massie et al., 1995, 1997; Mesken et al., 2002; Oltedal & Rundmo, 2006; Özkan & Lajunen, 2006). Men also report more anger than women when confronted with obstructive behaviour by other road users (Lawton et al., 1997; Parker, Lajunen, & Summala, 2002). That men act more aggressively than women has been explained by men having more macho personality patterns (Krahé & Fenske, 2002). Also, Özkan and Lajunen (2005) found that men exhibited less positive behaviour than women in traffic.

Oltedal and Rundmo (2006) found that excitement-seeking, aggression, irritability and normlessness were significant predictors of risky driving behaviour,

and together with gender explained 37 per cent of the variance. Dahlen and White (2006) showed that the Big Five traits openness, emotional stability and agreeableness, in addition to sensation seeking predicted driver behaviour in a sample of college students. Schwebel et al. (2006) also found that sensation-seeking predicted driver behaviour, as measured with the DBQ. Machin and Sankey (2008) reported that the variable that was most closely related to antisocial behaviour in traffic was altruism, measuring concern for the welfare of others. The influence of personality on driver behaviour seems to mainly be mediated by attitudes and risk perception (Ulleberg & Rundmo, 2003).

1.4 NARCISSISM AND SENSE OF ENTITLEMENT

There is no commonly agreed upon definition of narcissism in the literature, and it has been conceptualised differently in different traditions or fields within psychology (see e.g. Ackerman et al., 2010; Miller, Lynam, & Keith, in press; Raskin & Terry, 1988). The term has a long history within psychoanalytic and psychodynamic theory, and features prominently in the works of Freud, Kohut and Kernberg (Ackerman et al., 2010). Even though their accounts of the etiology and manifestations of narcissism are somewhat divergent, common element in the different conceptualisations of narcissism in the clinical literature is that it involves a sense of being entitled or deserving (Ackerman et al., 2010). Sense of entitlement is one of the criteria for narcissistic personality disorder in DSM 5, where it is defined as an unreasonable expectation of especially favourable treatment or automatic compliance with his or her expectations.

Within the social-personality perspective narcissism is conceptualised as a dimensional personality trait that is not necessarily pathological (Miller & Campbell, 2008). The concept seems to consist of a variety of heterogeneous traits, with a mix of adaptive and maladaptive behaviours (Ackerman et al., 2010). Based on the description of Narcissistic Personality Disorder in DSM-III, Raskin and Terry (1988) have developed the Narcissistic Personality Inventory. Using factor

analytical statistical techniques, they identified seven different trait components to narcissism, which, in addition to sense of entitlement, included authority, exhibitionism, superiority, vanity, exploitativeness and self-sufficiency. Attempts at reproducing this factor structure have shown mixed results. Emmons (1984) found a four factor solution, while Kubarych, Deary, and Austin (2004) found evidence for both a two- and three-factor solution. Ackerman et al. (2010) found support for a three-factor solution (leadership/authority, grandiose/exhibitionism, and entitlement/exploitativeness), finding that these three dimensions related differently to different criterion variables. Interestingly, they suggest that while the two first dimensions can be adaptive and related to positive outcomes, the entitlement/exploitativeness factor was mainly related to negative outcomes. They found that a high score on the entitlement/exploitativeness factor was linked with increased anger and hostility, lower levels of the Big Five trait agreeableness, lower levels of social adjustment and higher levels of negative behavioural interactions. They suggest that the entitlement/exploitativeness factor constitutes the “socially toxic” aspects of the Narcissistic Personality Inventory.

There are several problems with measuring entitlement using the NPI. The scale consists of only four items measuring entitlement, and these items are in a dichotomous forced-choice format. In addition, these items has shown poor alpha coefficient and low average inter-item correlations (Ackerman et al., 2010). An additional criticism that has been raised is that the items lack face validity related to measuring entitlement (Campbell et al., 2004). It is therefore necessary to find appropriate alternatives to measuring sense of entitlement in a non-clinical population.

As an alternative NPI, Campbell et al. (2004) has developed the Psychological Entitlement Scale (PES) specifically aimed at measuring individual differences in sense of entitlement. The authors defines psychological entitlement as a stable and pervasive sense that one deserves more and is entitled to more than others. It is experienced across situations and is reflected in actual behaviours. Applied to

non-clinical populations, their study showed that their scale was psychometrically sound and had acceptable test-retest reliability. The scale seems to measure sense of entitlement as a trait normally distributed within the population. PES was found to be inversely correlated with the Big Five traits Agreeableness and Emotional stability, but was not significantly related to the other Big Five traits Surgency/Extraversion, Conscientiousness and Intellect/Openness. To the authors knowledge, the psychometric qualities of this measure has not previously been investigated in a Norwegian sample.

Campbell et al. (2004) conducted several studies to investigate possible interpersonal consequences associated with psychological entitlement. In one study, participants were given the opportunity to take candy intended for children. As predicted, participants with higher entitlement scores took more candy. They also showed that individuals who scored higher on PES were less cooperative, more competitive and reported more greed in a commons dilemma showing a lack of concern for the welfare of others. In summary, individuals with a high sense of entitlement are less inclined to abide by the rules, norms or moral standards that normally govern social interactions.

Traffic is a highly regulated environment, with many informal and formal rules that guides behaviour in different situations. It is therefore of interest to examine if individuals high in sense of entitlement will be less inclined to follow these rules, and more concerned about fulfilling their own needs and motives in traffic as these are seen as more important. Examples of this is getting to their destination fast and efficiently, at the cost of other road users. At the same time, they might be less concerned with the safety of other road users. This could be important in relation to traffic safety, as lack of concern for other road users have been found to be associated with crash involvement (Assum, 1997).

Scoring higher on the PES was also associated with more aggression in response to criticism (Campbell et al., 2004). The assumption is that since individuals high in entitlement feel that they deserve favourable treatment from others, they will

act aggressively when possible if this expectation is not met. Narcissism have been associated with anger following challenges to the individuals self-esteem or situations with perceived ego threat. Using the term “narcissistic rage”, Kohut (1972) suggests that narcissists are sensitive to perceived wrongdoings against themselves and feels a strong need for revenge to undo the injury. Baumeister, Bushman, and Campbell (2000), Bushman and Baumeister (1998) and (Bushman et al., 2009) have found that the combination of narcissistic traits and egoistic insults leads to exceptionally high levels of aggression towards the source of the ego threat. Individuals high in the entitlement/exploitativeness subtrait of the narcissistic personality have been found to be prone to many forms of aggressive behaviour, including verbal aggression and violence across different interpersonal contexts (Reidy, Zeichner, Foster, & Martinez, 2008).

