

# The Relationship between Anxiety and Coping Strategies in Family Caregivers of Patients with Trauma

MOZHGAN RAHNAMA<sup>1</sup>, HOSIEN SHAHDADI<sup>2</sup>, SOMYEH BAGHERI<sup>3</sup>, MAHDIEH POODINEH MOGHADAM<sup>4</sup>, AHMAD ABSALAN<sup>5</sup>

## ABSTRACT

**Introduction:** Traumatic events are of high incidence and affect not only the patient but also their family members, causing psychological problems such as stress and anxiety for caregivers of these patients. Therefore, the application of appropriate coping strategies by them seems necessary in order to promote mental health.

**Aim:** To study the relationship of anxiety with coping strategies in family caregivers of trauma patients.

**Materials and Methods:** The present research was a descriptive-correlational study which was carried out on 127 family caregivers of patients with trauma in intensive care unit, surgery ward and emergency unit of Amir al-Mu'minin Hospital of Zabol, Sistan and Baluchestan Province. The respondents were selected based on the convenience sampling method. Demographics questionnaire, DASS-21, and Coping Strategies

questionnaire were used for data collection. The obtained data were statistically analysed using descriptive statistics, Analysis of Variance (ANOVA), t-test, and Pearson correlation coefficient in statistical package for the Social Sciences (SPSS) version 21.0.

**Results:** Based on the results, 89.9% of family caregivers suffer from mild to severe anxiety. The most common type of coping strategy used by the respondents was emotion-focused. The results showed no relationship between anxiety and emotion-centrism, but an inverse relationship was found between problem-centrism and anxiety.

**Conclusion:** The majority of family caregivers had anxiety. Given, the inverse relationship between the level of anxiety and the use of problem-based coping strategy, in addition to identifying and reducing the causes of anxiety in caregivers. It is recommended that appropriate coping strategies should be trained to them.

**Keywords:** Family members, Stress, Traumatic events

## INTRODUCTION

Traumatic events have always been shadowing humans, as a large number of people encounter with fatal events at least once in their lifetime [1]. In definition, any injury or damage caused by physical or chemical agents on body tissues is called trauma [2]. According to estimates from the World Health Organization, traumatic injuries are the leading cause of death worldwide among people aged 15-45 years and the third cause of death at all ages [3]. In addition, it is the most important cause of disability and health-related economic losses in developing countries [4]. In Iran, trauma is known as the cause of major lost years of life and disability and accounts for the second cause of death after cardiovascular diseases [5]. However, temporary or permanent disabilities caused by trauma affect not only the patient but also their family members [6]. In this regard, the results of Rabi Siahkali et al., showed that the majority of the family members of patients participated in their study were suffering from anxiety [7], which is a vague sense of fear and concern. Lavarone A stated that challenges of caregivers include heavy financial burden and physical and mental problems that are manifested as anxiety and depression [8]. Caregivers have different capabilities and limitations to meet the needs of patients. Therefore, when the patient's needs are beyond their abilities, this situation is stressful for them and jeopardizes their mental health [9]. Hence, family caregivers also are at risk and incur a lot of pressure [10]. Apart from socio-economic problems, they exhibit physical symptoms such as muscle aches and psychological symptoms, so they need special attention and psychological supports in this regard [11]. Bhattacharjee A et al., concluded that most studies have reported the encounter of patient's caregivers with mental-emotional distresses [12]. It is noteworthy that this anxiety in family members can spread like a contagious disease to the patient and even the medical staff and disturb their relations [13]. By contrast,

