

Investigation of the Effects of Religious Beliefs on Compliance with Traffic Laws and Regulations on Yazd Province Drivers (Structural Equation Modeling Approach)

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ARTICLE INFO

Original

Received: 12 Aug 2017

Accepted: 3 Dec 2017



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ABSTRACT

Introduction: It is obvious that driving without laws and regulations is a threat to every society's order and safety ultimately leading to accidents and loss of life. Several factors play a role in observance of traffic laws and regulations. The main purpose of this research was to investigate the effect of religious beliefs on compliance with traffic laws and regulations that could lead to improvement of order, safety, and reduction of casualties and accidents in Yazd City.

Methods: This was a descriptive study which conducted in 2017 on 384 citizens of Yazd province aged over 18 years with a driver's license and ownership of a car or motorcycle which were randomly selected. The data collection tool were two questionnaires, (Golak and Stark religiosity) and a questionnaire complying with the traffic rules and regulations. Data analysis was performed by Structural Equation Modeling, partial least squares and PLS software to test the assumptions and accuracy of the model.

Results: The findings showed that the effect of the lateral dimension of religious beliefs on compliance with traffic rules and regulations among drivers in Yazd was 0.518. Besides, the effect of the emotional dimension of religious beliefs on compliance with the rules and regulations among the drivers was 0.270, and the effect of the religious beliefs on the observance of the rules and regulations among the drivers of Yazd was 0.05. There was thus a significant relationship between the variables of religious beliefs and the observance of traffic laws and regulations (adherence to the rules influenced by Religious Beliefs).

Conclusion: In general, the results of this research showed that religious beliefs included in this research can increase the observance of traffic rules and regulations and consequently with its continuation over time may result in reduction of accidents and consequent losses.

Keywords: Driving Directions, Religious Beliefs, Yazd

How to cite this paper:

Pourshams M, JanFada H. Investigation of the Effects of Religious Beliefs on Compliance with Traffic Laws and Regulations on Yazd Province Drivers (Structural Equation Modeling Approach). J Community Health Research. 2017; 6(4): 207-15.

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Introduction

Attention to religion and beliefs is not a new approach, but is something that has been widely considered by scholars throughout history and has influenced the lives and functions of various people. Today, more than ever, we need to think about the influence of religious attitudes on all human affairs, especially emotional and spiritual. Nowadays, many scholars believe that religion has an irrefutable influence on the health of the soul, body, and other various aspects of human life ⁽¹⁾

Traffic behavior as a part of general behavior depicts the levels of obedience or disobedience of a society to laws. One of the most important necessities of life in these communities is respect for the social etiquette of life, but in third world countries these criteria are not met and sometimes witness a lack of respect for civil rights and violation of rules and regulations. In terms of traffic behavior, Iran is ranked second among 190 countries for traffic casualties. According to statistics in 1998 in Japan, for every 10,000 vehicles 1.5 people die every year in driving accidents, while in Iran, this figure is 23 for every 10,000 vehicles ⁽²⁾. Interestingly, countries like Sweden are pursuing a program that will reduce the human toll rate in their driving accidents by the year 2020. In developed countries, only one person is killed per 100 injuries, while this figure in Iran is one death per 10 injuries, and the resistances are very high for implementation of traffic rules and regulations ⁽²⁾.

There are different meanings for the word "traffic". The meaning of this term which has found its way from foreign languages to the Persian language includes; "coming, going, passing, transporting, etc." ⁽³⁾. From the point of view of the rules and law, traffic refers to the transport of vehicles, persons and animals on the roads ⁽⁴⁾. The concept of traffic refers to the transport of vehicles within a specified spatial boundary. ⁽⁵⁾

Traffic culture refers to sets of values, norms, customs, beliefs, and sentences (in the case of vehicles) that are used by traffic users when driving in alleys, streets, squares, and highways.