Situations arise in traffic that can elicit aggression due to such expectations. Parker et al. (2002) found that the single behaviour most likely to provoke anger was when another driver takes the parking spot the driver has been waiting for, and that this situation was likely to provoke an angry reaction in the driver. This situation could conceivably elicit anger also in individuals low in sense of entitlement, but suggest that situations where the driver perceive that they are denied or prevented from achieving something they deserve or is entitled to is particularly likely to provoke anger in individuals high in sense of entitlement. As individuals high in entitlement could feel entitled more often, they could also act aggressively behind the wheel more frequently than others.

Based on the research presented above, it is of interest to investigate whether the behavioural consequences of sense of entitlement can be generalised to the context of traffic behaviour, and investigate whether entitlement could explain rule violations, aggressive behaviour, and a lack of positive and considerate behaviour towards other road users.

1.5 SOCIOECONOMIC STATUS, DRIVER BEHAVIOUR AND CRASH INVOLVEMENT

Social position or socioeconomic status or position has been used to explain differences in behaviour. The concept has been operationalised in various ways, based on objective indicators such as income levels and educational achievement, or subjectively, based for example on the individuals sense of where he or she stands in relation to others (Oakes & Rossi, 2003). Subjective socioeconomic status has been found to mediate the relationship between objective indicators and different outcome variables (Demakakos, Nazroo, Breeze, & Marmot, 2008).

Both high and low socioeconomic status can plausibly be linked to deviant or anti-social behaviour (Kraus, Piff, Mendoza-Denton, Rheinschmidt, & Keltner, 2012). On the one hand, low socioeconomic status has been associated with higher levels of deviant or aberrant behaviour. Lower class individuals have fewer resources, less education, and restricted access to social institutions and social support. Piff, Kraus, Côté, Cheng, and Keltner (2010) suggests that this might lead to the expectation that lower class individuals might be more focused on their own needs rather the needs of others, and will act in a less prosocial manner than upper class individuals. On the other hand, since individuals with a lower position are more dependent on others to achieve their goals, they will be more aware of other individuals in their social environment, and thus will act more pro-socially than individuals with a higher position (Kraus & Keltner, 2009; Kraus, Piff, & Keltner, 2009, 2011).

Studies have shown that in general, lower class individuals have been found to be more helping, compassionate and empathic towards others (see Kraus et al., 2012, for review). Measuring socioeconomic status with the McCarthy scale of subjective socioeconomic status (Adler, Epel, Castellazzo, & Ickovics, 2000), Piff et al. (2010) found that upper-class individuals in general tended to act more unethically and less prosocially compared to lower-class individuals. These findings have also been generalised to road traffic behaviour. In two naturalistic studies

using motor vehicle as an indicator of social rank and wealth, Piff et al. (2010) found that upper-class individuals were more likely than lower-class individuals to cut off other vehicles at intersections and to cut off pedestrians at crosswalks. This could reflect a lowered attention to the needs and safety of other road users and a higher priority given to his or her own needs and motives in the situation among individuals with a high socioeconomic status.

Low socioeconomic status has been found to be associated with higher risks of road crash involvement, both in Norway and other countries (Factor, Yair, & Mahalel, 2010; Kristensen et al., 2012). There are two possible explanations for this relationship. One explanation is differences in levels of risk exposure, that is, a higher amount of structural risk is imposed on low status individuals compared to high status individuals (Factor et al., 2010). Another possibility is that low status individuals engage in more risky driver behaviour than high status individuals, and therefore expose themselves to higher levels of risk. Interestingly, Piff, Stancato, Côté, Mendoza-Denton, and Keltner (2012) suggest that higher socioeconomic status is associated with a wide range of unscrupulous and deviant behaviour, including in the context of driver behaviour. This could imply that both individuals with a low and high socioeconomic position engage in more deviant behaviours in traffic than individuals with a median socioeconomic position. It is therefore of interest to investigate the possible association between socioeconomic position and driver attitudes and self-reported driver behaviour. This relationship has received little attention, and there is a paucity of studies investigating socioeconomic status related to driver behaviour and road crash risk involvement.

1.6 THE PRESENT STUDY

The aim of the present study is to examine the relationship between socioeconomic status, psychological entitlement and driver attitudes and behaviour. Based on previous research, the following hypotheses are proposed and tested in this study:

- Sense of entitlement is associated with favourable attitudes towards violations and speeding, more ordinary violations and aggressive violations, and less positive behaviour in traffic.
- Sense of entitlement is a function of higher subjective and objective socioeconomic status.
- Income moderates the effect of sense of entitlement on attitudes and driver behaviours.

As has been shown, individuals high in sense of entitlement does not abide by the rules and norms that govern normal social interactions, and see themselves as exempt from the rules that usually governs social interactions due to their perceived social status and significance. They also show increased levels of aggression in situations with perceived ego threat, that is, they act aggressively when they perceive that they are not treated in a favourable fashion by others. In addition, sense of entitlement is associated with less cooperation and concern for others. This involves a pattern of more negative interpersonal behaviour and less positive behaviours. The main aim of the study is to examine if this behaviour can be generalised to the context of traffic behaviour and test the hypothesis that individuals scoring higher on sense of entitlement will also score higher on positive attitudes towards violation traffic rules and regulations, report more traffic violations, more aggressive behaviour and less positive behaviour toward other road users.

The current study suggest that there could be a link between the behaviour displayed by high class individuals and the behaviour associated with increased levels of entitlement. To the authors knowledge, no previous studies have examined the relationship between socioeconomic position and sense of entitlement. Previous studies have shown that socioeconomic status gives rise to specific patterns of traits and behaviours (Kraus & Keltner, 2009; Kraus et al., 2009). It could be that the particular social environment inhabited by high status individuals gives rise to higher levels of entitlement, and that this again influences driver attitudes and driver be-

haviour. Therefore, a further aim is to examine the hypothesis that entitlement is a function of high objective and subjective socioeconomic status. Specifically expect that subjective socioeconomic status predicts sense of entitlement, and that it mediates the relationship between objective indicators (income and education) on entitlement. An alternative hypothesis is that income moderates the effect of psychological entitlement on attitudes and behaviour. It could be that psychological entitlement only leads to violations and other kinds of aberrant driver behaviour if the relative cost of this behaviour is low. Specifically, the consequences of getting fined for traffic violations are relatively larger for an individual with a lower income compared to an individual with a high income.

To the authors knowledge, neither PES nor DBQ has has been tested and validated on a Norwegian sample. A precondition for interpreting the results will be to validate the measurement instruments. Consequently, an additional aim of the current paper is to investigate the reliability and validity of these measures.

METHOD

2.1 SAMPLE

The results of the study are based on a self-completion mail questionnaire carried out in 2012 among a random sample of 1000 individuals above 18 years of age. The sample was obtained from the Norwegian population registry. A total of 173 questionnaires were returned, giving a response rate of 17.3%. Comparatively low response rates are common in population studies targeting the population (Castanier, Paran, & Delhomme, 2012; Moan, 2013). The response rate could in part be due to the sample containing both individuals with and without a drivers' license, as this could not be ascertained from the information in the population registry. About 80% of Norwegians above 18 years of age have a drivers license (Statistics Norway, 2013). Further, there was no upper age limit on the sample. Two individuals reported that their eyesight was too poor to be able to read the questionnaire and therefore could not respond to the survey. In general, the sample and population had similar demographic characteristics, though with a somewhat lower response rate among younger individuals.

