opción

Revista de Antropología, Ciencias de la Comunicación y de la Información, Filosofía, Lingüística y Semiótica, Problemas del Desarrollo, la Ciencia y la Tecnología

Año 36, 2020, Especial N° 26

Revista de Ciencias Humanas y Sociales
ISSN 1012-1587/ ISSNe: 2477-9385
Depósito Legal pp 198402ZU45

Universidad del Zulia
Facultad Experimental de Ciencias
Departamento de Ciencias Humanas
Maracaibo - Venezuela

Opción, Año 36, Especial No.26 (2020): 1776-1794
ISSN 1012-1587/ISSNe: 2477-9385

Correlation of self-control with aggressive behavior of adolescent motorcyclists

Setia Budi, Ilham Nur Alfian
Department of Psychology, Faculty of Psychology, Universitas Airlangga
ilhamnuralfian48@g.com

Abstract

Most of road accidents are caused by aggressive behavior of motorcyclists, especially adolescents. An understanding of self-control is needed to reduce the risk of accidents. This study aimed to determine a relationship between self-control and aggressive behavior of motorcyclists in adolescents. The results of the correlation test between two variables indicated that the significance of the variable self-control driving with driver aggressiveness was 0.000. The correlation coefficient obtained was negative which showed the direction of the opposite relationship so that when self-control of motorbike driving was high then aggressive behavior was also high.

Keywords: Self control, Aggressive driving behavior, Adolescents.

Correlación del autocontrol con el comportamiento agresivo de los motociclistas adolescentes

Resumen

La mayoría de los accidentes de tráfico son causados por el comportamiento agresivo de los motociclistas, especialmente los adolescentes. Es necesario comprender el autocontrol para reducir el riesgo de accidentes. Este estudio tuvo como objetivo determinar una relación entre el autocontrol y el comportamiento agresivo de los motociclistas en adolescentes. Los resultados de la prueba de correlación entre dos variables indicaron que la importancia de la conducción de autocontrol variable con la agresividad del conductor fue de 0,000. El coeficiente de correlación obtenido fue negativo, lo que mostró la dirección de la relación opuesta, de modo que cuando el

Recibido: 20-12-2019 •Aceptado: 20-02-2020

autocontrol de la conducción de motocicletas era alto, el comportamiento agresivo también era alto.

Palabras clave: Autocontrol, Conducta agresiva, Adolescentes.

1. INTRODUCTION

Road accidents and deaths are mostly caused by an aggressive behavior of drivers (ADMINISTRATION 2009; ASSOCIATION 2009; GOLSHANI 2015), especially adolescents (ZAMBON & HASSELBERG 2006). Rider's aggressive behavior is a social dysfunctional behavior of a person who can endanger to others (HOUSTON, HARRIS & NORMAN 2003). On the highway, a person who experiences high competition, hostility and aggressive thoughts, tends to be an aggressive driver (BLANCHARD, BARTON & MALTA 2000; HOUSTON ET AL. 2001). Aggressive thoughts are a response to stress related to the environment. Drivers with stress are related to feeling angry when driving which results in aggressive driving (GLENDON ET AL. 1993; STOKOLS ET AL. 1978) So that self-control is needed to minimize the risk of accidents.

Aggressive behavior when driving on a highway is influenced by some aspects, including social by the presence of other people (CURRY ET AL. 2012), emotional which is influenced by high pressure and ego (NEIGHBORS, VIETOR & KNEE 2002) and anger, stress, and aggression in driving which can cause traffic and accident violations (DEFFENBACHER ET AL. 2000; KNEE & NEIGHBORS AND; NOVACO ET AL. 1979; SCHAEFFER ET AL. 1988; SELZER

& VINOKUR 1974; STOKOLS ET AL. 1978), situational time pressure (HOUSTON, HARRIS & NORMAN 2003) and personal, which is dominantly done by groups of adolescents (ZAMBON & HASSELBERG 2006). Another significant finding was from Morton et al which stated that the risk level of driving on highways by especially male adolescents, is higher than that in adult motorcylists (SIMONS-MORTON ET AL. 2011). It is reinforced by the results of research from Bettencourt & Miller's which states that male drivers are more aggressive in driving compared to female drivers (BETTENCOURT & MILLER 1996). The manifestation of aggressive behavior by motorcyclists on the highway is such as trailing other drivers, braking suddenly, and cutting through other riders' way (ASSOCIATION 2009).