This culture is essentially a combination of two main parts; the first includes regulations, rules of traffic and includes forms of text and symbols, attitudes, and actions of public actors, while the second is influenced by beliefs, customs, and cultural traditions of the community ^(6,7). Traffic behavior reflects the degree of adherence or non-compliance of the majority of people with traffic norms ⁽⁸⁾, which is a kind of cultural repercussions in Iran. In the driving debate in Iran, general rules have been introduced, but its implications are neither defined nor trained for citizens, and to implement it with the exception of a number of correct behaviors (such as standing behind the pedestrian line or using the safety belt), rarely attempts have been made to improve the traffic behavior of citizens ⁽⁹⁾.

Believing that there is a God controlling the positions and observing the servants greatly reduces the situation-related anxiety, as most believers describe their relationship with God like a very intimate friend. And they believe that it is possible to control the effect of uncontrollable situations by relying on God and resorting to God ⁽¹⁰⁾. Religion refers to a set of worldviews and ideologies that their instigation can determine the way of life of an individual. Religious beliefs in the special sense are always the common beliefs of a certain congregation who are proud of their self-reliance on those beliefs and practice of the rituals associated with them. These beliefs are not considered to be individually accepted by all members of the congregation, but are in the sense of belonging to the totality of the group and form part of the unity of the group ⁽¹¹⁾. Basically, the point is that the peoples of traditional societies, especially the Iliya societies, are free and easy in terms of religion, social and ideological issues according to ethnic and cultural factors which has been concluded by researchers and tourists travelling through these areas. Religious people, while adhering to their religious orders and beliefs preserve many of their beliefs and culture even before the advent of Islam ⁽¹²⁾. The word "Belief" has been translated into Persian with a number of

meanings⁽³⁾. This term is a term related to the field of social psychology that studies issues relating to the psychological phenomenon of belief in the sense that it has social behavior. In a simple and expressive definition, "beliefs are thoughts that the individual believes to be correct and legitimate."⁽¹³⁾ Where do beliefs come from? What are the cognitive, emotional and insightful sources of the formation of beliefs? Some social psychologists have concluded that "beliefs have three main roots; personal experience, information from others, and inference. Beliefs can be the product of these three sources simultaneously. For example, someone may well describe Mr. X's new tape because he has personally listened to it. Also, the track may seem very good because it defines a trusted person or has been written about in newspapers positively. In the latter case, a person's belief is based on the information obtained from others. Finally, it's likely that a person who has not listened to the tape at all, and nobody has talked to him about it, but he believes that since the previous tracks are good the new one is also good⁽¹⁴⁾. Investigations conducted on domestic and international research have not yet been conducted with this title, but the research that is closely related is mentioned in an article entitled "The Role of Social Interactions in Traffic Police According to Drivers' Guidelines", conducted by Eliasy et al⁽¹⁵⁾ This research shows that the social interaction of the police and the attitude of the police in the area of communication with the public increased and the police used less violence and paid more attention to people's demands. In another article titled "Investigation of the Social Capital of Social Security Policies and Observation of Laws and Regulations", which was carried out by the Clergy and colleagues in 2008, the framework of social interaction and social capital was studied by Robert Putnam, James Coleman Giddens, Fukuyama, and Kṛiṣṇa to develop a suitable model. The results of the survey and data from two statistical communities of drivers and traffic officers indicates that people want to communicate with the police and consider this to be very effective in observance of traffic laws⁽¹⁶⁾. Wild and his colleagues in the study of the

relationship between religious beliefs and mental health showed that 20 to 60 percent of the variables of adults mental health are explained by religious beliefs⁽¹⁷⁾. In another study, Winfield showed that in a sample of 1650 people with an average age of 50 years, religious attitudes with mental health have a positive relationship. Religiousness was also associated with marital satisfaction in both men and women and job satisfaction in men⁽¹⁸⁾.

There is a positive, direct, and meaningful relationship, so that the growth and strengthening of religious beliefs will increase the ability to control the emotions and excitement of oneself and others and, in other words, improve the level of emotional intelligence of the community. Moreover, there is the highest correlation coefficient between problem solving and religious beliefs⁽¹⁹⁾.