Missing data were handled in two steps. In the first step, eight respondents were excluded from the study as they did not have a drivers license and a further six respondents were excluded due to missing demographic variables, for a total of 14 excluded responses. In the second step, the remaining missing variables were estimated using the expectation-maximisation-function in SPSS 19. This allowed retaining more responses compared to using listwise deletion. There were no more than 5% missing for any single variable, and there was not any apparent systematic missing variables.

Among the remaining 159 respondents there were 72 (45%) female respondents and 87 (55%) male respondents. About 35% of the respondents had an income below 350,000 NOK, 36% had an income between 350,000 NOK and 500,000 NOK, and 39% had an income of 500,000 NOK or above. About 45% respondents

had no higher education, while 55% reported having achieved a bachelors degree or higher.

2.2 QUESTIONNAIRE

Indicators of socioeconomic status used in the study were income, education and subjective socioeconomic status measured using the MacArthur Scale of Subjective Social Status (Adler et al., 2000). The scale intends to measure the respondents subjective sense of socioeconomic status by presenting a “social ladder” and asking the respondent to place an “X” on the rung where he or she sees him or herself compared to other people. The version of the scale where the respondents are to compare themselves with other people on a national scale was used.

Psychological Entitlement Scale

Psychological entitlement was measured using the Psychological Entitlement Scale (PES). The scale consists of nine items. Ratings were given on a five-point Likert-type scale from (1) strongly disagree to (5) strongly agree (Campbell et al., 2004) (see Table A.1).

Driver attitudes

Attitudes was measured using the “Attitudes towards rule violations and speeding”-scale (Iversen & Rundmo, 2004). The scale consists of eleven items such as “taking chances and breaking a few rules does not necessarily make one a bad driver” and “it is acceptable to drive when traffic lights shifts from yellow to red”. A high score on the attitude scale intends to measure tendencies to positively evaluate violations of traffic rules (see Table A.2).

Driver behaviour

Behaviour was measured using the ordinary violations-scale and aggressive violations-scale from the DBQ, in addition to the positive behaviour scale (Özkan & Lajunen, 2005). A high score on the behaviour scale intends to measure that the respondents more frequently engages in these types of behaviours. Ratings for both attitudes and behaviour were given on a five-point Likert-type scale from (1) strongly disagree to (5) strongly agree (see Tables A.3, A.4 and A.5).

2.3 DATA ANALYSIS

Data preparation and analysis was carried out using IBM SPSS version 19 and R statistical software. Latent variable analysis was carried out using the lavaan-package for R (Rosseel, 2012). Analysis of reliability, in addition to confirmatory factor analysis, was conducted to test the reliability and factor structure of the measurement scales. Maximum likelihood with bootstrapped standard errors and test statistics (Bollen-Stine) on the covariance matrix was used for parameter estimation. Bootstrapped standard errors were also used in the linear regression analysis.

Different cut-off criteria for evaluating model fit are in use (Jackson, Gillaspay, & Purc-Stephenson, 2009). Hu and Bentler (1999) have advocated the use of relatively strict criteria for incremental fit indices (CFI and TLI above .95, RMSEA below .06 and SRMR below .08). Others (e.g. Marsh, Hau, & Wen, 2004) have argued that this could lead to incorrect rejections of acceptable models and imply that many currently used instruments in psychological research are unacceptable. In this study, the more liberal criteria (CFI or TLI above .90, RMSEA below .08 and SRMR below .11) were used as cut-off criteria for acceptable model fit.

Mediation analysis was carried out using lavaan for R with 5000 bootstrap resamples to derive robust standard errors (e.g. Hayes, 2008). Moderation analysis was carried out by constructing a latent variable including the multiplicative terms of all possible products of the predictor construct and moderating variable (e.g.

Little, Bovaird, & Widaman, 2006). Indicator variables sharing a common variable in their composition were allowed to covary.

RESULTS

3.1 RELIABILITY AND DESCRIPTIVE STATISTICS

All scales showed acceptable Cronbach's α 's, above the commonly accepted criteria of .70 (See Table 3.1). However, analysis suggested that removing one item from the original nine items ("I do not necessarily deserve special treatment") would improve the Cronbach's α of the Psychological Entitlement Scale slightly from .88 to .89 and the average corrected inter-item correlation from .46 to .50. This item had the lowest factor loading in the original study (Campbell et al., 2004), but is also the only reverse coded item in the scale. The item was not used in further analysis. The scale had a mean score of 2.26 ($SD = 0.69$).

For the scale measuring attitudes, two items pertaining to safe driving and weather conditions were removed due to low internal consistency, leaving nine attitude items for further analysis. The final scale showed showed a Cronbach's α of .81 and a mean score of 2.60 ($SD = 0.67$). The scale measuring ordinary violations had a Cronbach's α of .81 and a mean score of 1.90 ($SD = 0.48$). The Cronbach's α of the scale measuring positive behaviour was borderline acceptable with a value of 0.71 and a mean of 3.92 ($SD = 0.45$).

Table 3.1: Means, standard deviations (SD), Cronbach's α 's and average corrected inter-item correlations for scales

Statistic	Mean	SD	Cronbach's α	Average r
Psychological Entitlement Scale	2.26	0.69	.88	.50
Attitudes towards violations	2.60	0.67	.81	.32
Ordinary violations	1.90	0.48	.81	.30
Aggressive violations	1.59	0.61	.75	.51
Positive violations	3.92	0.45	.71	.20

$n = 159$, range 1 to 5.

Table 3.2: Correlations between Psychological Entitlement, Attitudes towards violations and the DBQ scales Ordinary violations, Positive behaviour and Aggressive violations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Psychological entitlement scale									
(2) Attitudes towards violations	.36***								
(3) Ordinary violations	.36***	.62***							
(4) Aggressive violations	.33***	.41***	.43***						
(5) Positive behaviour	-.39***	-.39***	-.42***	-.33***					
(6) Income	-.02	.10	.20**	.09	-.12				
(7) Education	-.07	-.05	.14	.06	.02	.40***			
(8) Gender	-.03	.22**	.22**	.03	-.08	.40***	.04		
(9) Age	-.15	-.17*	-.35***	-.19*	.21**	.04	-.05	.21**	
(10) Subj. socioeconomic status	-.20**	-.11	.03	-.01	.06	.43***	.34***	.09	-.10

