

# **Narcissism and Aggression: Is Inflated Self-Esteem Related to Aggressive Driving?**

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The purpose of this research was to examine the relationship between narcissism and aggressive driving behaviors. Based on the theory of threatened egotism, it was hypothesized that individuals with inflated views of the self that are challenged by another person would report higher levels of belligerent driving behavior. For this study, 91 participants (63 female, 28 male) completed self-report measures assessing narcissism, self-esteem, and aggressive driving behavior. In support of the theory of threatened egotism, specific aspects of narcissism (i.e., Exhibitionism for women and Entitlement for men) did predict aggressive driving behavior. Overall, these results suggest that inflated self-esteem, and not low self-esteem, may be an important cause of aggressive driving behavior.

The traditional belief among psychologists is that low self-esteem is a major predictor of violence and aggression (Levin & McDevitt, 1993; Toch, 1993). According to the low self-esteem theory, people are provoked by their own self-loathing to act out violently toward others or seek out situations in which their own self-worth is challenged in order to enhance their low self-esteem (Toch, 1993). Unfortunately, laboratory evidence supporting this direct link between low self-esteem and aggression is lacking (see Baumeister, Smart, & Boden, 1996, for an extensive review that questions this theory).

As an alternative to the low self-esteem theory, researchers have proposed that aggression may stem from threatened egotism (e.g., Baumeister, Bushman, & Campbell, 2000; Bushman & Baumeister, 1998; Papps & O'Carroll, 1998). According to this theory, people holding unrealistically highly favorable views of the self (i.e., high in narcissism) that are disputed or undermined by another person (i.e., ego threat) will be more prone to display aggression in order to defend their grandiose views of themselves (Baumeister et al., 2000). In support of their theory, Bushman and Baumeister (1998) found that people scoring high on narcissism displayed higher levels of aggression (as measured by blasts of noise) toward a person who allegedly criticized an essay they wrote compared to people who scored low on narcissism. In addition,

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level of self-esteem by itself had no effect on aggression. Thus, contrary to the low self-esteem theory, the empirical evidence "best fits the view that aggression is most likely when people with a narcissistically inflated view of their own personal superiority encounter someone who explicitly disputes that opinion" (Baumeister et al., 2000, p. 28).

Threatened egotism has been used to explain many forms of violence including murders, rapes, and gang activity (Baumeister et al., 1996). Another form of aggression that may relate to the threatened egotism model is aggressive driving. In this context, a narcissistic driver may perceive another driver's action as a personal threat to their inflated view of themselves or their personal safety, and this may lead to retaliation in the form of belligerent driving behavior. As Deffenbacher asserted, "their car is their world, so if you threaten their car, you threaten them" (1999, as cited in Cornelius, p. B6). According to a recent survey, aggressive driving incidents are on the rise (AAA, 1997). It has been estimated that drivers may be subjected to hundreds of anger episodes and aggressive behaviors per year (Deffenbacher, Huff, Lynch, Oetting, & Salvatore, 2000). Based on daily driving records over a 10-day period, Neighbors, Viotor, and Knee (2002) found that participants reported having driving anger an average of 2-5 minutes per day.

Researchers investigating the causes of aggressive driving have typically focused on either situational determinants, such as the presence of aggressive stimuli (e.g., gun rack, aggressive bumper sticker; see Turner, Layton, & Simons, 1975) and anonymity (Ellison, Govern, Petri, & Figler, 1995). Sometimes they have focused on personality traits such as Type A behavior pattern (Elander, West, & French, 1993) and trait driving anger (Deffenbacher et al., 2000). For example, based on the driving data of college students collected over three days, Deffenbacher et al. (2000) found that students (especially males) that scored high on trait driving anger argued and fought more with other drivers.

Recently, researchers have begun looking into whether differences in motivational orientation may be associated with aggressive driving behavior. For example, Knee, Neighbors, and Viotor (2001) found a strong connection between aggressive driving and an ego-involved "controlled" personality type. Apparently, individuals with a controlled orientation were more likely to perceive the actions of other drivers as personal affronts to their self-esteem, and this subsequently led to more anger and aggression while driving. This new line of research nicely compliments the research done on threatened egotism. Much like people with an externally controlled personality type, narcissistic people are also sensitive to personal threats and more likely to approach events with their "self-esteem on the line."