if the patient's family members and relatives are leading a healthy and satisfactory life, the patient will benefit from this blessing [14]. Abbasi AA stated, patients who have family support will have more to adapt to their disease and may live more [15]. Basically, the family plays an important role in one's ability to adapt to different situations [13]. However, increased pressure on caregivers is followed by inadequate care and thereby patient abandonment because the normal functioning of the family faces difficulties during stress and illness [16]. Every time a person is affected by stressful situations, it is necessary to apply appropriate coping strategies [17]. Coping strategies are a set of cognitive and behavioural efforts made to interpret and correct a stressful situation and reduce its resulting suffering [18]. Coping with stress involves two processes: the problem-focused process in which one deals with the real cause of their turmoil and the emotion-focused process in which one tries to regulate their emotional responses [19]. Emotion-based coping strategy indicates reserved reactions aimed at reducing stress and not the logical solving of the problem, while problem-focused coping strategy refers to targeted efforts to resolve the matter [20]. Researchers believe that the concept of coping is more important than stress in the face of stressors [21]. Ghazanfari F states that the emotion-focused and problem-focused strategies play role in reducing and increasing mental health, respectively [22]. In addition, psychiatric teams can provide emotional and psychological care for participants [8,12]. Nurses, because of their unique status in interaction with family members of patients, can adopt constructive measures to help these families [23]. Traumatic events have high prevalence and effect on patients and their family members [5]. Traumatic events caused due to psychological problems such as stress and anxiety in family caregivers [6,8,9], negatively influence the quality care services provided by family caregivers [9,16]. The families by using appropriate coping strategies have an important

role in patient's adaptation to the current situation and promote mental health [1,11,16]. The present research aims to study the relationship of anxiety with coping strategies in family caregivers of trauma patients visiting Amir al-Mu'minin Hospital of Zabol, Sistan and Baluchestan Province in 2015.

## MATERIALS AND METHODS

### Design and Participants

The present research was a descriptive-correlational study which was conducted from January 2015 to August 2015 for eight months. The statistical population included all family caregivers of trauma patients visiting the intensive care unit, surgery ward, and emergency unit of Amir al-Mu'minin Hospital of Zabol, Sistan and Baluchestan Province. Among the population, 127 people were selected as the respondents using convenience sampling method.

### Inclusion and Exclusion Criteria

The inclusion criteria were having the first-degree relation to the patient, being literate, and informed consent to participate in the research, having a hospitalized patient, non-affliction with known psychiatric disorders, and no history of taking anti-anxiety drugs. The exclusion criteria also was history of taking anti-anxiety drugs.

### Instruments

Data collection tools in this study were as follows:

1. Demographics questionnaire which was developed after reviewing the textbooks and papers and consulting with professors specialized in trauma.
2. Depression Anxiety Stress Scale-21 (DASS), which is eligible to be used in clinical situations, is a truncated version of DASS-42 developed by Loviband and Loviband in 1995. This questionnaire is a set of three self-evaluation subscales designed to measure the negative emotional states of depression, anxiety and stress. Each of the three subscales of DASS-21 involves seven items [24]. According to the study objective, seven options of anxiety assessment were used in the present research. Using Zung Self-Rating Anxiety Scale [25], consistency of anxiety subscales was obtained 0.67 which is significant at the level of  $p < 0.001$ . Items of each subscale were based on a 4-point Likert scale. Using this four-option severity/frequency scale, the subjects were asked to rate the extent to which they had experienced each of the states during the last week. Scores of anxiety was obtained from the sum of scores of relevant items. Items of DASS-21 were designed in a way to be representative of all subscales, so that they could be converted into subscales of DASS-42 by multiplying them by 2 [26]. Each item of the questionnaire is scored from 0 to 3 and gaining a score of 0-7, 8-9, 10-14, 15-19, and 21 denotes normal, mild, moderate, severe, and very severe levels of anxiety. The validity and reliability of this scale have been assessed in Iran by Samani S and Joukar B. The test-retest reliability and Cronbach's alpha for this subscale have been reported 0.76 and 0.74, respectively [27].
3. Coping Strategies Questionnaire, extracted from the Jallowice questionnaire, consists of 39 items; 15 items measure problem-focused coping strategies and 24 items are related to emotion-focused coping strategies. These items are scored based on a 5-point Likert scale (5: very much, 4: much, 3: moderate, 2: a little, and 1: not at all). Some items, due to their negative nature, are scored inversely. The range of score in problem-focused and emotion-focused coping strategies is 15-75 and 24-120, respectively. It is noteworthy that scores obtained on problem-focused coping strategies were categorized in three levels of weak (0-20), moderate (21-40), and good (41-60). In addition, in terms of emotion-focused coping strategies, the respondents were divided into three levels of weak (0-32), moderate (33-64),

