

Reducing Stress Related Violence at 70 MPH

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Introduction

In 1998 the author presented a humorous speech at a Toastmasters International humorous speech competition. While he did not win the contest, he was inundated with audience members wanting to share their personal “Road Rage” stories following the contest. The stories were filled with passion, anger, frustration and in some cases humor. While the author has studied stress related violence in relation to “child on child violence” and workplace violence since 1976 this was recognized as another opportunity to reduce stress related violence in society.

The initial study provided training and education in a process to reduce stress related violence on the roads to over 1200 attendees at American Society of Safety Engineers and Behavioral Safety Now conference attendees and provided \$3000 of educational assistance to children.

The problem has not gone away and we continue to read of tragic accidents and acts of violence on roads internationally. The purpose of this study and the associated education & training class are simply to, “Make a Difference”.

Since the early 90’s the phenomenon of “Road Rage” has received an increasing amount of coverage by the press and attention on the Internet. In 1995 there were approximately 500 articles on “Road Rage” recorded in the press. In 2008 an Internet search revealed an accumulative total of 5,550,000 (per Google Search) articles and studies on “Road Rage”.

While the phenomenon grows a number of private and public efforts have been put in place to address the issue. Most private efforts revolve around efforts to increase defensive and courteous driving in order to avoid or minimize contact with aggressive drivers. To a lesser degree some groups and individuals are promoting relaxation techniques, again to reduce stress. Public efforts are mostly state and local governments that include increased education, encouraging of reporting of aggressive drivers and increase penalties.

In addition to the above, there is also an effort to apply behavior-based principals involving communications between drivers through the use signs and signals allowing drivers to express

appreciation for courteous driving and to apologize for mistakes in traffic. Unfortunately this has also spawned products that improve a drivers ability to express displeasure and anger at other drivers. In this author's opinion, while this may be entertaining, it greatly increases the likelihood of stress related violence on the roads.

The primary purpose of this study and the class developed as a result of the study is the application of positive reinforcement, internally and externally to reduce stress related violence on the roads.

Objectives

Between 1999 and 2002 the author conducted a study to determine whether behavioral concepts could be applied in road traffic conditions to:

1. Increase personal awareness of individual courteous and aggressive driving behaviors through self observation.
2. Provide quantitative measurement of specific aggressive driving behaviors identified by interviewees as "traffic norms".
3. Measure the response of individuals practicing courteous driving behaviors based upon whether or not their courteous driving behavior was acknowledged by other drivers.
4. Determine if positive recognition of courteous driving behaviors have a positive effect on an individual drivers stress level and encourages continued courteous driving behaviors.

The 2007 study was designed to provide further validation of the previous study. The most difference in the study was the population involved. The 1999 – 2002 study involved participants from across the United States with over 50% residing in Texas and Louisiana areas. Houston and Dallas were the two major metropolitan areas involved in the study.

Participants (90%) in the 2007 study were primarily from the Denver, Colorado area.

The populations of both studies were primarily safety professionals from the American Society of Safety Engineers and attendees of Behavioral Safety Now Conferences.

Behavior Selection Process

The study involved the study of three specific driving behaviors associated with aggressive driving behaviors and stress related violence on the roads. In order to identity these behaviors a survey was conducted with 21 individuals involving only one question.

What is your number one pet peeve in traffic?

The top four responses are listed below, the top three were included in the study:

- Tailgators (According to a study by the Automobile Association in the UK Aggressive Tailgating represents 62 percent of "road rage" incidents.)

- Drivers that drive to the front of a traffic back up (construction related and exits) and want to cut in line.
- Drivers that speed up and won't let me in when I signal a lane change in traffic.
- Drivers that won't let me merge in at traffic back ups (construction related and exits)

Notes: 1) 18 of the 21 individuals' surveys did not stop and one pet peeve, several individuals "vented" about other bad drivers in excess of an hour during their response. 2) Eight individuals named both the third and fourth items indicating they did not like letting people (cut in line) but also took offense when others would not (let them cut in line).

Survey Requirements and Results

Observers were provided with observation cards and instruction on required courteous driving behaviors associated with each situation and observations to record during a 45 minute education and training session.

Tailgating

Observers were instructed that when encountering a "tailgator" in traffic when they could not pull over to let them pass they were to slow gradually without braking to increase their space cushion between them and the car in front. This is taught in numerous defensive driving classes.

They were then asked to record whether the "tailgator" 1) Backed off; 2) Stayed on their bumper; or 3) Passed.

They were then asked to observe if the "tailgator" provided any positive or negative feedback through gestures.

Results:

73% backed off or passed in 2000	65% backed off or passed in 2007
27% stayed on bumper in 2000	35% stayed on bumper in 2007
14% Negative Gestures in 2000	13% Negative Gestures in 2007
13% Positive Gestures in 2000	9% Positive Gestures n 2007

Summary:

There was an eight percent increase in "tailgaters" continuing the aggressive driving behavior. Negative gestures remained steady while Positive Gestures, saying thank you for allowing the "tailgator" to pass dropped off.