n = 159, *p<0.05; **p<0.01; ***p<0.001

3.2 CORRELATIONS BETWEEN ATTITUDE AND BEHAVIOUR SCALES

The pairwise correlations between the calculated means of the scales included in the study were calculated (see Table 3.2). Contrary to expectations, sense of entitlement and subjective socioeconomic status were negatively correlated ($r = -.20^{**}$, $p < .01$). As expected, psychological entitlement correlated positively with attitudes towards violations ($r = .36$, $p < .001$), ordinary violations ($r = .36$, $p < .001$) and aggressive violations ($r = .33$, $p < .001$), and correlated negatively with positive driver behaviour ($r = -.39$, $p < .001$). Attitudes towards violations correlated positively with ordinary violations ($r = .62$, $p < .001$) and aggressive violations ($r = .41$, $p < .001$), and negatively with positive behaviour ($r = -.39$, $p < .001$) as expected. Attitudes was also correlated with gender ($r = .22^{**}$, $p < .01$) and age ($r = -.17$, $p < .05$). Ordinary violations and aggressive violations correlated positively ($r = .43$, $p < .001$), while ordinary violations and positive behaviour correlated negatively ($r = -.29$, $p < .001$),

as was expected. Further, ordinary violations correlated with income ($r = .20$, $p < .01$), gender ($r = .22^{**}$, $p < .01$) and age ($r = -.35$, $p < .001$). As expected, aggressive violations were negatively correlated with positive behaviour ($r = -.33$, $p < .01$) and age ($r = -.19$, $p < .05$), while positive violations were positively correlated with age ($r = .21$, $p < .01$). Income was correlated with education ($r = .40$, $p < .001$), gender ($r = .40$, $p < .001$) and subjective socioeconomic status ($r = .43$, $p < .001$). Education was also significantly correlated with socioeconomic status ($r = .34$, $p < .001$). Contrary to expectations, neither attitudes ($r = -.11$, $p = \text{n.s.}$), ordinary violations ($r = .03$, $p = \text{n.s.}$), aggressive violations ($r = -.01$, $p = \text{n.s.}$) nor positive behaviour ($r = .06$, $p = \text{n.s.}$) were significantly correlated with subjective socioeconomic status.

3.3 CONFIRMATORY FACTOR ANALYSIS OF SENSE OF ENTITLEMENT, ATTITUDES AND BEHAVIOUR

Confirmatory factor analysis was carried out separately on the PES, the attitude scale, and the DBQ-dimensions (see Table 3.3). The analysis on the remaining eight items of the Psychological Entitlement Scale suggested excellent fit ($\chi^2 = 17.74$, $df = 16$, $p = .50$., $\chi^2/df = 1.11$, CFI = .99, TLI = .99, RMSEA = .026, 95% CI = .000-.080, SRMR = .025, see Figure 3.1). This supports that psychological entitlement can be measured as a single dimension. The fit-statistics for the attitude scale were also satisfactory ($\chi^2 = 35.18$, $df = 36$, $p = .15$, $\chi^2/df = 0.92$, CFI = 0.97, TLI = .95, RMSEA = .058, 95% CI = .001-.094, SRMR = .055, see Figure 3.2). Confirmatory factor analysis was also carried out on the three dimensions of the Driver Behaviour Questionnaire included in the study. The analysis showed a poor fit of the three-factor measurement model to the data ($\chi^2 = 414.28$, $df = 246$, $p < .001$, $\chi^2/df = 1.68$, CFI = .80, TLI = .77, RMSEA = .066, 95% CI = .054-.076, SRMR = .087). Inspecting the residual covariances and modification indices suggested that the items measuring positive behaviour was not well differentiated from ordinary violations and aggressive violations. Removing any single

Table 3.3: Confirmatory factor analysis on the Psychological Entitlement Scale, Attitudes towards rule violations and speeding, and the Driver Behaviour Questionnaire (DBQ).

Statistics	χ^2	df	χ^2 df	CFI	TLI	RMSEA	SRMR
Psychological Entitlement Scale (PES)	17.74	16	1.11	.99	.99	.026	.025
Attitudes towards violations	35.18	36	0.92	.97	.96	.058	.055
Driver behaviour questionnaire (DBQ)	107.60	88	1.22	.96	.95	.037	.076

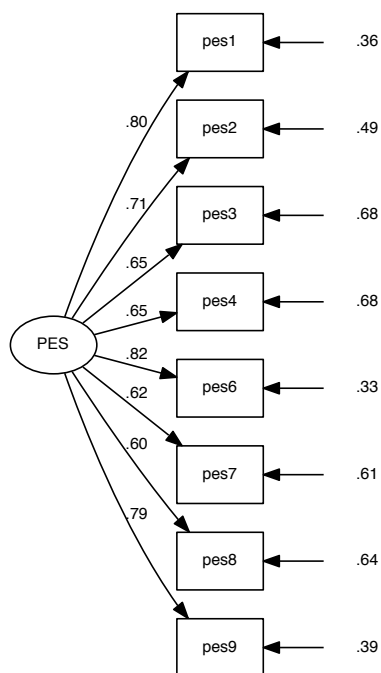
Bollen-Stine bootstrapped p-values for model fit statistics. Positive behaviour not included.

item measuring positive behaviour did not improve the fit indices to acceptable levels. Removing the items measuring positive behaviour entirely from the analysis, leaving only ordinary violations and aggressive violations in the model, greatly improved the results ($\chi^2 = 107.60$, $df = 88$, $p = .08$, $\chi^2/df = 1.22$, $CFI = .96$, $TLI = .95$, $RMSEA = .037$, $95\% CI = .000-.059$, $SRMR = .076$, see Figure 3.3). As the positive behaviour-scale showed a poor fit to the data, the scale was not used in the subsequent SEM-analysis, but was used in a separate regression analysis.

3.4 GROUP DIFFERENCES IN ATTITUDES AND DRIVER BEHAVIOUR

Analysis of variance was carried out to investigate differences in scores in attitudes, ordinary violations, aggressive violations and positive behaviour between income, education and gender groups. The results are shown in Table 3.4. There were significant overall differences between income groups in ordinary violations and positive behaviour, but not in attitudes and aggressive violations. Bonferroni post-hoc analysis showed significant differences between only the median and high income groups for the ordinary violations scale ($p < .05$), with the higher income group reporting more violations than the median income group. There were no differences in any of the scales between the groups without and with higher education. For gender, there were significant differences between men and women for attitudes, violations and positive violations, with males reporting more positive attitudes towards violations and speeding, more ordinary violations and less positive

Figure 3.1: Confirmatory factor analysis of Psychological Entitlement Scale with factor loadings and residual covariances.



behaviour. There were no differences in reported aggressive violations between genders.

3.5 RELATIONSHIP BETWEEN SOCIOECONOMIC STATUS, SENSE OF ENTITLEMENT, ATTITUDES AND DRIVER BEHAVIOUR

The model tests the hypothesis that higher socioeconomic status increases individuals sense of entitlement, which in turn influences attitudes and driver behaviour. In the model, objective indicators of socioeconomic status (income and education) was allowed to predict subjective socioeconomic status, which in turn was allowed to predict sense of entitlement. Sense of entitlement was allowed to predict attitudes endorsing violations in traffic, which then predicted behaviour.