In driving, a person behavior is related to self-control, because a good self-control helps individuals to avoid accidents. That deviant behavior is related to manifestations of latent nature in general, namely short-term pursuit and mere pleasure (GOTTFREDSON & HIRSCHI 1990; HIRSCHI & GOTTFREDSON 1994). Drivers with a low self-control are affected several factors, including sensation seeking, impulsivity, consequences, and anger or temper arousal (LIN 2009). The results of previous studies showed that self-control was caused by frustration which caused drivers to behave aggressively in driving. Individuals who are low in self-control are less possibility to tolerate frustration (GOTTFREDSON & HIRSCHI 1990). The act of controlling oneself is not only related to behavior but also gender and age (TITTLE, WARD & GRASMICK 2003).

Male teenage riders pass violations higher than female (ELLIOTT 1994; HERRNSTEIN & WILSON 1985; NAGEL & HAGAN 1983; SMITH & VISHER 1980; STEFFENSMEIER & ALLAN 2000; STEFFENSMEIER, ALLAN & STREIFEL 1989; SUTHERLAND, CRESSEY & LUCKENBILL 1992; TITTLE & PATERNOSTER 2000; TITTLE & WARD 1993; WARREN 1991). Male drivers have more tendency to a sensation seeking compared to female riders (LIN 2009). From the explanation above, self-driving control related to individual behavior which can lead to unsafe driving behavior.

There are numerous motor vehicle accidents in developing countries particularly Indonesia (INDAWATI & MOCHAMMAD 2018). Kenjeran District is a densely populated area located in the northern city of Surabaya, Indonesia where it is directly adjacent to Madura Island which is connected by the SURAMADU Bridge. Based on the phenomenon that the author has observed when crossing the highway of Kedung Cowek, adolescent motorcyclists in the area are classified as risky motorists because they do not use safety equipments while driving. Lack of awareness of road safety makes the number of traffic violators in this region high. One form of traffic violation is not using standardized vehicle safety device when crossing a highway.

Based on the Tanjung Perak Resort Police Satlantas data in 2015 regarding traffic violations in 5 regions handled by the Tanjung Perak POLRES in 2015 there were a total of 171 traffic violations (EAST JAVA 2015). Motorcycle users registered 156 traffic violations

and the rest were violations caused by car drivers and hit-and-run traffic. Adolescents mostly committed traffic violations totaling 59 people. According to sex, there were 51 male offenders who were traffic violators. The high number of violations that occurred in Kenjeran Subdistrict had an impact on the high number of accidents in the Kenjeran Subdistrict area. In Kenjeran Subdistrict, there were 61 accidents involving teenagers in the area in the last three years. Based on the data above, accidents in the Kenjeran Subdistrict are classified as high. As one of the areas in northern Surabaya, Kenjeran Subdistrict is one of the regions with a high accident rate compared to other sub-districts.

1.1. Adolescent Motorcyclists and Problems

Adolescence is a period of great change that occurs in young humans physically, cognitively, and emotionally (Spano 2004) and in the stage where they seek identity (Nursalam et al. 2019). The limits on adolescent age range are considered vary (Rusnalasari et al. 2018). However, definition of adolescents adapted to conditions in Indonesia by using unmarried boundaries and age (11-24 years). Adolescent Motorcyclists themselves are defined by the Transport Research Center as drivers who drive motorbike vehicle on the road under the age of 25 (ECMT 2006). Each country has a different age limit when having a driver's license.

The number of road accidents experienced by teenagers is higher than those experienced by adults. The accident itself is one of the main causes of death and disability in adolescents (SIMONS-MORTON ET AL. 2011). The involvement of adolescents in the occurrence of accidents causes the number of teenage accidents to be higher (SIMONS-MORTON ET AL. 2011). This is because teenagers often ignore rules that can maintain their safety while driving. The statement was reinforced by previous researches, which stated that many teenage drivers did not follow the driving safety recommendations (SHULTS & WEST 2015).