The purpose of this study was to examine whether narcissism (and not self-esteem level) is related to aggressive driving behavior. Aggressive driving was defined as any driving behavior that intentionally endangers others (Ellison-Potter, Bell, & Deffenbacher, 2001). Aggressive driving includes a range of behaviors from tailgating, obscene gestures, and flashing the high beams to the more extreme behaviors such as deliberately obstructing the path of other vehicles and intentionally trying to injure or assault another driver (i.e., road rage). Risk-taking behaviors such as speeding and traffic weaving were not included in the definition. Narcissism is a pattern of grandiosity used to bolster and enhance a fragile sense of self-esteem. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) is the most widely used measure of narcissism. Using factor analysis, Raskin and Terry (1988) found that the NPI contained seven factors: Authority, Self-Sufficiency, Superiority, Exhibitionism, Exploitativeness, Entitlement, and Vanity. In particular, the components of Exhibitionism, Exploitativeness, and Entitlement have consistently been associated with hostility, aggression, and defensive self-esteem (Emmons, 1987; Raskin, Novacek, & Hogan, 1991a; Raskin & Terry, 1988; Wink, 1991).

Based on previous research investigating narcissism, it was predicted that certain aspects of narcissism (and not self-esteem level) would be better predictors of aggressive driving behavior. Specifically, it was predicted that the Exhibition, Entitlement, and Exploitativeness factors would correlate highest with aggressive driving. Gender was included as a variable, because current research has found certain aspects of narcissism (i.e., exploitive tendencies and feelings of entitlement) may be less central to the construct of narcissism among females than among males (Tschanz, Morf, & Turner, 1998). Finally, a measure of driving anger was also included to examine the validity of the aggressive driving measure developed for this study.

## METHOD

### Participants

The participants included 99 undergraduates (68 female and 31 male) attending a small, ethnically diverse college outside a densely populated metropolitan area in the Northeast. The average age of the participants was 20.7 years ( $SD = 1.8$ ). Four students reported they did not drive and another four participants did not fully complete the questionnaires, so their data were not used in the analyses. Thus, the final sample consisted of 91 students (63 females and 28 males). The majority (72%) reported that they drive every day, and they drove a median of 60 minutes a day.

## Measures

*Self-Esteem.* The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used as a measure of global self-esteem. Participants indicated their agreement with 10 items (e.g., "On the whole, I am satisfied with myself") using a 4-point scale (0 = strongly disagree, 3 = strongly agree). In the present sample, the alpha coefficient was .88.

*Narcissism.* The Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) was used to measure narcissism in a nonclinical population. The scale contains 40 items that are answered using a forced-choice (true-false) format. The NPI provides a full-scale score and includes seven components identified as Authority (e.g., "I like to have authority over other people"), Self-sufficiency (e.g., "I am more capable than other people"), Superiority (e.g., "I am an extraordinary person"), Exhibitionism (e.g., "I really like to be the center of attention"), Exploitativeness (e.g., "I can make anybody believe anything that I want them to"), Entitlement (e.g., "I insist upon getting the respect that is due me"), and Vanity (e.g., "I like to look at my body"). In the present sample, the NPI had an alpha coefficient of .79.

*Driving anger.* Driving anger was measured with the short form of the Driving Anger Scale (DAS; Deffenbacher, Oetting, & Lynch, 1994). Participants were asked to rate the amount of anger that they would feel to 14 different driving situations (e.g., "Someone backs right out in front of you without looking"). Ratings were made using a 5-point scale from 1 (no anger) to 5 (very much anger). In the present sample, the DAS had an alpha coefficient of .87.

*Aggressive driving.* A 12-item aggressive driving questionnaire was created to measure behaviors often identified as indicators of aggressive driving (Knee et al., 2001; Neighbors et al., 2002). Similar to Knee et al. (2001), participants were asked to indicate how often they engage in various aggressive behaviors (e.g., tailgating, cursing, making obscene gestures) when confronted with another driver who makes them angry. Participants indicated their agreement with each item using a 5-point scale from 1 (never) to 5 (almost always). A reliability analysis found the full scale had good internal consistency ( $\alpha = .80$ ). For exploratory purposes, three additional items were included: "Do you feel vengeful if someone does something on the road to make you mad?," "Are you aggressive with other drivers if you cannot 'get back at' the driver who made you angry", and "Do you stay angry after a driver angers you?"