3.5. Relationship between socioeconomic status, sense of entitlement, attitudes and driver behaviour

Figure 3.2: Confirmatory factor analysis of Attitudes towards violations and speeding with factor loadings and residual covariances.

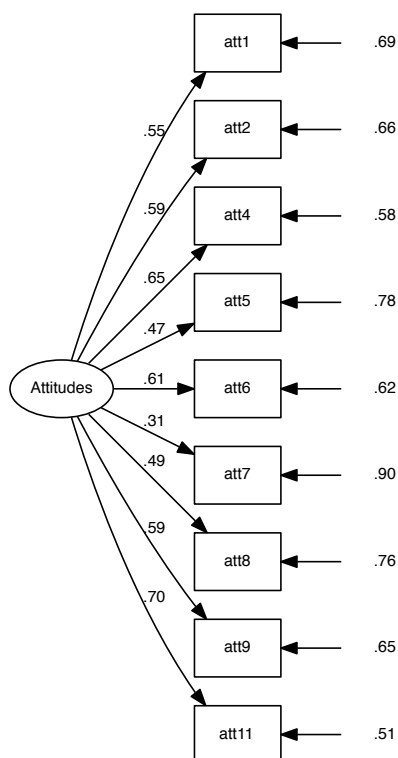
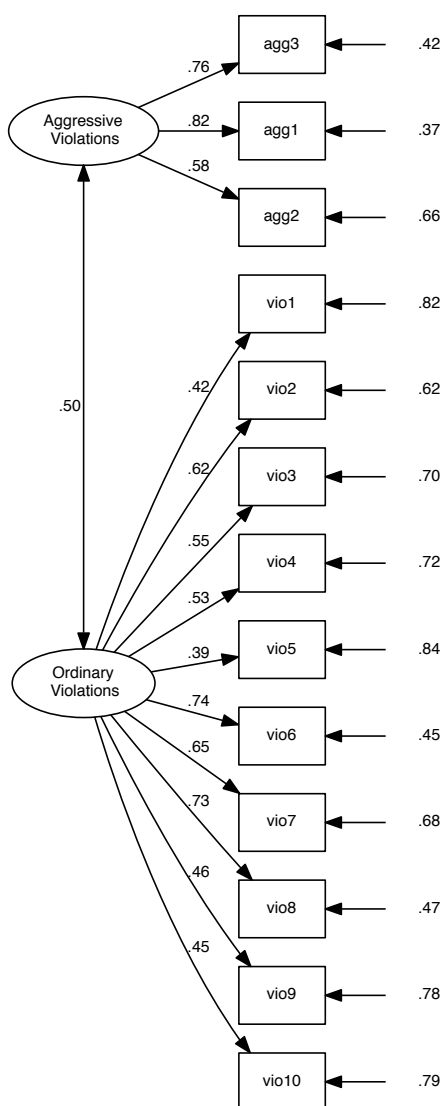


Table 3.4: Analysis of variance showing mean differences in attitudes, ordinary violations, aggressive violations and positive behaviour.

	Income			F	Education			F	Gender		F
	Low	Med	High		No higher	Higher	Female		Male		
Attitudes	2.61	2.43	2.69	1.92	2.64	2.50	1.54	2.37	2.73	9.37**	
Violations	1.88	1.75	2.03	4.30*	1.84	1.90	0.63	1.74	1.99	11.17***	
Aggression	1.54	1.48	1.73	1.61	1.55	1.58	0.09	1.56	1.58	0.03	
Positive	3.85	4.04	3.84	3.03*	3.94	3.89	0.32	4.01	3.84	4.64*	

n = 159, range 1-5, *p<0.05; **p<0.01; ***p<0.001

Figure 3.3: Confirmatory factor analysis of DBQ (ordinary violations and aggressive violations) with factor loadings and residual covariances.



3.5. Relationship between socioeconomic status, sense of entitlement, attitudes and driver behaviour

The first model showed adequate fit to the data ($\chi^2 = 617.72$, $df = 476$, $p = .03$, $CFI = .92$, $TLI = .91$, $RMSEA = .043$, $95\% CI = .033-.053$, $SRMR = .083$). The modification indices suggested adding direct paths from income to attitudes towards violations, from education to ordinary violations and from sense of entitlement to aggressive violations. As there were no theoretical objections to adding these paths, they were added in a revised model. This model showed slightly improved fit-statistics ($\chi^2 = 596.58$, $df = 473$, $p = .38$, $CFI = .93$, $TLI = .92$, $RMSEA = .041$, $95\% CI = .029-.050$, $SRMR = .077$). The final model with standardised coefficients is shown in Figure 3.4. As predicted, income ($\beta = .36$, $p < .001$) and education level ($\beta = .19$, $p < .05$) were positively associated with subjective socioeconomic status, and explained a total of 22 per cent of the variance in subjective socioeconomic status. Contrary to expectations, subjective socioeconomic status was negatively associated with sense of entitlement ($\beta = -.20$, $p < .01$). In addition, subjective socioeconomic status predicted only 5 per cent of the variance in sense of entitlement. Sense of entitlement ($\beta = .38$, $p < .01$) and income ($\beta = .17$, $p < .05$) were positively associated with attitudes towards violations, together explaining 16 per cent of the variance. Attitudes towards violations and sense of entitlement were positively associated with aggressive violations, together explaining 63 per cent of the variance. Ordinary violations was predicted by attitudes towards violations ($\beta = .77$, $p < .001$) and education ($\beta = .18$, $p < .05$), together explaining 37 per cent of the variance.

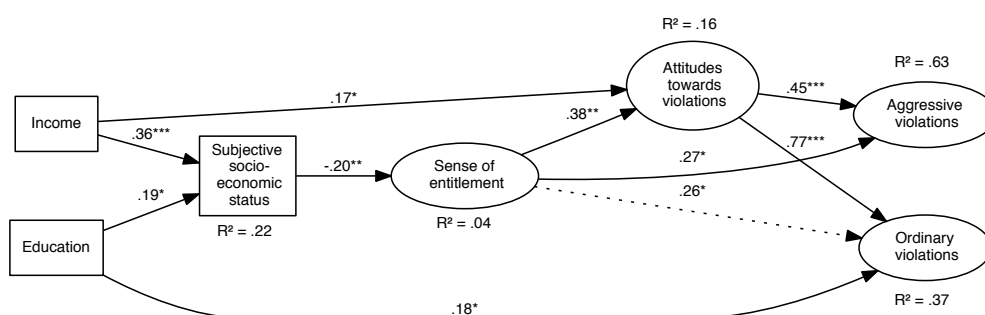


Figure 3.4: Structural equation model showing relationship between socioeconomic status, sense of entitlement and driver attitudes and behaviour. Indicators of latent variables not are not shown.