and good (65-96) [28]. The scientific validity of the Jallowice standard questionnaire of coping strategies has been confirmed by Jin Li in abroad and by Mohammadinia in Iran [29,30]. The reliability of this questionnaire was determined using the test-retest reliability within 10 days and the correlation coefficient [30]. In the pilot stage of this study before starting the main study on 40 patients, the internal consistency of the questionnaire for coping strategies using Cronbach's alpha was obtained 0.91.

For data collection, the researcher personally was present in the hospital in order to brief the respondent on the research purpose and attract their participation. Then, the respondents were asked to fill out demographics questionnaire, DASS-21, and Coping Strategies Questionnaire.

### Ethical Considerations

Ethical considerations such as confidentiality of information and the right to opt out of the study at any stage were also observed. This study was approved by Ethic Committee of Zabol University.

## STATISTICAL ANALYSIS

The obtained data were statistically analysed using descriptive statistics and analytical statistics (ANOVA, t-test, and Pearson correlation coefficient) in SPSS-21.

## RESULTS

Demographic information of participants (educational attainment, age, job, gender, and marital status) has been presented in [Table/Fig-1]. The results showed that 13 (10.2%), 59 (46.5%), 33 (26%), 18 (14.2%), and 4 (3.1%) of the participants had a normal, mild, moderate, severe, and very severe level of anxiety.

In terms of obtained scores, 32 (25.2%), 63 (49.6%), and 32 (25.2%) of family caregivers, respectively, were in a weak, moderate, and good status in problem-focused coping strategies. In addition, in terms of emotion-focused coping strategies 40 (31.5%), 76 (59.8%), and 11 (8.7%) family caregivers were in a weak, moderate, and good status, respectively.

The correlation coefficient between variables was calculated to analyse data and test the hypotheses. The results showed that there is no significant relationship between anxiety and emotion-centrism, while an inverse relationship was found between anxiety and problem-centrism. This means that the frequency of using problem-focused coping strategies decreases with the increase in anxiety level [Table/Fig-2].

Variable		Number	Percentage
Educational attainment	Lower than the high school diploma	22	17.3
	High school diploma	47	37
	University degree	58	45.7
Age (In years)	Younger than 25	60	47.2
	25-35	51	40.2
	Older than 35	16	12.6
Occupation	Self-employed	20	15.7
	Employee	41	32.2
	Student	39	30.7
	Farmer	5	3.9
	Others	22	17.3
Gender	Male	76	59.8
	Female	51	40.2
Marital status	Single	36	28.3
	Married	91	71.7

[Table/Fig-1]: Frequency distribution of demographics among family caregivers of trauma patients.

Variables	Anxiety	
	R	p-value
Emotion-focused coping strategy*	0.45	p-value > 0.05
Problem-focused coping strategy*	-0.267	p-value < 0.05

**[Table/Fig-2]:** The relationship of anxiety with emotion-focused and problem-focused coping strategies.  
\*chi-square test.

Statistical analysis showed that emotion-focused coping strategies (with a mean score of  $69.93 \pm 5.39$ ) are more common than problem-focused coping strategies (with a mean score of  $50.48 \pm 8.11$ ). In addition, among the statements, "I pray" and "I appeal to God" were used by most of them (63, 49.6%).

According to the study findings, there was no relationship between anxiety and demographics.

The results showed the relationship between coping strategies and demographics indicated that there is a significant relationship between emotion-focused coping strategies and gender ( $p < 0.05$ ). In addition, a significant relationship was found between problem-focused coping strategies and educational attainment ( $p < 0.05$ ).