2. METHODOLOGY

This was a quantitative research in the form of explanatory research with the type of survey research. The sampling technique in sampling in this study was non probability sampling by means of snowball sampling. The subjects used in this study amounted to 107 adolescents consisting of 50 male and 57 female adolescents who passed the Suramadu by-pass area and used motorbikes with an average age of 17 years as many as 26 people (23%), 18 years old of 17 people (16%), 19 years of 21 people (20%), 20 years of 22 people (21%) and 21 years of 21 people (20%).

Self-scale control: In the self-control questionnaire, the researchers used a scale from Gottfredson & Hirschi consisting of 6

dimensions of 24 items (Gottfredson & Hirschi 1990). The first dimension is impulsive consisting of 4 items, the second dimension is a simple task consisting of 4 items, the third dimension is taking risks consisting of 4 items, the fourth dimension is physical activity consisting of 4 items, the fifth dimension is selfish consisting of 4 items, and the sixth dimension is anger which consists of 4 items. Likert scale used starts from scale 1 (Strongly Disagree) to scale 5 (Strongly Agree).

Aggressive behavioral drive scale: On aggressive behavior questionnaires drive, the researchers use a translation of Aggressive Driving Behave Scale which was compiled by Houston et al consisting of 2 dimensions of 11 items (Houston, Harris & Norman 2003). The first dimension is conflict behavior consisting of 7 items and the second dimension is speed consisting of 4 items. Likert scale used starts from scale 1 (Strongly Disagree) to scale 5 (Strongly Agree).

The technique used in this study was survey techniques. The survey technique itself is the concept of variables to be packaged into a question that is adopted by the authors (Lawrence 2007). After becoming a form of question, the questionnaire was ready to be distributed to the respondent to be filled after it was returned to the researchers for data processing using statistical techniques. Data collection techniques at the time of the survey were carried out by distributing questionnaires. Retrieval of data for this study was from July 14 to 21, 2017 online with criteria and assistance of several

subjects according to the criteria that were already available on the form provided by the authors.

Data analysis used two main methods, namely univariate analysis and bivariate analysis. The univariate analysis is the result of the mean, median, and standard deviation of the data analysis on self-control of motorbike driving and aggressive driving behavior. After all the data were calculated and known in number, then the self-control of motorcycle driving with aggressive driving behavior using were connected using bivariate analysis. The analysis test used in this study was Pearson's Rho. The calculation was done using IBM SPSS Statistics 16 software for Windows (Babane & Chauke, 2015).

3. RESULTS AND DISCUSSION

The following are descriptive statistics obtained from calculations using IBM SPSS Statistics 16 software for Windows:

Table 1: Descriptive Statistics Analysis

	N	Minimum	Maximum	Mean		Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Std. Error	Statistic	Std. Error
KD_TOTAL	107	44.00	100.00	68.5607	1.10234	11.40273	-.238	.234	-.116	.463
A_TOTAL	107	11.00	50.00	32.3364	.69838	7.22410	-.235	.234	.090	.463
Valid N (listwise)	107									

Based on the table above, it can be seen that the self-control variable of motorcyclists had minimum value of 43 and a maximum value of 92 of the total subjects of 107 people. The average value of self-control was 64.71 and the standard deviation value was 10.151. For behavioral variables, driving aggressiveness had minimum value of 44 and maximum value was 94. As for the value of the Standard Deviation, it was 10.573 and the average of 67.50 of the total subjects.

The score above requires a comparison norm so that it can be interpreted. The author used comparison scale to categorize subjects using standardized scale norms for self-control and driving aggressiveness variables. In the norm, mean and standard deviation of the scale of self-control and driving aggressiveness examined by the authors must be known first.

