PERSONALITY TRAITS AND JOB STRESS AS PREDICTORS OF DRIVING ANGER BEHAVIOR AMONG DRIVERS IN SOUTH WEST NIGERIA

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ABSTRACT

This study investigated Personality Traits and Job Stress as Predictors of Driving Anger Behavior among Drivers in South West Nigeria.Questionnaire was used to collect data which consist of demographic characteristic of drivers, the Driving Anger scale and Personality traits scale. A total number of 713 participants were purposively sampled in this study. Personality and stress theory were reviewed.

Five hypotheses tested and confirmed in this study. Hypothesis One tested the significance prediction that participants who are high in extraversion traits will significantly score high in driving anger and was significant at [t{711}= -12.31,p<.01].Hypothesis two showed that participants with high level of job stress significantly score higher on measure of driving anger behavior than those with low level of job stress [t{711}= -4.29,p<.01].Also participants who are commercial (professional) drivers significantly score higher on driving anger behavior than those who are non-commercial (non-professional) driver and it was significant at [t{711}= -12.33,p<.001]. Participants who are commercial(professional) drivers which score high on job stress significantly score higher on driving anger behavior than non-commercial(non-professional) drivers who have low job stress.Demographic variables of number of trips made per day, driving experience and educational level independently and jointly predicts driving anger behavior among the commercial and non-commercial drivers in south west Nigeria which was significant at [F {2,710} = 61.05; p<0.01].Trip driving experience (β = -0.382; t = -10.831; p<0.01) and educational level (β = 0.147; t = 4.161; p<0.01) were significant independent contributors.

The implication of the findings shows that Job stress is positively associated with distraction in driving and other risky driving behavior. One main conclusion leads us to understand that extraversion trait of personality predict negatively driving error.

It is recommended that there should be psycho educational training for commercial and non-commercial drivers so as to minimize the accident rates on our roads.

Key Words: Driving anger, job stress, personality traits, commercial drivers,

extraversion and professional

Background to the study

The phenomena of angry drivers as well as "road rage" have attracted considerable public attention in the past few years (Elvik 2000). Anger while driving is a type of anger that represents a significant and dangerous phenomenon that commonly occurs in our society. In the world road rage is becoming a growing problem as the number of vehicles on the road increased steadily in the last five to ten years that are causing traffic jams, mental stress, road rage, road traffic crashes faced by motorists are being reported by the media, aggressive acts like tailgating or cutting people off in anger, hostile gestures, angry epithet, and elevated blood pressures are some signs of anger on the road (Deffenbacher, Lynch, Oetting&Yingling (2001).

Spielberger (1988) in his theory of state-trait anger indicated that individuals high in trait anger are expected to interpret a wide variety of situations as being anger provoking, and to react to situations with an elevated level of anger. How people express their anger is important for example two people may be equally angered by the same situation, but they might express that anger in different ways.

Thus, the form of expression as well as the intensity of anger may play an important role in a driver's safety, health and well being on the road as well as that of others who ride with him/her or share the road with him/her.Studies have shown that drivers who engaged in risky illegal driving and who have the highest crash rates are usually high in general anger, aggressiveness, risk taking, impulsiveness and social irresponsibility behaviors' (Underwood, Chapman, Wright, & Crundall,1999).

Previous studies, mainly conducted in the West, have identified several attitudinal and personality factors that are related to driving anger and aggression (Esiyok, Yasak, Korkusuz,(2007), Hennessy & Wiesenthal, (2001), Sullman, Gras, Cunill, Planes, Mayolas(2007). For example, a study by Deffenbacher, Deffenbacher, Lynch & Richards (2003) compared low-anger drivers with high anger drivers using Driving Anger Scale (DAS), Driving Anger Expression Inventory (DAX), State Anger Scale (SAS), and Trait Anger Scale (TAS) that were administered to 121 respondents. The result of this study showed that high-anger drivers tend to use hostile aggression, more frequent drove at higher speeds and had shorter times and distance to collision. High-anger drivers reported greater state verbal and physical aggression tendencies following high impedance simulation in a related study.

Further review of accident literatures revealed several studies that show significant differences between male and female in terms of aggression while driving where male drivers tend to be involved in unsafe driving behaviors such as speeding and short following distance (the youngest and the oldest drivers engaging in more unsafe behaviors than the Middle Ages). (Al Balbiss (2003)**,** Deffenbacher (2008), & Boyce and Geller (2002).

