

*Full Length Research Paper*

# **The relationship between organizational citizenship behavior and basic trauma life support in pre-hospital emergency services**

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**The main purpose of this present study was to investigate if Organizational Citizenship Behavior (OCB) plays a significant role on quality and excellence of pre-hospital emergency services. “NeteMeyer” questionnaire was used to measure organizational citizenship behavior and for measuring basic trauma life support (BTLS), a researcher constructed questionnaire was developed. The population consisted of 140 medical emergency technicians working in Mashad, North-East of Iran. Using simple random sampling, 53 members of research population were selected. Data were analyzed using Pearson correlation and t- test. The relationship between OCB and basic trauma life support was significant. Also, there was a significant relationship between altruism and basic trauma life support as well as conscientiousness and basic trauma life support. Although, the relationship between ‘civic virtue’ and ‘sportsmanship’ with basic trauma life support were not significant. Therefore, OCB could play a critical role in reduction of mortality and disabilities in traumatic victims.**

**Key words:** Organizational citizenship behavior, emergency medical services, basic trauma life support.

## **INTRODUCTION**

Trauma is considered as the most prevalent reason of mortality in the first three decades of life (Salimi and Zarei, 2008). Fast and accurate treatment operations are one of the significant priorities of prehospital emergency medical services (EMS) and today, its role in determining injury results is apparent (Ahmadi-Amoli et al., 2008). There is a huge gap between current levels of treatment actions for traumatic victims (in Iran) in comparison with global standards. This discrepancy cause different kinds of problem such as excessive rates of mortality, disabilities and also economic, social and psychological complications for society while many of them are preventable (Bidari et al., 2007; Zare and Kargar, 2005). Comparison of such treatment actions with international standards and identification of practical and feasible solutions are of paramount significance. Organizational citizenship behavior (OCB) could be considered as one of the influential factors on performance indexes (Piercy et al., 2006). This behavior is interpreted as devotional and voluntary actions. Perception of organizational citizenship

behavior and identification of its determining factors in medical emergency technicians during service offering procedure could contribute to higher effectiveness and efficacy of the procedure which leads to improve organizational performance. Hence, studying the relationship between OCB and emergency treatment actions seems to be very essential. More than 60 years ago organizational behavior researchers mentioned the importance of cooperative and non-task behaviors in enhancing organizational effectiveness (Katz and Kahn, 1966). Organ et al. (1983) were first researchers who referred to the concept of “organizational citizenship behavior” while they were studying the relation between job satisfaction and performance (Abu, 2008). Although years before, Barnard through the concept of “willingness to cooperate” and Katz and Kahn through “innovative and spontaneous behaviors” discussed this issue (Turnipseed and Murkison, 1996). Also after development of organizational citizenship behavior by Organ et al. (1983), other researchers through using variables such

**Table 1.** Descriptive information on OCB dimensions.

Variables	Descriptive information				
	Frequency	Average	Minimum/lower bound	Maximum/upper bound	Standard deviation
Sportsmanship	53	3.56	2	5	0.77
Civic virtue	53	4.14	1.67	4.67	0.81
Conscientiousness	53	3.77	1	5	0.83
Altruism	53	3.57	1.33	5	0.83
OCB	53	3.27	1.5	4.45	0.55

as extra role behavior, pro-social organizational behavior, organizational spontaneity and contextual performance have been contributed to this concept (Podsakoff et al., 2000). Basic trauma life support is considered as an important functional item in pre-hospital emergency services.

Trauma is a physical or ulcerous harm that is caused by an external force or strike. Trauma after 'cardiovascular diseases', cerebral stroke and cancer is the forth reason of mortality in the United States and considered as the most important determinant of death for under 44 year olds and therefore, trauma takes the most valuable and productive years of its victims (Bledsoe et al., 2003). Actions that should be taken towards traumatic victims are: to keep the respiratory route open, giving oxygen, control bleeding, immobilizing the victim, limitation of spinal, hip cervical vertebrae and psychological support. This research intended to study the relationship between organizational citizenship behavior of medical emergency technicians and basic trauma life support (BTLS) in Mashhad, North-East of Iran.