Therefore, one of the most important traffic-related issues, as mentioned above, is the issue of observance of traffic rules and regulations by individuals in the community, which can affect many factors; one of these factors is Beliefs and Yazd as one of the religious cities of the country known as the Dar Al-Ebadeh (Yazd) is a region where religious beliefs are very rich. Therefore, these religious beliefs can certainly affect the driving culture and drivers of Yazd will definitely cease to be in the same position. The managers and authorities can investigate the impact of religious beliefs on adherence to the traffic rules and take appropriate measures. This study seeks to investigate the relationship between religious beliefs and adherence to the rules and regulations by drivers and tries to identify and provide appropriate solutions.

Methods

The present research was a descriptive study. It was also a practical study as the expected results can be exploited to improve traffic conditions and reduce road accidents. Regarding the research objectives and its nature, the most appropriate method for collecting the required information was using a questionnaire. For this purpose, two

questionnaires were used. The first questionnaire was Glock and Stark Religion Questionnaire which is prepared by Glock and Stark to measure attitudes and religious beliefs (Glock and Stark, 1965). It has been standardized in different countries of Europe, America, Africa and Asia and adapted for followers of Christian, Judaism and Islam religions. The present questionnaire was a five-dimensional measure containing five dimensions of belief, emotional, and consequential dimensions, rituals and thoughts to measure religiosity. In this research, because the main purpose of this research was to study the effect of religious beliefs on adherence to the rules of the law, the questionnaire used only three dimensions and the intellectual dimension of religion and religious practices were eliminated due to less proximity to the main goal. The present questionnaire had 19 items that were used to measure religiosity in 3 dimensions and included; religious beliefs (7 items), emotions (6 items) and consequence or religious effects (6 items). The second questionnaire was a researcher-made questionnaire on compliance rules included 16 questions that were used by the sample population to assess the compliance with the rules. Likert Scale was used for the measurement scale. The statistical population of the study included all citizens of Yazd province aged over 18 years with a driver's license and ownership of a car or motorcycle. Due to the large size of the statistical population, 384 people were randomly selected from among five different sections of Yazd city, and the questionnaires were distributed among them. In order to determine the validity of the questionnaires, the original design questionnaire was prepared and examined by the professors and experts in the field. In this study, Structural Equation Modeling Method (a comprehensive approach to hypothesis testing) was used to analyze the aggregate data of the collected questionnaires by using partial least squares method and PLS software to test the assumptions

and validity of the model. PLS modeling was done in two steps. In the first step, the measurement model was examined through validation and reliability analysis and confirmatory factor analysis. In the second step, the structural model was investigated by estimating the path between the variables and determining the fitting indices of the model.

Results

Evaluation of the measurement model

To obtain convergent validity and correlation, composite reliability and mean variance tests were evaluated. Reliability greater than 0.8 with mean of variance of at least 0.5 were two prerequisites for convergent validity and the correlation of a structure. Factor loads greater than 0.5 had a good reputation. In a prudent approach, factor loadings greater than 0.7 were of prime importance. The results of the validity and reliability analysis and the confirmatory factor analysis of the research model are shown in Table 1.

In this study, Fornell and Larker's (1981) approach was used to interpret factor load values. As it can be seen from the table above, the six-factor factor load is less than 0.5, and therefore, these items do not have a good reputation. But the other factor's load factor is more than 0.5, and therefore they are of prime importance. On the other hand, the table data show that the composite reliability obtained for all variables is greater than 0.7 and the mean of variance obtained for all variables is also greater than 0.5, which is the high convergence validity. Due to the inappropriateness of the validity of ten items from the questionnaire, the mentioned items were excluded in the analysis of the final research model.

Evaluation of the structural model

The results of the model test in the form of path coefficients along with the t statistics are the hypotheses related to the model paths in Table 3.