Allowing the Line Jumper to merge in backed up traffic

Observers were instructed that when stuck in traffic at an exit or a construction merge area they were to allow space for drivers "going to the front of the line" to merge in front of them. They were then required to record two items. 1) Whether or not the "line jumper" waved thank you. 2) How the observer felt after letting the driver merge or "cut in line".

Results:

Line Jumpers Response

59% waved thank you in 2000.
41% gave no response.

48% waved thank you in 2007.
In Denver only 40% said thanks!

Observers Response

43% had positive response in 2000. 40% positive in 2007.
8% were mad when driver didn't wave thanks.
17% were angry in Denver survey.

Summary:

In both studies there was a direct correlation in the observer's response of having a positive feeling or negative feeling based upon whether or not the other driver waved thanks. The Denver observers were separated from the general population and analyzed. Positive reinforcement (thank you wave) was lower in Denver (40%) than the overall population (59%). This correlated to observers in Denver recording negative feelings (17%) vs. the larger population at only (8%). Several individuals were questioned as to their likelihood of continuing to let drivers "cut in" in the future. Those that received thanks said they probably would. Those that felt ignored said they would be less likely to let drivers "cut in".

This data would support the theory that positive reinforcement in traffic is possible and it encourages repetition of courteous driving behavior. Negative reinforcement (defined as no thank you, (observers commented they felt they were being ignored) decreased the likelihood of drivers continuing courteous driving behaviors.

Signaling Lane Changes before merging

In the pre-survey study the majority of interviewees indicated that other drivers will speed up to keep you from getting in front of them if you signal a lane change. The required behavior for observers was to; 1) Signal intention to change lanes; 2) Observe if the driver in the lane they were merging into slowed, stayed the same speed, or sped up. If the driver sped up they were not to attempt to merge. If the driver slowed or stayed the same speed they were to merge and wave thank you. After waving they were to observe if the other driver acknowledged by waving back.

Results:

Did the other driver speed up to prevent lane change in front of them?

- Occurred in 21% of the observations in 2000
- Occurred in 26% of the observations in 2007

Did the other driver acknowledge thank you?

- Over 40% of driver's acknowledged thank you in 2000
- 36% positive response in 2007

Summary:

A significant percentage of drivers do speed up when a driver signals their intention to merge in front (21% in 2000, 26% in 2007). Positive reinforcement (thank you wave) can take place between drivers simply and effectively (acknowledged thank you by return of “than you” wave).

Additional notes and observations:

- A trend of note among observers following participation in the study was an observation they had difficulty with the required courteous driving requirements concluding the study made them realize how their driving habits had deteriorated and they had become more aggressive themselves.
- The majority of participants in the 2007 study were from the Denver, CO metropolitan area. In analyzing this study group separately the overall trend showed increased aggressive driving behaviors and less positive reinforcement for courteous driving than the national average.
- Denver, CO was recently listed as having the 6th friendliest drivers in major cities in the US.
- Observers were instructed to give no feedback to aggressive drivers encountered during the survey. In additional research trying to correct an aggressive driver on the roads has been a contributing factor in a number of “road rage” events.
- Observers were instructed to only complete the observation cards after completing their journeys. While this may have increased possible sampling errors it was determined to err on the side of safety.

Comment on recommendation to ignore other drivers by psychotherapist.

Noted researcher Scott Geller, PhD. was quoted in an article on inter-vehicular communication that “Psychotherapist tell us to just avoid making eye contact with other drivers. Look neither left nor right. As a result, we become prisoners of fear in our own cars, too anxious that the driver next to us may become subject to road rage.”

A number of participants in the study have revealed they have personally experienced “road rage” themselves. When these individuals were asked how they feel when another driver ignores them when they honk, gesture or shout at the offending driver everyone stated it made them angrier. When asked how they felt when the other driver waved and made a gesture indicating an apology and acknowledging their mistake these same individuals indicated there stress level dropped. Many said they then waved back and smiled at the other driver.

Conclusions

Based upon the findings of the two studies there is measurable evidence that:

- Positive communications are possible on the roadways using simple, basic gestures.
- Positive reinforcement for courteous driving has a measurable effect on reducing stress for drivers and encouraging repetition of courteous driving behaviors.
- Lack of positive feedback increases the risk of extinguishing courteous driving behaviors.

A Brief Story

My 17-year old daughter has been driving for just over a year. Before receiving her license she attended “Master Drive” driving school in Denver, Colorado where she received training and practice in skills to drive a motor vehicle. In the class they emphasized courteous driving and provided additional education on how to avoid confrontations on the roads. I have also involved my daughter in frequent discussions (she probably calls them lectures) on the contents of this study.

While I come home and still complain about discourteous and aggressive drivers I encounter on the roads, she frequently tells me about the nice people that wave thanks to her all the time for letting them merge at busy intersection, exit drives, etc. She acknowledges this makes her feel better about herself and others. When I asked if she ever sees aggressive drivers she said yes, when I ask her how she responds to them she said she mutters under her breath...