## MATERIALS AND METHODS

The research population was composed of 140 EMS technicians from Mashhad health services Network, North-East of Iran. Simple random sampling was used to select 30 EMS technicians based on the sample size was calculated:

$$n \geq \frac{N \times Z_{\alpha}^2 \times \sigma^2}{(N-1) \times \varepsilon^2 - Z_{\alpha}^2 \times \sigma^2}$$

$$N = 140$$

$$\varepsilon = 0.06$$

$$\sigma^2 = 0.03$$

$$n \geq 45$$

To have a more reliable and representative sample and also with considering the return rate, 65 questionnaire were distributed among technicians which 53 of them were completed and returned thoroughly and accurately. "Netemeyer" questionnaire was used to

assess OCB as the independent variable. It consists of 12 items on 5-point Likert scale with 1 being very low and 5 being very high. The questionnaire measure OCB through 4 dimensions which 3 questions were devoted to each of them (Netemeyer et al., 1997). Validity of Net Meyer questionnaire have been confirmed through previous researches, although face validity of this instrument was evaluated and confirmed by experts' opinions. Cronbach's alpha was calculated to assess internal consistency among items. The reliability coefficient alpha for the 12 items was 0.74. A researcher constructed questionnaire was developed to measure the dependent variable. First of all, 220 operational checklists of basic trauma life support were identified through studying the research literature and conducting interviews with experts. The average score of checklists was considered as the score of the dependent variable.

A t-test was used to assess OCB dimensions against a fixed value of 3.0 which was considered as a mean score on five point Likert scale. A Pearson correlation and regression analysis was used to assess the relationship between dependent and independent variables.

## RESULTS

Demographic characteristics of participants indicate that the mean age of them was 28, their average work experience was 4.7 years and 74% of them were married. 2/3 of them were employed by private sector and the rest of them were employed by public sector. Descriptive information of sample according to dimensions of OCB is illustrated in Table 1. Using Pearson correlation technique, the relationship of two demographic variables, that is age and work experience with dimensions of OCB and basic trauma life support were estimated (Table 2). The findings revealed there is no significant relationship between demographic features of technicians and other main variables, except the relationship between work experience and 'sportsmanship' which was significant. The last two rows of the table illustrate the results of correlation analysis of basic trauma life support with OCB and its dimensions. Results show that 'conscientiousness' and altruism have a significant positive relationship with basic trauma life support whereas other examined relationships are not significant. In other words, technicians with higher 'sportsmanship' and altruism show a higher performance in their tasks. Also, the relation of OCB and basic trauma life support is significant and its correlation coefficient is

**Table 2.** Correlation of demographic characteristics with independent and dependent variables.

Variables		BTLS	Sportsmanship	Civic virtue	Conscientiousness	Altruism	OCB
Age	Correlation	0.275	0.508	-0.268	0.33	0.212	0.035
	P-value	0.32	0.053	0.334	0.229	0.447	0.80
Work experience	Correlation	0.28	0.76	-0.197	-0.046	0.084	0.12
	P-value	0.43	0.01	0.585	0.89	0.81	0.44
BTLS	Correlation	1	0.332	0.351	0.56	0.66	0.353
	P-value	0.00	0.226	0.19	0.028	0.007	1.00

BTLS: Basic trauma life support.

**Table 3.** t-test results on OCB variable and its dimensions\*.

Variable	Test statistic	d.f.	P-value	Mean difference
OCB	3.56	52	0.001	0.27
Sportsmanship	-5.25	52	0.000	-0.53
Civic virtue	1.59	52	0.117	0.17
Conscientiousness	6.75	52	0.000	0.76
Altruism	5.83	52	0.000	0.68

\*Note the mean score of OCB and its dimensions were compared against a fixed value of 3.0.

**Table 4.** The share of each OCB dimensions on estimating of basic trauma life support.

Variables	Beta coefficients	P-value
Sportsmanship	0.50	0.000
Civic virtue	0.07	0.60
Conscientiousness	0.036	0.81
Altruism	0.068	0.66
OCB	0.15	0.005

Correlation coefficient = 0.542,  $R^2 = 0.29$ , Adjusted  $R^2 = 0.235$ .