Path	Factor Load	Result of Validity	Composite Reliability	Mean Variance
Belief Dimension				
Question 1	0.471	Inappropriate		
Question 2	0.670	Appropriate		
Question 3	0.544	Appropriate		
Question 4	0.719	Appropriate	0.943	0.770
Question 5	0.746	Appropriate		
Question 6	0.747	Appropriate		
Question 7	0.686	Appropriate		
Emotional Dimension				
Question 8	0.691	Appropriate		
Question 9	0.674	Appropriate		
Question 10	0.333	Inappropriate	0.971	0.918
Question 11	0.611	Appropriate		
Question 12	0.723	Appropriate		
Question 13	0.747	Appropriate		
Consequential Dimension				
Question 14	0.616	Appropriate		
Question 15	0.786	Appropriate		
Question 16	0.777	Appropriate	0.910	0.774
Question 17	0.760	Appropriate		

Table 2. Path coefficient values and t statistics. Hypotheses related to the paths of the research model

Path	Relation	Path coefficient	T statistics	
1	Belief Dimension	Observance of law	0.05	9.277
2	Emotional Dimension	Observance of law	0.27	2.062
3	Consequence Dimension	Observance of law	0.517	6.573

Given the interpretive pattern in structural equation modeling, if the t-value of a path is larger than 1.96, then the corresponding path is significant at 95% level and the hypothesis of that path is confirmed. In the following paragraphs, according to the data obtained from the model test (the table), each of the research paths is examined separately.

- Study of the first path of the model: The value of the t-statistic of the first path of the model is 9.277, which is greater than 1.96. Therefore, it can be said that the corresponding path is significant at 95% confidence level. In other words, the hypothesis of this pathway (the first hypothesis of the research) is confirmed. Regarding the path coefficient obtained for this route, it can be said that the influence of religious beliefs on adherence to the rules and regulations among the drivers of the city of Yazd is 0.05.

- Study of the second path of the model: The t-value of the second path of the model is 2.062, which is 1.96 larger, so it can be concluded that the

corresponding path is significant at 95% confidence level. In other words, the hypothesis of this path (the second hypothesis of the research) is confirmed. Regarding the path coefficient obtained for this route, it can be said that the effect of the emotional dimension of religious beliefs on adherence to the rules and regulations among the drivers of the city of Yazd is 0.270.

- Study of the third path of the model: The t-value of the third path of the model is equal to 6,573, which is greater than 1.96, so it can be assumed that the corresponding path is significant at 95% confidence level. In other words, the hypothesis of this path (the third hypothesis of the research) is confirmed. Regarding the path coefficient obtained for this route, it can be said that the effect of the lateral dimension of religious beliefs on observance of the rules and regulations among the drivers of the city of Yazd is 0.518.

- Fitness of the model

In the partial least squares (PBL) approach, the quality and fitness of the model are measured using

either the CV-Redundancy and CV-Communality scales. Positive numbers indicate the quality of the

model. The values obtained for these indicators are shown in Table 4.

Table 3. CV-Red and CV-Com index values for the research model variables

Variable	CV-Red	CV-Com
Belief Dimension	0.000	0.280
Emotional Dimension	0.082	0.249
Consequence Dimension	0.018	0.305
Observance of Rules & Regulations-Com	0.005	0.197

According to the Table 3, the values obtained for the CV-Red or CV-Com test are all positive, which indicates the quality of the test model.

Afterwards, the image of the tested model of research, along with the path coefficient obtained for all the paths of the model, has been determined.