## DISCUSSION

The results showed that there is no significant relationship between anxiety and emotion-centrism among family caregivers of patients with trauma, while an inverse relationship was found between problem-centrism and anxiety. Gupta A and Sharma R also corroborated that caregivers who apply problem-based adaptive strategies experience less stress compared to those who use emotion-focused adaptive strategies [28]. In this regard, Ghazanfari F and Ghadam PE state that the emotion-focused and problem-focused strategies play role in reducing and increasing mental health, respectively [22]. In this study, coping strategies mean scores showed that most of the family caregivers apply emotion-focused coping strategies. Abbasi A found the same results, as the mean and standard deviation of scores in emotion-focused coping strategies was higher than those for problem-focused coping strategies. This means that emotion-focused coping strategies were applied more frequently by caregivers [29]. In terms of obtained scores, most of the family caregivers participated in this study was at a moderate level in problem-focused (49.6%) and emotion-focused coping strategies (59.8%). Mohammadinia N et al., showed that most caregivers are at a weak or good level in terms of these two types of coping strategies [30]. This difference may be due to differences in the studied population and the research environment.

Statistical analyses revealed that among the statements, "I pray" and "I appeal to God" were used by most of the family caregivers. Mohammadinia N et al., reported the same results in this regard [30]. Although the statistical population in these two studies was different, the same culture and religious beliefs in the Islamic society can be the reason for this similarity. According to the study results, only 10.2% of family caregivers had a normal level of anxiety and rest of them (89.8%) were suffering from an abnormal level of anxiety. Sajjadian A et al., studied problems of family caregivers caring for cancer patients and their results showed that 16% of caregivers were grappling with mental health problems [31]. Rabi Siahkali et al., studied the level of anxiety among the family members of patients hospitalized in special care units and concluded that the majority of caregivers (77.1%) were distressed and rest of them were non-distressed [13]. The difference between this result and the findings of the present study can be attributed to differences in the statistical population and research tools. Rahmani Anaraki H et al., studied the general health status in caregivers of neurologic patients and reported that a large fraction of caregivers is exposed to stress and burden of care pressures which can underlie the occurrence of some psychological disorders [32].

Navidian A et al. studied the mental exhaustion among family caregivers of patients with mental conditions and reported that the majority of caregivers (73.6%) suffer from mental exhaustion, as anxiety, worry, and different types of pressures are common among the family member and the main caregiver of the patient [10]. In studies conducted by Batra BS et al., and Motaharian E et al., no relationship was found between demographics of caregivers and the coping strategies applied by them [33,34]. This difference may be due to differences in the studied population and the research environment.

## LIMITATION

The limited statistical population and sample size (trauma patients in Zabol) and the limited location of the research to one hospital have made it difficult to generalize the findings to the whole population.

## CONCLUSION

The findings from this study suggest that a large percentage of caregivers of patients with trauma suffered from mild to very severe levels of anxiety. However, most of them, instead of problem-focused coping strategies, apply emotion-focused coping strategies in dealing with this situation. In addition, the findings of the present research can underlie more extensive and diverse studies on improvement of mental health and reduction of anxiety among caregivers.

