Original Article

The Compare of Cognitive Emotion Regulation Strategies and Personality Patterns in Drivers with and without a History of Accidents

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A R T I C L E   I N F O

A B S T R A C T

The purpose of this study to was compare cognitive emotion regulation strategies and personality patterns in drivers with and without a history of accidents. This research is causal-comparative (case-control). The population consist of all drivers traveling with and without a history of accidents in Ardebil in 2015 years. 160 drivers were selected randomly. Data analysis included MANOVA and SPSS software (package of Spss / pc + + ver18). The results showed, there is a significant relationship between drivers with and without a history of accidents in terms of positive negative emotion regulation strategies. According the results, there is a significant relationship between personality patterns in drivers with and without a history of accidents.

INTRODUCTION

Vehicles, which are characteristics of civilization have turned into a big problem in different social and public health respects due to increasing the number of the road and city accidents and high mortality rate (Bener et al, 2004). The most important factor behind death of those who are between one to forty is injuries caused by the variety of accidents that includes 12% of illness being; furthermore, this one is a third factor behind the total mortality (WHO, 2009). Meanwhile, causes of injuries are including road accidents and findings of World Health Organization (WHO) show that 25% of losses due to injuries throughout the world. It is predicted that until 2020, the number of death cases due to driving accidents increase up to 65% throughout the world and up to 80% in developing countries (Peden, 2005). The vital point is

to the extent that WHO suggested the motto of "safe road" in 2004 (Koushki et al, 2003) The organization has put the responsibility upon the Health Department For collecting information, investigating about driving accidents, and interfering in traffic safety (Allahyari et al, 2008).

Iran has one of the highest rates of road traffic crashes mortality rates in the world; furthermore, driving accidents, after heart maladies, is nationally regarded as the second factor behind death in Iran (Montazeri, 2004). The road traffic crashes mortality rate in Iran was 30/100,000 people in which is 23 and 14 times higher in comparison with the world and Eastern Mediterranean respectively (Akbari et al, 2004). According to the statistics of Iranian Legal Medicine Organization, from the perspective of losses rate, the number of dead people due to accidents had 10% growth in the year. The index

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of the number of death to one hundred thousand persons has had an ascending trend over the last decade and has increased from 5.20 in 1996 to 5.40 in 2006. Growth rate of the index has almost been stopped due to reduced birth rate and measures adopted in the safety area, to an extent that the number has reached 31.2 in 2009, which reduced 25% in comparison with 2006. However, according to the statistics of Road Maintenance and Transportation Organization of Iran, the number of accidents, injuries and its losses is still increasing every year (Atapoor, 2005).

Cognitive emotion regulation strategies are cognitive responses to emotion-eliciting events that consciously or unconsciously attempt to modify the magnitude and/or type of individuals ' emotional experience or the event itself (Campbell-Sills & Barlow, 2007). In recent years, a substantial amount of work has been devoted to delineating the relationships between dispositions to use certain strat- egies and a variety of disorders, including depression (Nolen-Hoeksema et al, 2008), mania (Feldman et al, 2008), generalized anxiety disorder (Mennin et al, 2007), post-traumatic stress disorder (Tull & Roemer, 2003), social anxiety disorder (Kashdan & Breen, 2008), and eating disorders (Nolen- Hoeksema et al, 2007).

Grid (2013) Reports Some of highway accidents was related to factors such as emotional instability, anti-social behavior, impulsive behavior or psychological pressure. Arnau-Sabatés et al (2014) finding there is a significant relationship between cognitive strategies excitement with dangerous driving. Emotion regulation, a variety of control processes that aim to manage what when, where, how and how our emotions are experienced or expressed. Emotion regulation includes cognitive processes that occur automatically or with effort. Therefore emotion regulation can refer to a wide range of biological processes, social, behavioral and cognitive processes as well as conscious and unconscious (Garnefski et al, 2001). Hashemian et al (2010) finding drivers risk in factors extraversion and neuroticism compared with ordinary drivers received received high marks. Grosi and Azodi (2013) reports drivers group offending in the components of personality agreeableness, openness and conscientiousness were scores lower compared to the normal group.