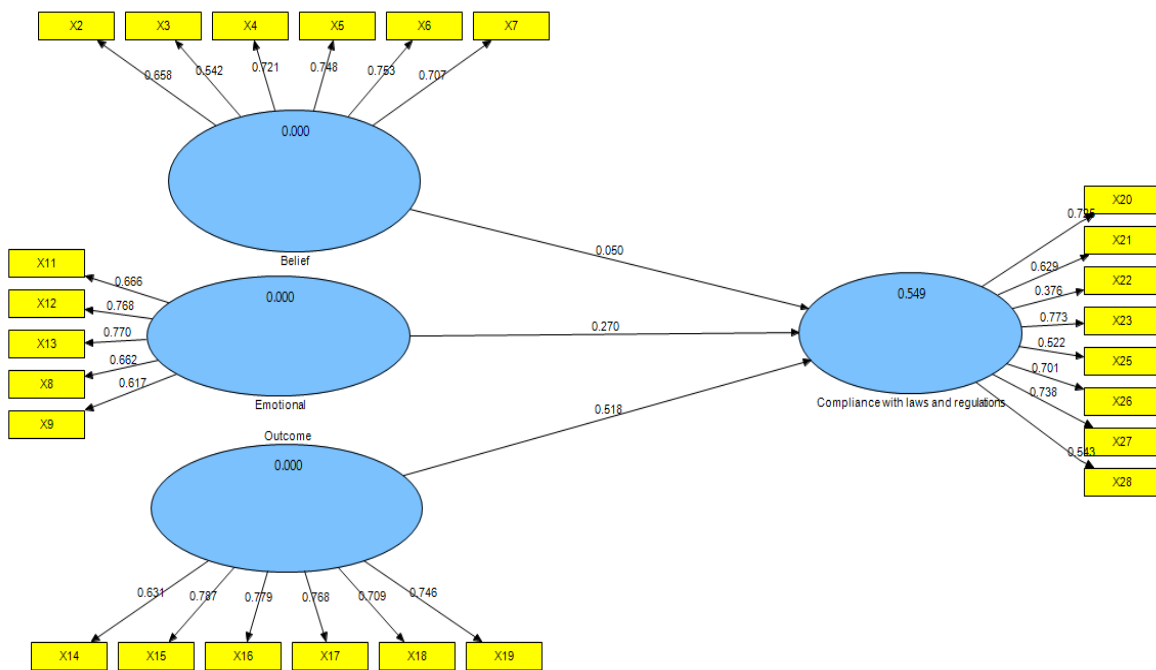


Figure 1. The Tested Research Model in PLS Software

In general, according to the findings of the research, the tables and coefficients obtained, as well as the tested research model in PLS software, all the research hypotheses are as follows:

1. Religious beliefs affect the observance of traffic rules and regulation.
2. Religious experiences affect the observance of traffic rules and regulation.
3. The religious consequences affect the observance of traffic rules and regulation.

According to Table 2, the path coefficients and

the obtained t-statistics, it can be said that:

- The effect of religious beliefs on adherence to the rules and regulations among the drivers of the city of Yazd is 0.518.
- The effect of the emotional dimension of religious beliefs on observance of the rules and regulations among the drivers of the city of Yazd is 0.270.
- The effect of the religious beliefs on observance of the rules and regulations among the drivers of the city of Yazd is 0.05.

Therefore, it can be concluded that religious beliefs affect the observance of traffic rules and regulations.

Discussion

Religiousness, morale and religious behavior are part of personality traits and should be considered in studying their relationship with other psychological structures. On the other hand, psychologists studying psychological constructs have considered emotional intelligence as an important factor in the lives of individuals, and have noted the use of religious and ethical principles in their development⁽²⁰⁾. Granart also believes that the ethical development and transformation that occurs through religious practices plays an important role in the development of emotional intelligence, and the limits to which emotional intelligence is used in it will require moral limits. Without an ethical guide that guides people in using their talents, emotional intelligence cannot be used to achieve the high goals.⁽²¹⁾ In general, the relationship between man and creator and his belief in his permanent presence can have a significant impact on mental health and treatment of mental illnesses (Jung, quoted by Karami et al.) Having a meaning and purpose in life, a sense of belonging to life in a supreme source, and hope of a Helping God in difficult conditions, enjoyment of social support etc, all are among the resources that religious people can afford and life-threatening accidents will cause less damage. In another study by Paloma and Pendleton on the role of religion in mental health, it was observed that religious beliefs and prayers have a direct relationship with the satisfaction level of life⁽²²⁾. Health has, in recent years, been important. Many consider the role of religious strategies and lifestyle of individuals in their physical and mental health. Religious coping methods deal with issues, cognitive and behavioral abilities that an anxious person uses in order to control the particular internal and external stresses⁽²³⁾. In religious confrontation, sources such as prayer, trust, and