35%. A t-test was used to assess OCB dimensions against value of three which was considered as a mean score on five point Likert scale (Table 3). Results show that all the variables except 'civic virtue' were significantly different from three. Average value of organizational citizenship behavior is greater than mean (that is 3.0), so the status of OCB among the investigated subjects seems to be desirable. The same condition hold true for 'conscientiousness' and altruism. Generally, it seems that OCB have a good condition, though the condition of sportsmanship and civic virtue were not appropriate. A regression analysis was conducted to determine the share of each OCB dimensions for estimating basic trauma life support (BTLS) (Table 4).

Results of multiple regression analysis illustrates that

only 'sportsmanship' had a significant effect on the basic trauma life support and other 3 dimensions do not impact the dependent variable significantly. Result shows that OCB has a significant role for estimating BTLS. The value of standardized coefficient illustrates that one unit change in OCB leads to 0.35 change in basic trauma life support.

## DISCUSSION

Research findings show that there is a significant relationship between OCB of medical emergency technicians and basic trauma life support. Basic trauma life support is considered as an important functional item

in pre-hospital emergency services, so it could be claimed that there is also a relationship between OCB and role behaviors. As a result, improvements in organizational citizenship behavior could lead to decrease in the amount of faults and inaccuracies in basic trauma life support which is very crucial in saving the victims life. The positive impact of OCB on the performance of technicians of medical emergency could give some clues for their managers to pay more attention to this important concept. Findings of this study is in line with results of other studies conducted by Castro et al. (2004), Abili et al. (2008) and Karambayya (1989) though Mohaghar et al. (2008) in their study concluded that OCB does not have a direct impact on performance. The relation of altruism and 'conscientiousness' with basic trauma life support was confirmed in this study. Conscientiousness is an inherent feature of human being but sometimes situational and environmental factors undermine it, therefore it could be suggested to the management of emergency medical services that they could preserve and promote 'conscientiousness' through utilizing motivational mechanisms and improvements in working conditions. In prehospital emergency circumstances developing appropriate relationships with victims, patients and their relatives is crucial and altruism and 'conscientiousness' could play constructive roles in these situations. Altruism as a substantial characteristic of human being needs to be nurtured and developed inside families and in early ages of life, although the management of emergency medical services could promote this feature by providing appropriate atmosphere inside their organizations and offering related training programs for technicians. Increasing importance of emotional labor in treatment systems adds to the necessity of altruism in prehospital emergency services. Results of Bonaparte (2008) showed that altruism through organizational commitment impact on the performance. This study did not find a significant relationship between 'sportsmanship' and basic trauma life support. Base on the nature of 'sportsmanship' which is related to the interactions among organization and individuals, and also unpropitious work conditions in Iran, this finding is not unexpected. It seems that the improper relationships between technicians and their organization, high level of risk in their work environment and low job security, technicians are not inclined to tolerate organization's drawbacks and they expect more appropriate behaviors towards them. In other words, technicians' organizational citizenship behaviors could be to a large extent the result of management's extra role behaviors towards them.

Offering mechanisms to enhance job security, organizational commitment and participation could be considered as appropriate solutions. Zarei-Matin et al. (2006) in their study compared successful and unsuccessful organizations based on the amount of sportsmanship of their personnel. Findings of their study

showed that 'sportsmanship' plays an important role in success of an organization. Results of this study showed that there is not a significant relationship between 'civic virtue' and basic trauma life support which is aligned with results of Zarei-Matin et al. (2006). They suggest that 'civic virtue' could be found in both successful and unsuccessful organizations and it does not consider as a determining factor in organization's achievement. Overall scores of OCB in this research could be interpreted as desirable, though this claim is not true about sportsmanship. Findings of this research is in contrast with results of Moghimi (2005) which suggest overall condition of OCB is not propitious, especially in altruism, 'conscientiousness' and 'sportsmanship'. The relationship of age with OCB dimensions and basic trauma life support were not significant. This may be due to independence of OCB from age which means that the passing of time could not impose extra-role behaviors to people. This finding is in line with results of Moghimi (2005) and Gholipour and Hasani-Kakhki (2007). In this study, work experience and 'sportsmanship' had a significant relationship while it was in contrast with results of Moghimi (2005) and Gholipour and Hasani-Kakhki (2007).

## Conclusions

There was a significant relationship between altruism and basic trauma life support as well as conscientiousness and basic trauma life support. Although, the relationship between 'civic virtue' and 'sportsmanship' with basic trauma life support were not significant. Therefore, OCB could play a critical role in reduction of mortality and disabilities in traumatic victims.

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