($\beta = .18, p < .05$). These variables explained 63 per cent of the variance in ordinary violations. Sense of entitlement ($\beta = .27, p < .05$), together with attitudes towards violations ($\beta = .45, p < .001$), explained 37 per cent of the variance in aggressive violations.

Due to the poor fit when including positive behaviour, this dimension was not included in the structural equation model. For reasons of completeness we nevertheless wanted to examine this dimension in relationship with socioeconomic status and sense of entitlement. This was carried out using regression analysis with bootstrapped standard errors. In this analysis, high and low income were added as a dummy variables. As can be seen from Table 3.5, as predicted sense of entitlement was negatively related to positive behaviour ($\beta = -.35, p < .001$). Further, higher income was associated with less positive behaviour ($\beta = -.20, p < .05$). Finally, age was significantly related to positive behaviour ($\beta = .17, p < .05$).

Attitudes as mediator of entitlement on behaviour

Sense of entitlement only directly predicted aggressive violations and not ordinary violations in the model. Further analysis was carried out to investigate whether there was an effect of sense of entitlement on ordinary violations mediated through attitudes towards violations. Mediation analysis using 5000 bootstrapped resamples found a significant indirect effect of sense of entitlement on ordinary violations mediated through attitudes towards violations ($\beta = .26, p < .05$)

Income as moderator of sense of entitlement

To investigate the hypothesis that income moderates the effect of sense of entitlement on attitudes and driver behaviour, attitudes, ordinary violations and aggressive violations were plotted on sense of entitlement by the three income groups. As can be seen in figures 3.5, 3.6 and 3.7), a mediation effect was only evident when predicting attitudes towards violations. That is, the association between sense of

3.5. Relationship between socioeconomic status, sense of entitlement, attitudes and driver behaviour

Table 3.5: Positive behaviour regressed on psychological entitlement, income, education level, gender and age.

	Positive behaviour		
	B	SE	β
Constant	4.21***	0.19	
Psychological entitlement	-0.19***	0.05	-.35
Low income	-0.05	0.07	-.06
High income	-0.17*	0.07	-.20
Education level	0.03	0.06	-.04
Gender	-0.05	0.06	-.13
Age	0.01*	0.00	.17
R ²		.16	
Adjusted R ²		.12	
Residual Std. Error		0.418 (df = 152)	
F Statistic		4.67*** (df = 6, 152)	

n = 159, *p<0.5; **p<0.01; ***p<0.001

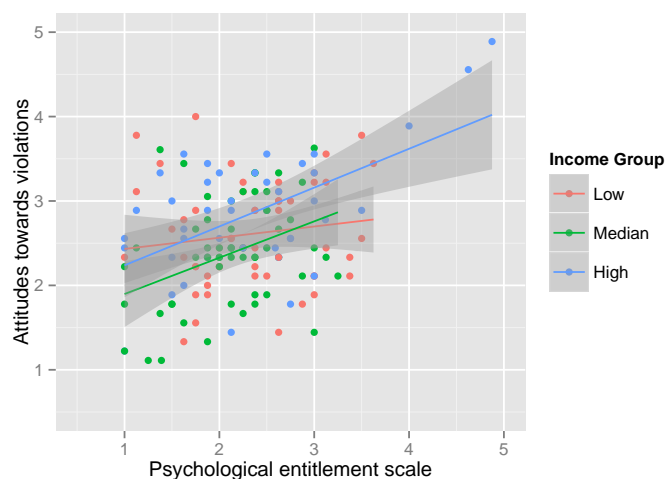


Figure 3.5: Plot of attitudes towards traffic violations on sense of entitlement in low, median and high income groups with bootstrapped 95 per cent confidence intervals.

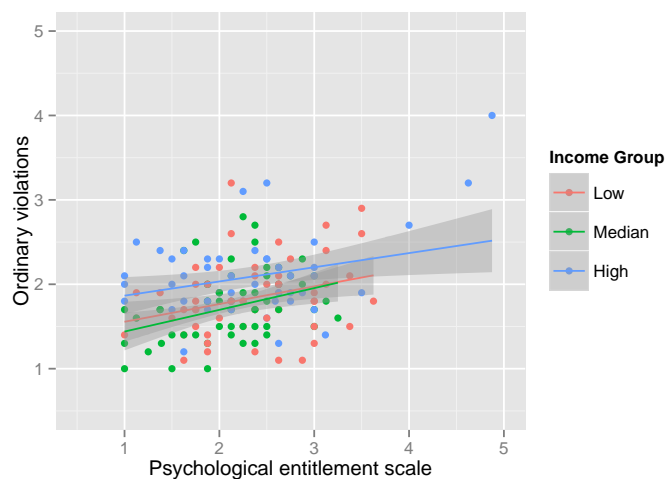


Figure 3.6: Plot of ordinary violations on sense of entitlement in low, median and high income groups with bootstrapped 95 per cent confidence intervals.

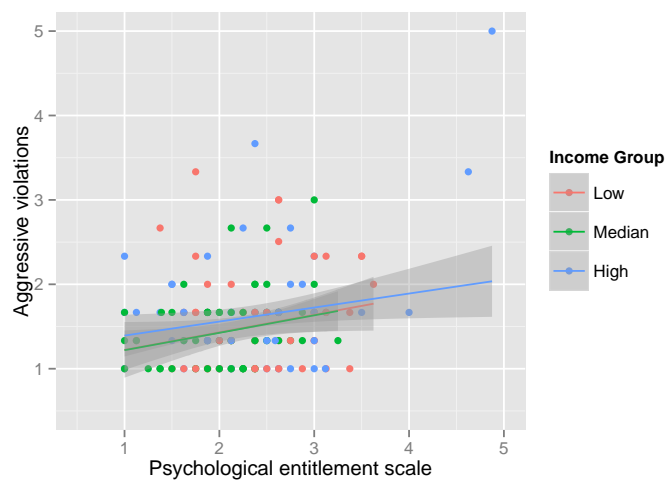


Figure 3.7: Plot of aggressive violations on sense of entitlement in low, median and high income groups with bootstrapped 95 per cent confidence intervals.

entitlement and attitudes towards traffic violations were stronger among high income respondents compared to low income respondents. The mediation effect was confirmed by statistical analysis: When attitudes were regressed on income, sense of entitlement and the latent variable modelling the interacting between income and sense of entitlement, only the interaction variable reached significance ($\beta = .52, p < .05$), while sense of entitlement ($-.10, p = n.s.$) and income ($\beta = .12, p = n.s.$) were not significant predictors. There were no significant moderating effect of income on the effect of entitlement on violations and aggressive behaviour.

DISCUSSION

The present study investigated the relationships between socioeconomic status, sense of entitlement and driver attitudes and behaviour. The main hypothesis of the current study was that sense of entitlement is related to driver attitudes towards violations and speeding, ordinary violations, aggressive violations and positive behaviour. Based on previous research, the study investigate the hypothesis that individuals with a higher sense of entitlement are less concerned about adhering to formal and informal rules in traffic. The assumption is that they might be aware of what the rules are, but see themselves as exempt from these rules due to their perceived special status.