resort to God are used. Recent findings suggest that since these types of coping are both a source of emotional support and a means for the positive interpretation of life events, they can facilitate further coping; therefore, their application for most people causes strengthening of mental health⁽²⁴⁾. In general, religious confrontation with psychological problems is based on religious beliefs and activities, and thus helps in controlling emotional stress and physical discomfort. Having meaning and purpose in life, feeling of belonging to a high source, hope with the help of God in difficult situations of life, enjoying social and spiritual support, etc. are all among the sources that religious people can use. Moreover, in the face of stressful life events, they will suffer less damage⁽²⁵⁾.

Conclusion

In the light of the previous research and related theories which some part are highlighted above, and the correlation of results, it can be concluded in general that:

- 1- Religion can create meaning. Therefore, religion is meaningful for life and death⁽²⁶⁾. This result can explain the principle that "non-observance of the rules of the traffic police and the conduct of hazardous driving movements is in fact a kind of deliberate acceptance of driving accidents", and principles of religion and religious beliefs induce the sense of preservation of life and property of one self and others. Thus strengthened respect for religion results in effective steps to comply with the rules and regulations.
2. Religion gives the religious people a kind of sense of control and effectiveness that has godliness and can reduce the loss of personal control. According to this result, traffic authorities can rely on religious beliefs to help them. Religious experts use the religious beliefs to link the traffic rules and use self-control and promotion to adhere to the rules of the law in those who have strong religious beliefs.
3. Religion prescribes a healthier lifestyle for individuals and thus has a positive effect on mental

health. The result is that by considering religious teachings and relying on religious beliefs can lead to a healthier life and one of the results of healthy living is observance of laws and regulations, including the traffic rules and respect for the rights of others.

4. Religion is a set of positive social norms obeying which results in affirmation, support, and acceptance from others. According to this principle, by informing and educating religious people about adherence to the rules of law, they can create patterns and examples that will definitely help improve other people's traffic behaviors and ultimately result in decrease of traffic accidents.

5. Religion creates hope and increases the optimism of people. Thus, considering this principle and informing the religious people about the benefits and goodness of adherence to traffic laws can lead to the reduction of driving accidents (due to their potentially optimistic attitude) that is in line with the policy of the authorities and helps in improvement of themselves and others in this regard.

6. Religion gives a kind of supernatural feeling to one that undoubtedly also has a psychological

effect. This supernatural feeling can be very effective in promoting the perceptions of people with strong religious beliefs, and these people have a good insight. This point can be considered in education of this group and help the authorities improve the traffic situation and achieve their targeted goals.

Taking everything into consideration, traffic authorities can use the conclusions and suggestions in this study to raise the levels of observance of traffic rules and regulations ultimately improving the traffic conditions and reducing traffic accidents and casualties.

Acknowledgements

The authors would like to thank all the journal staffs, especially the distinguished experts who with their dedication helped in the research and the results of the study. We would also like to thank Dr.Yavari for the English translation of this study.