Table 2: Self-Control Scale Categorization

Category norm	Category	Total sample
$83 > X$	Very high	14
$73 < X \leq 83$	High	33
$62 < X \leq 73$	Moderate	35
$51 < X \leq 62$	Low	16
$X \leq 51$	Very low	9

The results showed that the majority of subjects obtained moderate score of 35 subjects, a very high score of 14 people, a high score of 33 people, a low score of 16 people, and a very low score of 9 people.

Table 3: Categorization of Aggressive Behavior Scale

Category Norms	Category	Number of Samples
43 > X	Very high	27
36 < X ≤ 43	High	32
29 < X ≤ 36	Moderate	16
22 < X ≤ 29	Low	19
X ≤ 22	Very low	13

The results of normalization of the categorization data table the aggressiveness variable of the riders above showed that the majority of subjects obtained high scores of 32 subjects, very high scores of 27 people, moderate scores of 16 people, low scores of 19 people, and very low scores of 13 people

Data analysis in this study used Pearson correlation techniques, which is a non-parametric technique. Furthermore, decision making recognizes the relationship between variables on the magnitude of the r value (correlation coefficient) as shown in the table below:

Table 4: Table of correlation coefficients

Interpretation	r value interval
0.10 – 0.29	Weak
0.30 – 0.49	Moderate
0.50 - 1.0	Strong

The following are the results of the analysis test using the Pearson's rho correlation technique.

Table 5: Correlation Test

		KDT	AT
KDT	Pearson Correlation	1	-.962**
	Sig. (2-tailed)		.000
	N	107	91
AT	Pearson Correlation	-.962**	1
	Sig. (2-tailed)	.000	
	N	91	91

Correlation is significant at the 0.01 level (2-tailed)

The results of the correlation test between the two variables indicate that the significance of the variable self-control driving with the aggressiveness of drivers was 0.000. This showed that there was relationship between self-control of motorbike driving and the aggressiveness of drivers. The correlation coefficient between the two variables was -0,962 which indicated the strength of the relationship between the two variables. The correlation coefficient obtained was negative which indicated the direction of the opposite relationship. Thus, when self-control of motorbike driving was high, aggressive behavior was also high.

This study showed that self-control of motorcycle driving had significant relationship with the aggressive behavior of adolescent driving. This is consistent with the research that has taken place, stating that self-control can have a negative impact, such as anger, which results in a person behaving deviant (ELLWANGER & PRATT 2014). The nature of self-control is as the ability to override or change one's inner response to interfere with unwanted behavioral tendencies

(such as impulses) and refrain from actions caused by others (TANGNEY, BOONE & BAUMEISTER 2018). Self-control can be concluded as the ability of individuals to monitor and regulate their thoughts and emotions in order to make decisions in accordance with self-standards (HAWS 2007).

A person who has negative self-control can result in anger which causes a person to drive aggressively (ELLWANGER & PRATT 2014) (PRATT, 2014). Individuals with low self-control tend to pursue short-term rather than long-term consequences of what they do (GOTTFREDSON & HIRSCHI 1990). A person who has low self-control ability prefers the desire for more mature short-term results than long-term, such as momentary friendships, problem-prone marriages, etc. for their own satisfaction, while those who have high self-control will think about what he will do and delay satisfaction for himself/herself (GOTTFREDSON & HIRSCHI 1990).

Low self-control is also felt to lose interest because choosing a short period of time and easy than long time and difficult activities also tend to have low tolerance and prefer to solve problems physically rather than verbally. Gottfredson & Hirschi also added that they tend to be selfish, indifferent, and insensitive to the suffering and needs of others and are usually easily angry and take action so that they are always associated with violence. A driver in an angry state will reduce self-control against the high level of accidents (TITTLE, WARD & GRASMICK 2003), while drivers in a relaxed state will improve self-control of driving accidents with reference to the significance level of -

0.962. Those who have low self-control are more dominant doing dangerous actions than individuals who have high self-control (TITTLE, WARD & GRASMICK 2003).