RESEARCH METHODS

This research is causal-comparative (case-control). The population consist of all drivers traveling with and without a history of accidents in Ardebil in 2015 years. 160 drivers were selected randomly (80 people with history of accidents and 80 people without history of accidents). The drivers answered the same questionnaire including cognitive emotion regulation (Hasani, 2010) (including 36 questions) and questionnaire of NEOPI-R personality patterns (Costa & McCrae, 1992) (including 30 questions). The cronbach's alpha that obtained from the pilot data was 0.93 for cognitive emotion regulation and 0.87 for personality patterns. Data analysis included Multivariate Analysis of Variance (MANOVA) and SPSS software (package of Spss / pc + + ver18).

RESULTS

The results showed that the mean age of the drivers with history of accidents was 34.91 and SD was 11.93. The mean age and SD of the drivers without history of accidents was 38.16 and 9.29. According the results of table 4 (F=145.28) there is a significant relationship between drivers with and without a history of accidents in terms of positive emotion regulation strategies.

According the results of table 5 (F=80.31) there is a significant relationship between drivers with and without a history of accidents in terms of negative emotion regulation strategies. According the results of Eta square difference between groups was significant according to the dependent variables and this difference is 0.25 based on test Wilkes Lambda. That's mean 25% of the variance of the difference between groups is the effect dependent variables.

According the results of table 8 (F=80.31) there is a significant relationship between drivers with and without a history of accidents in terms personality traits of extraversion, neuroticism and agreement between drivers (p≤ 0.01). So that the characteristics of extraversion and neuroticism in drivers with accident history and characteristics of the agreement on drivers without an accident is higher.

Table 1: The mean and standard deviation of cognitive emotion regulation strategies in the group studied

Variable	Group	Mean	SD
Positive strategies of cognitive emotion regulation	Drivers without history of accidents	48.17	8.55
	Drivers with history of accidents	28.20	6.05
Negative strategies of cognitive emotion regulation	Drivers without history of accidents	26.72	6.17
	Drivers with history of accidents	43.30	9.93

Table 2: The mean and standard deviation personality patterns in the group studied

Variable	Group	Mean	SD
Extraversion	drivers without history of accidents	37.15	3.23
	drivers with history of accidents	43.90	3.48
Neuroticism	drivers without history of accidents	20.95	2.58
	drivers with history of accidents	29.82	2.83
Conscientious	drivers without history of accidents	30.40	2.89
	drivers with history of accidents	18.15	2.30
Openness to experience	drivers without history of accidents	27.11	4.80
	drivers with history of accidents	26.85	3.20
Agreement	drivers without history of accidents	38.10	4.81
	drivers with history of accidents	24.02	3.77

Table 3: The results of Levine's test for cognitive emotion regulation strategies

Variable	F	Degrees of freedom 1	Degrees of freedom 2	significance level
Positive strategies of cognitive emotion regulation	0.005	1	78	0.945
Negative strategies of cognitive emotion regulatio	0.012	1	78	0.914

Table 4: The results of MONOVA analysis test for positive strategies of cognitive emotion regulation

Source variations	Total squares	Degrees of freedom	Mean square	F	significance level	Eta square
Model	116622.812	1	116622.812	2124.026	0.000	0.965
Group	7980.013	1	7980.013	145.228	0.000	0.651
Error	4285.175	78	45.925			
Total	128927.000	80				

Table 5: The results of MONOVA analysis test for negative strategies of cognitive emotion regulation

Source variations	Total squares	Degrees of freedom	Mean square	F	significance level	Eta square
Model	98070.013	1	98070.013	1433.456	0.000	0.948
Group	5494.612	1	5494.612	80.313	0.000	0.507
Error	5336.357	78	68.415			

Table 6: The results of Levine test for variable personality patterns

Variable	F	Degrees of freedom 1	Degrees of freedom 2	Significance level
Extraversion	0.21	1	78	0.64
Neuroticism	0.01	1	78	0.91
Conscientious	0.36	1	78	0.54
Agreement	0.63	1	78	0.42
Openness to experience	2.54	1	78	0.06