The Ijebu Ode Command of the FRSC (Federal Road Safety Corps) recorded 138 RTC involving 1,267 persons on Ijebu-Ode/Ore/Benin Expressway only in 2011 as a result of Driver's Behavior. Road Traffic Crash (RTC) the term used by FRSC, also known as traffic accident, motor vehicle collision, motor vehicle accident, car accident, automobile accident, road traffic collision or car and crash occur when a vehicle collides with another vehicle, pedestrian, animal, road debris, or other stationary obstruction such as a tree or utility pole. Road Traffic Accidents may result in injury, death and property damage.

As far back as 1925, the Australian Government lamented over the death of 700 people in one year, from 306,000 registered vehicles. This was estimated at 12 deaths per 100,000 of her Population. Globally, road crashes account for a large share of total number of injuries and deaths. Every year there are about one million fatalities on the roads and the number of people injured in road crashes varies between 23 -32 million persons. These statistics may be frightening, but they have more profound significance in the developing countries in terms of fatalities per 100 million vehicle kilometers. In Nigeria alone, annual fatalities on the roads reached 6,452 and the number of injured persons amounted to nearly 18,116 in 2003.In 2005, the total number of casualties rose to nearly 20,298 and was about 34,641 in 2008 according to Federal Road Safety Corps. The severity of road crash measured in terms of the number of person killed in every 100 crashes has remained high, rising from 45 persons in 2003 to 59 persons in 2008.

While this situation represents a gloomy picture of transport usage in the country, it is equally sad to note that over 80 percent of all crashes on Nigerian roads can be attributed to human errors (2008 FRSC Report). Ogwude (2010) as cited from Tillman and Hobbs (1949) once remarked that ''a man drives as he lives.'' Anger is a psychological variable that one could relate to the occurrence of stressful driving that is prevalent on Nigerian roads. Driver's angry thoughts and outburst could be attributed to a number of factors such as their personality traits, job stress, substance abuse, economic hardship and so on.

The nature of an individual personality determines his thought patterns and behaviors towards self and others. Personality as an influencing factor can be defined as an individually unique, consistent pattern of behavioral and psychological attributes that endure over time and across situations, (Barry& Smith. (1998), personality traits affect reactions to potentially destructive stressors: environmental situations, stimuli or events that disrupt or perceived as threats to physical or psychological well-being. Personality development is not only influenced by environmental factors but also substantially influenced by genetic factors and a growing body of research strongly confirms the role of heredity in personality (Barry & Smith, 1998).

However it is very important to note that, genetic factor does not entirely account for personality. They are important but heritability averages around 50%, leaving considerable room for environmental influence (Barry & Smith, 1998).

According to McCrae and Costa (1997), there are five personality traits underlying an individual`s actions, attitude and behaviors. These traits include extraversion, agreeableness, conscientiousness neuroticism openness to experience. Job Stress is another contributory factor that can spark off drivers' anger while driving on the road. Job stress basically refers to the physiological, emotional and psychological reactions to certain threatening conditions to stress include signs of arousal such as increased heart and respiratory rate, blood pressure, and sweating.

According to the early stress theory, Hans Selye(1976) , these reactions serve a survival function by helping human being to deal with potential dangers. In this response to stress, the body prepares to deal with the danger either by physical confrontation or by running away (Selye, 1976). The emotional reactions to stress include feelings of anxiety, fear, frustration and despair. A great deal of job stress is caused by stressors in the environment of the work setting. Some of this job stress is caused by work tasks themselves- physical and psychological demands of performing a job. A common source of such stress is work overload which results when the job requires excessive work speed, output, or concentration which is very peculiar to driving profession. This research therefore examine the relationship that exist between personality traits, job stress and driving anger among professional and non-professional drivers in Ijebu- Ode, Ogun State Nigeria.

Methods

Participants: Participants were drivers plying Ijebu Ode/Ore/Benin expressway. Seven hundred and thirteen (713) drivers participated in the study. The frequency data of 713 drivers indicate that 659(92.4%) were male, 54(7.6%) participants were female. The age analysis indicates that 39(5.5%) were 18-25 years, 387(54.3%) were 26-40 years, 224(31.4%) were 41-50 years and 63(8.8%) were 51-60 years. The participants distributions by Education showed that 60(8.4%) were holders of first school leaving certificate, 317(44.5%) were holders of Senior School certificate or General Certificate of education O/L, 276(38.7%) were holders of National Diploma or National Certificate of Education and 60(8.4%) were holders of Higher National Diploma/1st degree. The participants by driving experience showed that 15(2.1%) were below 2 years in driving, 310(43.5%) had 2-5 years driving experience, 252(35.3%) had 6-10 years driving experience and 136(19.1%) had 10 years and above driving experience.The participants distribution by the trips made showed that 279 (39.1%) made many trips per day, 162 (22.7%) made two trips per day, 242 (33.9%) made one trip per day daily, 30 (4.2%) were weekly.The participants distribution by category of drivers showed that 372 (52.2%), $\overline{X}$ = 35.22, SD = 6.94 were private (non professional) drivers, 341 (47.8%), $\overline{X}$ = 43.79, SD = 7.06 were commercial (professional) drivers.