In the group of teenage boys and girls in the Kenjeran Subdistrict, there was no significant difference in aggression behavior supported by a value above 0.05, which was 0.156. Data obtained from the National Highway Traffic Safety Administration state that male drivers tend to be more likely to experience accidents than female riders (US 2002), the cause of accidents themselves is verbal confrontation and throwing objects. From the data that is supported by research from Morton et al regarding, the level of accidents experienced by male teenage drivers is greater when on the road compared to adult drivers (SIMONS-MORTON ET AL. 2011). In addition, violators and victims that occur in the region are male. Based on Chen's research, when on the highway male teen drivers are more often seen acting aggressively (CHEN 2009).

The above statement is supported by other studies that show that male drivers when driving more often do violations compared to female or adult riders (YAGIL 1998), although studies conducted show that self-control of motorbike driving is the dominant factor to encourage the emergence of aggressive behavior of teenage motorbike riders in North Surabaya, Indonesia and young male and female teen drivers have the same aggressive behavior.

In this study, the population of adolescent motorbike riders in Kenjeran Subdistrict was not known. The related Tanjung Perak Police Satlantas Police stated that they did not have the data needed. Then, the search for suitable subjects who were willing to fill out questionnaires provided by researchers was limited.

4. CONCLUSION

Based on the results of the research that has been done, there was a relationship between self-control and aggressive behavior of adolescent motorbike riders in Kenjeran Subdistrict with a result of 0.000, lower than the significance standard value of 0.05, in which adolescents both men and women in Kenjeran Sub-district had the same level of aggressive behavior. It is expected that motorcyclists, especially adolescents, will maintain safety. Related parties are also expected to provide further socialization.

IMPLICATION

The results obtained can have implications for the relevant supervisors and academics. The police can make the results of this study as a reference to form a traffic discipline program so that the aggressiveness of adolescent motorbike riders does not harm other road users. Future research can make the results related to the behavior

of driving aggressiveness by using other factors that can encourage the emergence of such behavior in adolescents because self-control of motorbike driving showed the results of having low relationship with the aggressiveness of motorcycle riders.

REFERENCES

ABOU-ZEID, M., KAYSI, I., & AL-NAGHI, H. 2011. **Measuring aggressive driving behavior using a driving simulator: an exploratory study.** Proceedings of the 3rd International Conference on Road Safety and Simulation.

ADMINISTRATION, N.H.T.S. 2009. 'Traffic Safety Facts: 2007 Data: Pedestrians'. **Annals of Emergency Medicine.** Vol. 53, No 6: p. 824.

ASSOCIATION, A.A. 2009. **Aggressive driving: Research update**. American Automobile Association Foundation for Traffic Safety: 202–638.

BABANE, M. T., & CHAUKE, M. T. 2015. "Cross-border Language Harmonization: A Case of Xitsonga (South Africa) and Shangani (Zimbabwe)". **Journal of Sociology and Social Anthropology.** Vol. 6, No 3: 435-440.

BETTENCOURT, B., & MILLER, N. 1996. "Gender differences in aggression as a function of provocation: a meta-analysis". **Psychological bulletin.** Vol. 119, No 3: p. 422.

BLANCHARD, E.B., BARTON, K.A., & MALTA, L. 2000. "Psychometric properties of a measure of aggressive driving: The Larson Driver's Stress Profile". **Psychological reports.** Vol. 87, No 3: 881–92.

CHEN, C.-F. 2009. "Personality, safety attitudes and risky driving behaviors—Evidence from young Taiwanese motorcyclists". **Accident Analysis & Prevention.** Vol. 41, No 5: 963–8.

CURRY, A.E., MIRMAN, J.H., KALLAN, M.J., WINSTON, F.K. & DURBIN, D.R. 2012. "Peer passengers: How do they affect teen

crashes?". **Journal of Adolescent Health.** Vol. 50, No 6: 588–94.

DEFFENBACHER, J.L., HUFF, M.E., LYNCH, R.S., OETTING, E.R. & SALVATORE, N.F. 2000. "Characteristics and treatment of high-anger drivers.". **Journal of counseling psychology.** Vol. 47, No 1: p. 5.

ECMT, O. 2006. **Young Drivers: The Road Safety**. Transport Research Center.