## Procedure

After completing a consent form, the participants were given a packet containing the aggressive driving questionnaire, DAS, NPI, and self-esteem measures. In addition, demographic variables including age,

gender, and driving habits (e.g., time spent driving per day, days spent driving per week, type of vehicle, and how long they had their license) were assessed. After completing the packet, the participants were then debriefed and thanked for their participation.

## RESULTS

In support of the validity of the aggressive driving measure, aggressive driving scores correlated with driving anger ( $r = .31, p < .003$ ), feeling vengeful if another driver makes you mad ( $r = .56, p < .001$ ), and becoming aggressive with other drivers if you cannot get back at the driver who angered you ( $r = .33, p < .001$ ). There were no gender differences in general self-esteem ( $M_s = 31.11$  for females and  $31.07$  for males) or in overall belligerent driving behavior ( $M_s = 24.87$  for females and  $23.89$  for males).

TABLE 1 Regression Analyses on Aggressive Driving Behavior as a Function of Self-Esteem and NPI Subscales for Females and Males

Predictors	Females (N = 61)		Males (N = 28)	
	$\beta$	t	$\beta$	t
Self-Esteem	.05	.38	.08	.26
NPI (Authority)	-.14	-.89	-.01	-.04
NPI (Exhibition)	.61	4.55**	.15	.56
NPI (Superiority)	-.25	-1.91	-.23	-.89
NPI (Entitlement)	.03	.25	.53	2.11*
NPI (Exploitativeness)	.07	.55	-.35	-1.23
NPI (Self-sufficiency)	-.04	-.29	-.01	-.03
NPI (Vanity)	-.22	-1.83	.04	.15

Note:  $R^2 = .45$  for females,  $R^2 = .32$  for males. \* $p < .05$ . \*\* $p < .001$ .

Consistent with the narcissism literature, males scored higher on the NPI than females ( $M_s = 17.54$  and  $14.61$ , respectively),  $t_{(87)} = 2.26, p < .03$ . There were no gender differences on any of the NPI subscales with the exception that males scored significantly higher on the Entitlement factor than females,  $t_{(88)} = -3.64, p < .001$ . The NPI full scale was not associated with aggressive driving behavior; however, additional analyses were performed in order to examine whether certain subscales of the NPI were associated with aggressive driving behavior. Multiple regression analysis was conducted with aggressive driving behavior as

the criterion and self-esteem and the seven subscales of the NPI as the predictors. All variables were entered simultaneously. As predicted self-esteem alone did not predict aggressive driving behavior ( $\beta = .10, p < .39$ ), however, the Exhibitionism and Superiority subscales did predict aggressive driving behavior. Specifically, individuals scoring higher on Exhibitionism reported more belligerent driving behavior ( $\beta = .46, p < .001$ ), and individuals scoring higher on superiority reported less aggressive driving behaviors ( $\beta = -.28, p < .02$ ). In addition, analysis using partial correlations also found these associations held even when self-esteem was partialled out.

To investigate for gender differences, regression analyses were performed separately for males and females (see Table 1). For females, aggressive driving behavior was strongly predicted by Exhibitionism ( $\beta = .61, p < .001$ ), and marginally predicted by Superiority ( $\beta = -.25, p < .07$ ) and Vanity ( $\beta = -.22, p < .08$ ). For males, however, the only significant predictor of aggressive driving behavior was the Entitlement subscale ( $\beta = .53, p < .05$ ). The Exploitativeness subscale did not predict aggressive driving behavior for either males or females.