The results of the study supports this hypothesis, finding that sense of entitlement is associated with attitudes towards rule violations in traffic and self-reported violations. This is in accordance with previous research that shows that narcissism in general, and sense of entitlement in particular, is associated with negative outcomes across a range of different situations and social behaviours by disregarding established norms of behaviour (Ackerman et al., 2010; Campbell et al., 2004; Miller et al., in press). Sense of entitlement directly predicted attitudes, while the influence of entitlement on ordinary violations was mediated by attitudes. This is in line with previous work finding that personality can influence behaviour through attitudes (Ulleberg & Rundmo, 2003).

Entitlement was significantly related to aggressive violations. Previous research has shown that entitlement is related to aggressive behaviour following ego threat (Campbell et al., 2004) and increased anger and hostility (Ackerman et al., 2010). Attitudes did not fully mediate the relationship between PES and aggressive violations, and there was a direct relationship between PES and aggressive violations. This is not surprising, as the scale measuring attitudes towards violations does not purport to measure attitudes towards aggressive behaviour.

Regression analysis showed that individuals high in sense of entitlement re-

ported engaging in less positive behaviour towards other road users. This is in line with previous research that shows that individuals high in entitlement are less concerned about the welfare of others, and are less likely to engage in behaviours that only benefit others and not themselves (Campbell et al., 2004). They are more concerned with their own needs in the situation, and pay little attention to the need of other road users. Research has been focused on predicting outcomes for individual drivers, and there has been little focus on behaviours that inconvenience other road users or put other road users at risk. Further studies should attempt to include the effect different types of behaviour has on other road users and interactions between road users.

As expected, the objective indicators of socio-economic status was positively related to the respondents subjective rating of their status compared to others. However, the results of the study does not support the hypothesis that individuals scoring higher on sense of entitlement also have a high socio-economic status. On the contrary, there was a small but significant inverse relationship between subjective socio-economic status and sense of entitlement. It is difficult to find a sensible theoretical explanation of this finding. The observed negative relationship between the variables could be due to problems with the validity of the measurement instrument used to assess subjective socioeconomic status. Also, it could possibly be a spurious relationship.

Higher income was a direct predictor of attitudes towards violations. This is in line with research that finds that higher class individuals are more likely than lower class individuals to violate traffic rules (Piff et al., 2010; Stradling, Meadows, & Beatty, 2004). However, it is somewhat surprising as lower class individuals are more likely to be involved in road crashes (Factor et al., 2010; Kristensen et al., 2012). One reason for this could be that individuals with a lower socioeconomic status are exposed to risk to a higher degree than individuals with a higher socioeconomic status, through driving on more unsafe roads or using more unsafe vehicles. Another explanation for this finding could be that the attitude-measure

is not sensitive to attitudes that leads to unsafe behaviour. Not all violations necessarily put the driver at a higher risk of crash involvement, and it may be that there is a subset of high risk behaviours that more directly leads to crash involvement that is not captured by the measures used in this study.

In line with previous studies (e.g. Lonczak et al., 2007; Massie et al., 1995, 1997; Mesken et al., 2002; Oltedal & Rundmo, 2006; Özkan & Lajunen, 2006), men reported more favourable attitude towards rule breaking and speeding than did women. They also reported more ordinary violations and less positive behaviour. Interventions should be devised that especially target men. Surprisingly, there was no significant difference between men and women in aggressive behaviour, which is contrary to the finding of previous studies (Lawton et al., 1997; Parker et al., 2002). Since aggressive behaviour is less common in the higher age groups, this could be due to the relatively high median age in the sample. It could also be due to the relatively small sample size. Finally, the aggressive behaviour scale consists only of three items, and the behaviours included are rare occurrences. Scales used in other studies measuring aggressive behaviour might be more sensitive to gender differences.

Analysis of reliability showed that the PES was a unidimensional and internally consistent measure of sense of entitlement in the Norwegian population (Campbell et al., 2004). The scale measuring attitudes towards violations was also a good fit to the data. With regards to the DBQ, the confirmatory factor analysis did not support a three factor solution, where positive behaviour was distinguished from ordinary violations and aggressive violations. The scale was originally constructed and validated on a Turkish sample (Özkan & Lajunen, 2005). It could be that what constitutes positive behaviours in traffic differ between cultures. As suggested by Özkan et al. (2006), differing traffic cultures can determine what are the formal and informal rules for acceptable driving style in each country. Demographic differences between the samples could also lead to differences in factor structure of the measure. A final possibility is that positive driver behaviour consists of multi-

ple dimensions with different types of behaviours and different underlying motives behind each type of behaviour.

4.1 LIMITATIONS

The findings of this study are based on a representative sample of the public which can increase the external validity compared to using for instance a student sample. However, the study has limitations that should be considered when interpreting the results. The small sample size and low response rate could limit the generalisability of the results. As mentioned previously, low response rates are common in studies targeting the population (Castanier et al., 2012; Moan, 2013). A comparison of the respondents with the general Norwegian population did not suggest large deviations, although the response rate seems to be somewhat lower in the lower age range. It is important to replicate this study with a larger sample to determine if these relationships hold true in the population.

The results are based on self-report data and the design of the study is correlational, which are limitations common in transportation research. For instance, the causal relationship between attitudes and behaviour is not clearly one-directional from attitudes to behaviour, and attitude formation could be influenced by behaviour (Fishbein & Ajzen, 2005). Similarly, subjective socioeconomic position could be influenced by personality rather than the other way around as assumed in this study. The findings of this study could be supported by using other data collection methods in addition to self-report, such as simulation studies and naturalistic observations. Further, the observed relationship could be due to response bias or socially desirable responding. Socially desirable responding could be a problem when the behaviours in question deviate from social norms and rules, which is the case in this study. However, there is some evidence that self-reported behaviour in traffic is a good indicator of actual behaviour. West, French, Kemp, and Elander (1993) found that observed driver behaviour correlated well with drivers' self-reports of normal driver behaviour on the Driving Style Questionnaire. Fur-

ther, Lajunen and Summala (2003) found that bias caused by socially desirable responding was small using the DBQ. Also, the PES has been found to not significantly correlate with a measure of socially desirable responding (Campbell et al., 2004).

4.2 IMPLICATIONS AND FURTHER RESEARCH

The current study adds to a body of research showing a relationship between personality and driver behaviour. The main finding reported here is that sense of entitlement is related to driver attitudes and behaviour. There is a need for further research that investigates this relationship while controlling for other personality variables that have been found to be important in predicting driver behaviour. For example the behavioural outcomes associated with narcissistic traits overlaps with the outcomes associated with antisocial trait. The relationship between sense of entitlement and driver behaviour could be due to a third variable such as antisocial traits or altruism. The relative importance of different personality variables could be important in devising interventions for reducing crashes. There could also be differences in importance of various personality traits in predicting different types of driver behaviour. For instance, sense of entitlement might be better at predicting positive behaviour towards other road users, while sensation seeking and extraversion could be a better predictor of joy-riding or extreme speeding.