ELLIOTT, D.S. 1994. "Serious violent offenders: Onset, developmental course, and termination—The American Society of Criminology 1993 presidential address". **Criminology.** Vol. 32, No 1: pp. 1–21.

ELLWANGER, S.J. & PRATT, T.C. 2014. "Self-control, negative affect, and young driver aggression: An assessment of competing theoretical claims". **International journal of offender therapy and comparative criminology**. Vol. 58, No 1: 85–106.

FUJITA, K. 2011. "On conceptualizing self-control as more than the effortful inhibition of impulses". **Personality and Social Psychology Review.** Vol. 15, No 4: 352–66.

GLENDON, A.I., DORN, L., MATTHEWS, G., GULIAN, E., DAVIES, D.R. & DEBNEY, L.M. 1993. "Reliability of the driving behaviour inventory". **Ergonomics.** Vol. 36, No 6: 719–26.

GOLSHANI, N. 2015. **Analysis of aggressive driving behavior: A driving simulation study.** State University of New York at, Buffalo.

GOTTFREDSON, M.R. & HIRSCHI, T. 1990. **A general theory of crime.** Stanford University Press**.**

HARRIS, P.B. & HOUSTON, J.M. 2010. "Recklessness in context: Individual and situational correlates to aggressive driving". **Environment and Behavior.** Vol. 42, No 1: 44–60.

HAWS, K.L. 2007. "The impact of consumer spending self-control on consumption behaviors". vol. 68.

HERRNSTEIN, R. & WILSON, J.Q. 1985 **Crime and human nature**. New York: Simon and Shuster**.**

HIRSCHI, T. & GOTTFREDSON, M.R. 1994. **The Generality of Deviance.** NJ: Transaction, New Brunswick**.**

HOUSTON, J.M., HARRIS, P.B. & NORMAN, M. 2003. "The Aggressive Driving Behavior Scale: Developing a self-report measure of unsafe driving practices". **North American Journal of Psychology.** Vol. 5, No 2: 269–78.

HOUSTON, J.M., MCINTIRE, S., HUNTER, E., AND JOHNSON, K. & FRANCIS, D. 2001. **hypercompetitiveness and aggressive driving: getting my way on the highway.** Poster presented at the 47th Annual Meeting of the Southeastern Psychological Association. Atlanta, Georgia.

INDAWATI, R., & QOMARUDDIN, M. B. 2018. "The Probability of the Traffic Accidents on Students". **Journal of International Dental and Medical Research.** Vol. 11, No 1: 348-351.

JATIM, P. 2015. **Polres Jatim--Tanjung Perak.**

KNEE, C.R. & NEIGHBORS, C. N.D., "Feeling controlled, perception of peer pressure, and drinking among college students (in press)". **Journal of Applied Social Psychology.**

LAWRENCE, N.W. 2007. **Basics of Social Research Qualitative and Quantitative Approaches.** Pearson Education.

LIN, Y.-S. 2009. **Modeling aggressive driving: Assessing low self-control theory with the general aggression model**. Washington State University.

NAGEL, I.H. & HAGAN, J. 1983. "Gender and crime: Offense patterns and criminal court sanctions". **Crime and justice.** vol. 4: 91–144.

NEIGHBORS, C., VIETOR, N.A. & KNEE, C.R. 2002. "A motivational model of driving anger and aggression". **Personality and Social Psychology Bulletin.** Vol. 28, No 3: 324–35.

NOVACO, R.W., STOKOLS, D., CAMPBELL, J. & STOKOLS, J. 1979. "Transportation, stress, and community psychology".

American Journal of Community Psychology. Vol. 7, No 4: 361–80.

NURSALAM, NURSALAM, ET.AL. 2019. "Association between insomnia and social network site use in Indonesian adolescents." **Nursing forum.** Vol. 54, No 2.

RUSNALASARI, ZULIDYANA D., ET AL. 2018. "Students vulnerability and literacy analysis terrorism ideology prevention". **Journal of Physics: Conference Series.** Vol. 1028, No 1. IOP Publishing,

SCHAEFFER, M.H., STREET, S.W., SINGER, J.E. & BAUM, A. 1988. "Effects of Control on the Stress Reactions of Commuters 1". **Journal of Applied Social Psychology.** Vol. 18, No 11: 944–57.