Table 7: The results of Multivariate analysis of variance for personality patterns

	Test	Value	F	df of hypothesis	df of error	P	Eta square
Model	Pilia effect	0.99	2415.15	4	75	0.001	0.99
	Lambda Wilkes	0.008	2415.15	4	75	0.001	0.99
	Hotelling effect	128.80	2415.15	4	75	0.001	0.99
	Largest root of the error	128.80	2415.15	4	75	0.001	0.99
Group	Pilia effect	0.25	6.45	4	75	0.001	0.25
	Lambda Wilkes	0.74	6.45	4	75	0.001	0.25
	Hotelling effect	0.34	6.45	4	75	0.001	0.25
	Largest root of the error	0.34	6.45	4	75	0.001	0.25

Table 8: The results of Multivariate analysis of variance (MANOVA) on the variables personality patterns

Source variations	Dependent variable	Total squares	Degrees of freedom	Mean square	F	P	Eta square
Model	Extraversion	532195.31	1	532195.31	8629.16	0.001	0.99
	Neuroticism	40590.05	1	40590.05	3594.89	0.001	0.97
	Conscientious	36594.01	1	36594.01	4975.52	0.001	0.98
	Agreement	8446.05	1	8446.05	1900.17	0.001	0.96
	Openness to experience	59951.25	1	59951.25	3595.13	0.001	0.97
Group	Extraversion	485.11	1	485.11	7.86	0.006	0.09
	Neuroticism	151.25	1	151.25	13.39	0.001	0.14
	Conscientious	15.31	1	15.31	2.08	0.15	0.02
	Agreement	61.25	1	61.25	13.78	0.001	0.15
	Openness to experience	4.05	1	4.05	0.24	0.62	0.003

DISCUSSION

The purpose of this study to was compare cognitive emotion regulation strategies and personality patterns in drivers with and without a history of accidents. According the results, there is a significant relationship between drivers with and without a history of accidents in terms of positive negative emotion regulation strategies. These results are in good agreement with result Grid (2013) and Arnau-Sabatés et al (2014). Grid (2013) reports some of highway accidents was related to factors such as emotional instability, anti-social behavior, impulsive behavior or psychological pressure. Arnau-Sabatés et al (2014) finding there is a significant relationship between cognitive strategies excitement with dangerous driving. Emotion regulation, a variety of control processes that aim to manage what when, where, how and how our emotions are experienced or expressed. Emotion regulation includes cognitive processes that occur automatically or with effort. Such processes allow people to enjoy positive events in their lives and avoid negative events and their severity increase or decrease (Gross, 2001). Therefore emotion regulation can refer to a wide range of biological processes, social, behavioral and cognitive processes as well as conscious and unconscious (Garnefski et al, 2001). The results showed that there is a significant relationship between personality patterns in drivers with and without a history of accidents. So that the characteristics of extraversion and neuroticism in drivers with accident history and characteristics of the agreement on drivers without an accident is higher.

These results are in good agreement with result Sumer (2005), Wundersitz (2008), Hashemian et al (2010), Grosi and Azodi (2013) and Borges et al (2014). Wundersitz (2008) reports. There is a significant relationship between personality traits and predicted traffic accidents. Hashemian et al (2010) finding drivers risk in factors extraversion and neuroticism compared with ordinary drivers received high marks. Grosi and Azodi (2013) reports drivers group offending in the components of personality agreeableness, openness and conscientiousness were scores lower compared to the normal group. The explanation for this finding could be said individual afflicted with negative emotions such as excitement, stress, anger, guilt, and feelings of frustration permanent and pervasive is not necessary accuracy and focus on driving. These factors lead to an increase in accidents. As well as those with high scores on the index of agreement essentially altruistic and have sympathy with the others, and the probability that the driving risk is very low and expected.

In general it can be said that cognitive emotion regulation strategies and personality patterns among the variables were related to traffic accidents and are require programs to mitigate and control these variables. Because this research was done in self-report, so like all retrospective studies, the results of which may be associated with flaws. Therefore, it is recommended such research be done in several iranian cities and with other methods of data collection (interviews, observations).

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