The study shows the a relationship between socioeconomic position and driver attitudes and behaviour. Few studies investigate the relationship between socioeconomic status on the one hand, and driver behaviour and risk of road crash involvement. There is a need to clarify the relationship between socioeconomic status and driver behaviour. Specifically of interest are what factors account for the differences in risk between individuals with a high and low socioeconomic status. It is paradoxical that this study suggests that high income individuals are more inclined to break traffic rules, while other studies show that individuals with low socioeconomic status are at higher risk for road crash fatalities (Factor et al., 2010;

Kristensen et al., 2012). To some degree this questions the ability of measures of driver behaviour to identify which groups are at risk of road crash involvement.

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APPENDIX

Table A.1: Item-total correlations, means and standard deviations (SD) for the Psychological Entitlement Scale

		Item-total r	Mean	SD
pes1	Ærlig talt så føler jeg at jeg fortjener mer enn andre	0.74	4.1	0.79
pes2	Det bør skje store ting med meg	0.72	3.7	0.90
pes3	Hadde jeg vært på Titanic da den sank, så hadde jeg fortjent å være i den første livbåten	0.72	4.1	0.93
pes4	Jeg krever det beste fordi jeg er verdt det	0.73	3.8	0.99
pes5	Det er ikke nødvendig å gi meg særbehandling (R)	0.47	3.9	0.89
pes6	Jeg fortjener mer i livet	0.76	3.5	0.94
pes7	Mennesker som meg fortjener en ekstra pause nå og da	0.66	3.7	0.98
pes8	Livet bør gå min vei	0.57	2.9	0.99
pes9	Jeg føler rett og slett at jeg har rett på mer av alt	0.77	4.1	0.84

$n = 159$

Table A.2: Item-total correlations, means and standard deviations (SD) for the Attitudes towards rule violations and speeding-scale

		Item-total r	Mean	SD
att1	Mange trafikkregler kan ikke overholdes hvis det skal være flyt i trafikken	0.59	2.3	1.05
att2	Det er fornuftig å kjøre litt for fort for å komme forbi lusekjørere	0.53	3.1	1.22
att3	Man bør overholde trafikkreglene uansett hvordan kjøreforholdene er (rotert)	0.34	2.4	1.16
att4	Det er ikke rart at folk bryter fartsgrensa i Norge, så lave som de er	0.64	2.6	1.19
att5	Det er helt greit å kjøre på gult lys like før det skifter til rødt	0.53	2.6	1.12
att6	Sjåfører som bryter noen trafikkregler er ikke nødvendigvis mindre sikre sjåfører enn de som kjører helt lovlig	0.57	3.2	1.11
att7	Det er greit å ta sjanser når det kun er deg selv som utsettes for risiko	0.45	1.9	0.93
att8	Trafikkregler er ofte for kompliserte til at de kan følges i praksis	0.54	2.0	0.86
att9	Hvis du er en dyktig sjåfør er det akseptabelt å kjøre litt for fort	0.63	2.3	0.93
att10	Det er greit å kjøre i 100 km/t på en rett strekning når ingen andre er i nærheten	0.74	2.7	1.17
att11	Det skulle vært strengere straffer for å bryte fartsgrensen (rotert)	0.60	3.5	1.09

$n = 159$

Table A.3: Item-total correlations, means and standard deviations (SD) for DBQ Violations scale

		Item-total r	Mean	SD
vio1	kjører forbi en treg sjåfør på høyre side?	0.41	4.4	0.91
vio2	bryter fartsgrensen i tettbebygd strøk?	0.63	3.8	0.84
vio3	er så nær bilen foran at du ikke ville klart å stoppe hvis den plutselig bremsset?	0.59	3.9	0.79
vio4	holder deg i et kjørefelt du vet snart opphører helt til siste sekund, for deretter å presse deg inn i det andre kjørefeltet?	0.53	4.4	0.66
vio5	kappkjører med sjåføren i feltet ved siden av deg ut fra et lyskryss?	0.40	4.6	0.69
vio6	bryter fartsgrensen på landevei?	0.71	3.0	0.92
vio7	kjører forbi bilen foran deg, selv om den holder fartsgrensen?	0.62	3.6	0.95
vio8	ignorerer trafikkreglene for å komme deg raskere fram?	0.69	4.0	0.81
vio9	kjører så langt ut i et kryss eller rundkjøring at sjåføren du har vikeplikt for må stoppe for å slippe deg frem?	0.44	4.6	0.64
vio10	kjører gjennom lyskryss etter at signalet har skiftet til rødt?	0.47	4.8	0.48

$n = 159$

Table A.4: Item-total correlations, means and standard deviations (SD) for DBQ Aggression scale

		Item-total r	Mean	SD
agg1	bruker lydhornet for å vise at du er irritert på en annen trafikant?	0.76	4.3	0.86
agg2	kjører etter en sjåfør du føler har forulempet deg, med intensjon om å vise personen hva du syns om hennes/hans oppførsel?	0.57	4.9	0.51
agg3	blir sint av en spesiell type oppførsel i trafikken, og gir tydelig uttrykk for din misnøye med de virkemidlene du har til rådighet?	0.74	4.1	0.79

$n = 159$

Table A.5: Item-total correlations, means and standard deviations (SD) for DBQ Positive behaviour scale

		Item-total r	Mean	SD
pos1	holder god avstand til bilen foran slik at du ikke forstyrrer sjåføren?	0.48	4.2	0.81
pos2	skrur av langlysene tidlig for å hjelpe sjåføren i det motgående kjørefeltet?	0.41	4.1	0.95
pos3	er nøye med å parkere kjøretøyet slik at det ikke blokkerer for annen trafikk?	0.62	4.7	0.65
pos4	følger med på sølepyttene slik at jeg ikke spruter vann på fotgjengere?	0.47	4.3	0.84
pos5	senker farten for å hjelpe førere som ønsker å gjøre en forbikjøring?	0.31	3.3	0.77
pos6	unnlater å bruke lydhornet for å skåne andre for bråk?	0.30	3.6	1.23
pos7	holder deg i høyre kjørefelt på flerfelts vei for å unngå å forstyrre trafikkflyten?	0.43	3.9	0.97
pos8	viker for fotgjengere selv om du har forkjørsrett?	0.43	3.6	0.96
pos9	takker andre trafikanter for å slippe deg frem ved å vinke eller lignende?	0.56	4.3	0.85
pos10	gjør ditt beste for å ikke være til hinder for andre trafikanter?	0.62	4.2	0.74
pos11	slipper andre trafikanter frem selv om du har forkjørsrett?	0.30	3.0	0.74

$n = 159$