## DISCUSSION

Consistent with current research (Baumeister et al., 2000), inflated self-esteem (i.e. narcissism) was a better predictor of aggressive driving behavior than low self-esteem. According to the theory of threatened egotism, people holding inflated views of themselves are more likely to display aggression when those grandiose views are threatened by another. These findings dovetail with current research investigating the relationship between motivational orientation and aggressive driving (Knee et al., 2001; Neighbors et al., 2002). Similar to individuals with a controlled orientation, narcissistic people may be more likely to perceive common roadway encounters as personal affronts to their self-esteem. In order to defend their strongly held views about themselves, narcissistic drivers may be more likely to retaliate in the form of belligerent driving behavior (e.g., cursing, yelling, honking, gesturing, and tailgating).

The NPI full scale did not predict aggressive driving behavior. Instead, researchers have proposed a two-component model where certain aspects of narcissism may be more indicative of nondefensive (healthy) self-esteem (e.g., Authority, Self-Sufficiency, Vanity, and Superiority), while other aspects of narcissism (e.g., Exhibitionism, Exploitativeness, and Entitlement) may be associated with defensive self-esteem and aggression (Emmons, 1987; Raskin, Novacek, & Hogan, 1991a; 1991b). In support of this two-component model, individuals scoring higher on Exhibitionism reported higher levels of belligerent driving behavior, whereas individuals scoring higher on Superiority

reported lower levels of aggressive driving behavior. Contrary to expectations, Exploitativeness did not predict aggressive driving behavior. Perhaps Exploitativeness, as defined by Raskin and Terry (1988), did not predict aggressive driving behavior because these items may have been misclassified. For example, in another factor analysis on the NPI performed by Emmons (1987), the majority of items identified as Exploitativeness by Raskin and Terry (1988) fell into the less defensive category of Superiority/Arrogance.

Because narcissism may not describe the same phenomenon in both genders (Morf, Weir, & Davidov, 2000), gender differences were investigated. For females, aggressive driving behavior was predicted by higher Exhibitionism scores, and to a lesser extent, lower scores on the more nondefensive aspects of narcissism: Superiority and Vanity. For males, however, aggressive driving behavior was only predicted by higher scores on Entitlement. Thus, a strong sense of entitlement appears to be more characteristic of the male aggressive driver, whereas an excessive need for admiration may be more characteristic of the female aggressive driver. In partial support of these findings, Tschanz et al., (1998) found that feelings of entitlement were less central to the construct of narcissism among females than for males because such behaviors may "violate culturally held expectations regarding appropriate female behavior" (p. 868). Perhaps, women who engage in aggressive driving have a need to be noticed and they ensure this by yelling and making obscene gestures at other drivers. For male aggressive drivers, however, the act of driving may evoke a strong sense of power and privilege, and when that power is challenged, they react with hostility and aggression. Additional research should be done in order to elucidate whether different aspects of narcissism are more dangerous for one gender or the other.

Interestingly, women in this study reported the same levels of aggressive driving behavior as men. Much of the experimental research, however, shows that men are more aggressive than women and that the male gender role typically includes norms encouraging aggression (e.g., Eagly & Steffen, 1986). To explain this inconsistency, one needs to take into consideration the moderator of provocation. Although unprovoked men have been found to be more aggressive than women, provocation (e.g., frustration, insults, blows to one's self-esteem) greatly attenuates this gender difference (Bettencourt & Miller, 1996). According to Bettencourt and Miller (1996), provocation provides justification for aggression and frees women from the constraints evoked by gender role norms. In a typical aggressive driving situation, the driver is often provoked and angered by another, thus it is not that surprising that women displayed levels of aggressive driving behavior comparable to

that of men. Future research could investigate whether situational factors such as provocation intensity might moderate gender differences in aggressive driving behavior.

In this study, the results are limited primarily to 18-22 year old college students. Community samples with a wide range of ages are needed to see how these findings generalize to other populations. In addition, to build on this research it may be useful to supplement the self-report measures with other methodologies. For example, having participants keep a diary of driving behaviors has the benefit of assessing actual events as they are experienced rather than studying imagined scenarios assessing how participants would respond (Neighbors et al., 2002). As an alternative, participants could partake in a driving simulator task (Ellison-Potter et al., 2001), where they are randomly assigned to high and low personal threat conditions. One could hypothesize that highly narcissistic people (especially Exhibitionism and Entitlement) will display more aggressive driving behavior when their inflated self-views are threatened.

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