SELZER, M.L. & VINOKUR, A. 1974. "Life events, subjective stress, and traffic accidents". **American Journal of Psychiatry.** Vol. 131, No 8: 903–6.

SHULTS, R.A. & WEST, B.A. 2015. "ATV riding and helmet use among youth aged 12–17 years, USA, 2011: results from the YouthStyles survey". **Injury prevention.** Vol. 21, No 1: 10–4.

SIMONS-MORTON, B.G., OUIMET, M.C., ZHANG, Z., KLAUER, S.E., LEE, S.E., WANG, J., ALBERT, P.S. & DINGUS, T.A. 2011. "Crash and risky driving involvement among novice adolescent drivers and their parents". **American journal of public health.** Vol. 101, NO 12: 2362–7.

SMITH, D.A. & VISHER, C.A. 1980. **Sex and involvement in deviance/crime: A quantitative review of the empirical literature**. American Sociological Review: 691–701.

SPANO, S. 2004. "Stages of adolescent development: Research FACTS and findings". **ACT for Youth: Upstate Center of Excellence, Cornell University. Retrieved April.** vol. 24: p. 2012.

STEFFENSMEIER, D. & ALLAN, E. 2000. **Looking for patterns: Gender, age, and crime.** Criminology: A contemporary handbook: 85–128.

STEFFENSMEIER, D., ALLAN, E. & STREIFEL, C. 1989. "Development and female crime: A cross-national test of alternative explanations". **Social Forces.** Vol. 68, No 1: 262–83.

STOKOLS, D., NOVACO, R.W., STOKOLS, J. & CAMPBELL, J. 1978. "Traffic congestion, Type A behavior, and stress.". **Journal of Applied Psychology.** Vol. 63, No 4: p. 467.

SUTHERLAND, E.H., CRESSEY, D.R. & LUCKENBILL, D.F. 1992. **Principles of criminology**. Altamira Press.

TANGNEY, J.P., BOONE, A.L. & BAUMEISTER, R.F. 2018. **High self-control predicts good adjustment, less pathology, better grades, and interpersonal success**. Self-Regulation and Self-Control. Routledge: 181–220.

TITTLE, C.R. & PATERNOSTER, R. 2000. **Social deviance and crime: An organizational and theoretical approach**. Roxbury Publishing Company Los Angeles, CA.

TITTLE, C.R. & WARD, D.A. 1993. "The interaction of age with the correlates and causes of crime". **Journal of Quantitative Criminology.** Vol. 9, No 1: 3–53.

TITTLE, C.R., WARD, D.A. & GRASMICK, H.G. 2003. "Gender, age, and crime/deviance: A challenge to self-control theory". **Journal of Research in Crime and Delinquency.** Vol. 40, No 4: 426–53.

US, D. OF T.N.H.T.A. 2002. **Traffic Safety Facts 2000 SpeedinG**.

WARREN, M. 1991. **Comparing Male and Female Offenders**. CA: Sage, Newbury Park.

YAGIL, D. 1998. "Gender and age-related differences in attitudes toward traffic laws and traffic violations". **Transportation Research Part F: Traffic Psychology and Behaviour.** Vol. 1, No 2: 123–35.

ZAMBON, F. & HASSELBERG, M. 2006. "Factors affecting the severity of injuries among young motorcyclists—a Swedish nationwide cohort study". **Traffic injury prevention.** Vol. 7, No 2: 143–9.

UNIVERSIDAD DEL ZULIA

opción
Revista de Ciencias Humanas y Sociales

Año 36, Especial N° 26 (2020)

Esta revista fue editada en formato digital por el personal de la Oficina de Publicaciones Científicas de la Facultad Experimental de Ciencias, Universidad del Zulia.
Maracaibo - Venezuela

www.luz.edu.ve

www.serbi.luz.edu.ve

produccioncientifica.luz.edu.ve