



How Personality and Interventions Affect Driver Aggression



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Background

Driver aggression occurs when an individual commits moving traffic offenses that endanger other people or their property.

- The Type A personality classification profile includes a strong sense of urgency, high competitiveness, impatience, and quick irritability. In contrast, Type B personality is associated with being more creative, imaginative, and philosophical (Wu, 2004).
- Perry and Baldwin (2000), reported that Type A and Extreme Type A personality participants were significantly related to more traffic accidents, greater frequency of breaking traffic laws, higher impatience when driving, and engaging in risky driving behavior.
- Hennessy and Wiesenthal (2001) stated that the inability to handle stressful situations while driving can lead to irritation and frustration, thereby increasing the potential for driver aggression.

The current study investigated the plausibility of creating frustration and stress levels comparable to those which can be encountered while driving. Perhaps successful intervention strategies for reducing aggression in a controlled environment could be self-implemented in environments other than a laboratory setting.



Design and Hypotheses

A 3 (Personality) x 3 (Intervention) between subjects factorial design was implemented. Personality had three levels: Type A, Extreme Type A and Type B. Intervention had three levels: Control, Frustration and Intervention. The control condition involved no manipulation or intervention. The frustration condition included the manipulation of frustration and the intervention condition involved frustration followed by intervention. The dependent variable was driving aggression.

- Hypothesis 1: Type A participants would show reduced aggression levels following the implementation of relaxation intervention.
- Hypothesis 2: The intervention techniques would have a greater positive impact on Type A participants when compared to Extreme Type A participants.

Method

Participants

Sixty participants were used. The median age was 23. However, 58% were under the age of 20. I did not select for age or race.

Materials

- A consent form was signed by each participant. A debriefing form explaining the manipulation and deception was given following each participant's involvement.
- The modified Jenkins Activity Survey was used to determine the personality type of each participant. Thirty questions from the Unsafe Driving Behaviors Questionnaire (National Highway Traffic Safety Association, 2005) were used.
- A questionnaire which included five driving scenarios was used to measure aggression levels. Following a short scenario, participants indicated, using a 4-point Likert scale, how appropriate the response of the driver in the scenario to be.

Procedure

- The control condition involved no manipulation.
- In the frustration condition, various manipulations of frustration occurred. A confederate was in the room when participants arrived and instructed them to wait because the researcher was running late. Participants were instructed to turn off cell phones. When the researcher arrived 5 minutes late, all participants were asked to sign a consent form. The Jenkins Activity Survey and the Driving Behaviors Questionnaire were then given to participants. The researcher's phone rang and she left the room. Participants were reminded not to speak to each other during the study. Confederates began a scandalous conversation in the hall. After 10 minutes participants were told that technical problems had delayed watching the video and they were again left in the room alone. Confederates created noise by moving chairs in the adjacent room. Upon returning to the room the second time, the researcher administered the driving scenarios survey.
- The intervention condition included the same series of frustration tactics followed by relaxation techniques which included progressive relaxation. Following the intervention participants completed the driving scenarios survey.

Results

Scores for the modified Jenkins Activity Survey were averaged for each participant to determine personality type. Fifteen questions from the Unsafe Driving Behaviors Questionnaire were used in the analysis. Those 15 questions were separated into three subsets of five questions each (speed, safety, and frequency). For the dependent variable of driving aggression, a Cronbach's Alpha was run on the five-question Driving Scenarios Survey. As a result, one question was omitted, and the resultant Cronbach's Alpha was .646. An average of the remaining four questions from the Driving Scenarios Survey was used to determine participant driving aggression level.

The three driving behaviors subsets were next evaluated as possible covariates. The safety subset showed a slight correlation, $r(50) = .28, p < 0.05$. Therefore, the safety subset was considered as a covariate in the following analyses, which used an Alpha of 0.05.

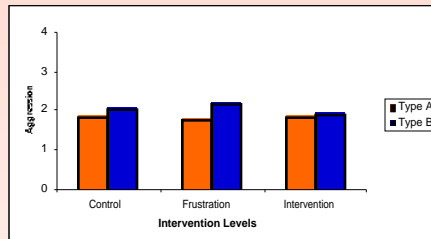
A 2 x 3 ANOVA was performed. There were no significant findings; however, there seemed to be a trend towards a main effect with personality ($F(1,59) = 2.53, p = .12$), such that participants with Type B personalities ($M = 2.0625$) seemed to experience a greater aggression level in all conditions than Type A personalities ($M = 1.8333$). (figure 1)

Discussion

In the current study, all hypotheses were formed with the expectation that the results would closely replicate those found in previous research. However, upon completion of data collection, no Extreme Type A personality individuals had been evaluated. Therefore, the prediction that the intervention techniques would have a greater positive impact on Type A personality participants when compared to Extreme Type A personality participants was not tested.

Unlike what was predicted, the results did not support the hypothesis that both levels of Type A personality participants in the experimental groups would show reduced aggression levels following the implementation of relaxation intervention strategies. Though aggression levels reported by Type A participants did return to the baseline level obtained in the control condition, this was subsequent to the decrease in aggression levels reported in the frustration condition. Perhaps with the intense frustration techniques used, Type A personality participants in frustration condition reached their peak levels of aggression for the situation, earlier in the testing period. Possibly after the maximum level was reached, the Type A participants disassociated emotionally, thereby decreasing their aggressive tendencies. Future research should include a pilot study implementing more subtle frustration tactics.

The current research revealed unpredicted findings in regard to participants with Type B personalities. Although not significant, the means pattern shows a trend towards a main effect with personality in that participants with Type B personality reported experiencing a greater aggression level in all conditions than participants with Type A personality. This study should be extended to increase the number of participants and observe changes or constancy of the results. Perhaps the increase in societal tolerance of aggression and hostility is affecting the younger population; such that, it is becoming acceptable to respond to other motorists with very little consideration and aggressive driving behaviors.



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