Instruments

Anger driving behavior scale developed by Deffenbacher1994), the Nigeria adapted version by Ogwude(2010) was used which has 5-point,likert type scale. The author report 0.84 for its validity , test-retest reliability and cronbach's alpha of 0.91.Meanwhile for this study cronbach's alpha is 0.86. Higher score indicate high level of driving anger behavior while low score is vise versa

Job stress scale developed by Sinha 2002 as stated by Cogprints 2011). It has reliability coefficient and validity of 0.72 and it has Cronbach's Alpha of 0.70.In this research the Cronbach's alpha is 0.94.

Big-Five Personality Inventory which was developed by Oliver John and Berkeley (1999). Likert response measuring extraversion, agreeableness, conscientiousness, neuroticism and openness. Each subscale has the following psychometric properties: Test-retest Reliability – Extraversion (0.88), Agreeableness (0.79), conscientiousness (0.82), Neuroticism (0.84), Openness (0.81), Convergent Validities- Extraversion (0.94), Agreeableness (0.92), Conscientiousness (0.92), Neuroticism (0.90), Openness (0.92), and Mean scores – Extraversion (37.11), Agreeableness (43.17), Conscientiousness (42.13), Neuroticism (36.54) and Openness (43.11).

Procedure: In carrying out this study, the researcher took the effort to personally administer the questionnaires to the Professional drivers after the informed consent of each participant were obtained with the assistance of some transport union members and staff. For non-professional drivers, the research assistant assisted in collection of data from selected residential houses, business outlets and law enforcement agencies at Ijebu-Ode. The participants were urged to give sincere responses to test items. The questionnaires were collected and coded. Out 1000 questionnaires distributed, 723 were returned and 713 found to have been properly filled were used for data analyses.

Results:indicated that participants with high extraversion significantly reported high driving anger behavior than those with low extraversion [t (711) =-12.31, p<.001]. Also participants with high level of job stress significantly reported higher driving anger behavior than those with low level of job stress [t (711)=-4.29, p<.001]. Professional drivers significantly reported higher driving anger behavior than those who are non-professional [t (711) =-12.33, p<.001]. There was significant effect of drivers category on driving behavior [F (1,709) = 316.83; p< .001]. There was also significant effect of level of stress on driving behavior [F (1,709) = 129.017; p< .001]. The table also shows that drivers category and level of stress significantly interacted to impact driving behavior Professional drivers with high level of stress reported significantly higher score ($\overline{X}$ = 45.68) on driving anger than non-professional with both low and high level of stress ($\overline{X}$ = 31.11 & 37.50) with a mean difference of 9.61 and 14.57 respectively. Trips made, driving experience and educational level yielded a coefficient (R) of 0.383 and r-square of 0.147. This shows that 15% of the total variance of driving anger behavior was accounted for by the linear combination of the two independent variables. Trips made, driving experience and educational level had significant joint effect on driving anger behavior [F (2,710) =61.05; p<0.01]. Driving experience (β = -0.382; t = -10.831; p<0.001) and educational level (β = 0.147; t = 4.161; p<0.01) were significant independent contributors to driving anger behavior.

5.1.1 Discussion

Hypothesis one which tested the significant difference between high and low extraversion personality trait on driving anger behavior was confirmed. The result indicated that drivers who score high on extraversion significantly reported high driving anger behavior. This is supported by previous research on personality traits and driving anger. (Lajunen& Parker, (2001).

Hypothesis two which tested the significant difference between high and low level of job stress on driving anger behavior was confirmed. The result indicated that drivers who score high on job stress significantly reported high driving anger behavior. This is supported by previous research on job stress and driving anger. Deffenbacher and colleagues have identified trait differences in driving anger. Hypothesis three tested the difference between professional and non-professional drivers on driving anger behavior was confirmed. The result indicated that professional drivers reported higher driving anger behavior than the non-professional drivers. Hypothesis four tested the main and interactive effects of category of drivers and job stress on driving anger behavior was confirmed. The result indicated that professional drivers with high job stress reported high driving anger behavior than non-professional drivers. We suggest that, although high levels of stress do produce more driving anger and aggressive responses, anger is also, and perhaps more frequently, aroused by ego-defensive reactions to other drivers (e.g., perceiving another driver's actions as being personally directed at the self).

Hypothesis five which tested the joint and independent prediction of driving experience and education on driving anger behavior was confirmed. The result indicated that both driving experience and education positively influenced driving behavior.

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