Conflict of interest

None

References

- 1- Bootrabi Kh. Common aspects of mental health in monotheistic religions and holy books. First International Conference on the Role of Religion in Mental Health, 2003: 205-21. [Persian]
- 2- Siri Gh, Influential role of media in changing driver behavior.2009. <http://www.1824.ir/news-1325-> .[Persian]
- 3- Aryanpour kashani A. Full Persian English Culture, Tehran, Amir Kabir Publishing. 1984.[Persian]
- 4- Roshani Gh, The rules and regulations that an accident expert should be familiar with, Tehran: Roshani Publishing. 2010;22.[Persian]
- 5- Shahi G. Traffic Engineering, Tehran: Center for Academic Publishing. 1984 ;19.[Persian]
- 6- Mousavian SA. Social Behavior of Drivers and its Importance in the Urban Community, Journal of Traffic Management Studies.2011; (21):89-107. [Persian]
- 7- Abdul Rahmani R. The role of families in teaching traffic culture to children. teaching Social Science. 2005; 18:41-69.[Persian]
- 8- Mortazavi MR. The work of mass media in changing the attitude and culture of traffic. The first conference of traffic and traffic, Tehran. 2004;4.[Persian]
- 9- Khosravi H. Traffic Culture. Etemad newspaper. 2008; (1829);8 .[Persian]
- 10- Fountoulakis KN, Siamouli M, Magiria S, et al. late-life depression, religiosity, cerebrovascular disease, cognitive impairment and attitudes towards death in the elderly, Interpreting the data. Medical Hypotheses. , 2008;70(3): 493-496.
11. Durkheim E, Primary forms of religious life, translation by Bagher Parham, Tehran: Center publication. 2004;54.[Persian]

12. Tabibi, HA, Fundamentals of Sociology and Anthropology of Eilat and Nomads. Tehran: Tehran University.2008; 279.[Persian]
13. Parsa M. New Psychology. Tehran: Beasat. 2004; 312 .[Persian]
14. Badar L. Social Psychology, Seventh Edition, Tehran: Savalan. 2010; 92.
15. Eliyasi, M H, Taghavi M. Role of traffic Polices interaction in obeying traffic regulations by drivers, Police Management Studies Quarterly. 2009; 4(3): 326-341. [Persian]
16. Doagoyan D, Rafiee MR. A Survey of the Evaluation of Social Capital of Traffic Police and Its Role on Regulations Obediences, Traffic Management Studies.2009;3(11):83-104. . [Persian]
- 17- Wilde A, Joseph S. Religiosity and personality in a Muslim context, Personality and Individual Differences. 1997; 23 (5): 889-900.
- 18- Winfield LF. The Knowledge Base on Resilience in African-American Adolescents, In L.J. Crockett, & A.C. Crouter (Eds), Pathways through Adolescence, Individual development in relation to social contexts. Mahway NJ, Lawrence Erlbaum.1995.
19. Sayadi T, Jamali R, Mirghfour SHA. A Case study on university students excitatory intelligence. Andishe-E-Novin-e-Dini. 2008; 3(11): 145-172. [Persian]
- 20- Rostami N. Investigating the relationship between religiosity and emotional intelligence among pre-university students, Quarterly Journal of Educational Innovations. 2004;3(4);116-128 [Persian]
- 21- Granacher RP. Emotional intelligence and the impacts of morality. Retrieved for the world wide web. [Http://www.info.com](http://www.info.com). 2000.
22. Karami J,Roghanchi M, Attari Y, et al. Investigating the relationship between religious orientation and mental health dimensions among Razi University students, Journal of Education and Psychology. 2006: 13(3);31-52 [Persian]
23. King V, Elder GH, Whitbeck, LB. Religious involvement in rural youth, An ecological and life course perspective, Journal of Research on Adolescence.1997;438(7): 431-456.
- 24- Gordon EW, Song LD. Variations in the experience of resilience, In M. C. Wang, & E. W. Gordon (Eds.), Educational Resilience in the inner-city America: Challenges and Prospects. Hillsdale, NJ: Lawrence Erlbaum.1994; 27-43.
- 25-Ellison CG. *Religious involvement and self-perception among Black Americans. Social Forces. 1993;71:1027–1055*
- 26- Spilka B, Hood WR, Gorsuch RL. The Psychology of Religion: An Empirical Approach, Englewood Cliffs, NJ, Prentice Hall.1985.