## REFERENCES

- Zargham HM. Adaptive effects following trauma: a conceptual review. *Applied Psychology*. 2009;3(11):7-22.
- Schild S, Dalenberg CJ. Information deprivation trauma: definition, assessment, and interventions. *Journal of Aggression, Maltreatment & Trauma*. 2016:1-17.
- Violence WHO, Prevention I, Organization WH. Global status report on road safety 2013: supporting a decade of action: World Health Organization; 2013.
- Norton R, Kobusingye O. Injuries. *New England Journal of Medicine*. 2013;368(18):1723-30.
- Norouzi V, Feizi I, Vatankhah S, Pourshaikhian M. Calculation of the probability of survival for trauma patients based on trauma score and the injury severity score model in fatemi hospital in ardebil. *Archives of Trauma Research*. 2013;2(1):30.
- Moattari M, Shirazi FA, Sharifi N, Zareh N. The effects of a sensory stimulation program conducted by nurses and families on the consciousness, level of cognitive function, and basic cognitive sensory recovery of comatose patients with severe traumatic brain injury: a randomized control trial. *Trauma Mon*. 2016.
- Rabie Siahkali S, Khaleghdoost Mohamadi T, Paryad E, Atrkar Roushan Z. Family and anxiety in intensive care units. *Holistic Nursing and Midwifery*. 2007;17(2):1-8.
- Lavarone A, Ziello AR, Pastore F, Fasanaro AM, Poderico C. Caregiver burden and coping strategies in caregivers of patients with Alzheimer's disease. *Neuropsychiatric Disease and Treatment*. 2014;10:1407.
- Rahmani AH, Mahmoudi GR, Roohi G, Asayesh H, Nasiri H, Rakhshani H. General health status of neurologic patients'caregivers and the related factors. *Journal of Research Development In Nursing & Midwifery*. 2013;9(2):49-55.
- Navidian A, Salar A, Hashemina A, Keikhael A. Study of mental exhaustion experienced by family caregivers of patients with mental disorders (zahedan psychiatric hospital; 2000). *Journal of Babol University Of Medical Sciences*. 2001;3(4):33-38.
- Muskett C. Surgical-informed care in inpatient mental health settings: A review of the literature. *International Journal of Mental Health Nursing*. 2014;23(1):51-59.
- Bhattacharjee A, Ananya Mondal MC, TanimaChatterjee, Poria S, Mukhopadhyay P. Informal caregivers' psychological distress and coping style during cancer care. *Scholars Journal of Arts, Humanities and Social Sciences*. 2015;3(1):144-52.
- Rabie Siahkali S, Khaleghdoost Mohamadi T, Paryad E, Atrkar Roushan Z, Mazloom R. A survey on psychological and environmental factors on family anxiety of the hospitalized patients in intensive care units. *Iranian Journal of Critical Care Nursing*. 2011;3(4):171-76.
- Shoaa kazemi M. Relation between family social support & coping strategies in recovery breast cancer. *Iranian Quarterly Journal of Breast Diseases*. 2014;6(4):35-40.
- Abbasi AA, Rahmani H, Hossein S, Alireza H, Seyyed Abedin R, Ghanbar ME. The burden on caregivers from hemodialysis patients and related factors. *Journal of Research Development in Nursing & Midwifery*. 2011;8(1):26-33.
- Mullen JE, Reynolds MR, Larson JS. Caring for pediatric patients' families at the child's end of life. *Critical Care Nurse*. 2015;35(6):46-56.
- Dardas LA, Ahmad MM. Coping strategies as mediators and moderators between stress and quality of life among parents of children with autistic disorder. *Stress and Health*. 2015;31(1):5-12.
- Aust H, Rüscht D, Schuster M, Sturm T, Brehm F, Nestoriuc Y. Coping strategies in anxious surgical patients. *BMC Health Services Research*. 2016;16(1):250.

- [19] Faasse K, Petrie KJ. Stress, coping and health. *Wright JD International Encyclopedia of the Social & Behavioural Sciences*. 2015;2:551-55.
- [20] Proulx J, Aldwin CM. Effects of coping on psychological and physical health. *The Encyclopedia of Adulthood and Aging*. 2016.
- [21] Loo GT, DiMaggio CJ, Gershon RR, Canton DB, Morse SS, Galea S. Coping behaviour and risk of post-traumatic stress disorder among federal disaster responders. *Disaster Medicine And Public Health Preparedness*. 2016;10(01):108-17.
- [22] Ghazanfari F, Ghadam PE. The relationship between mental health and coping strategies in citizenship of Khoramabad city. *The Quarterly Journal of Fundamentals of Mental Health*. 2008;10(37):47-54.
- [23] Mahmoudi H, Ebadi A, Salimi SH, Najafi Mehri S, Mokhtari Noori J, Shokrollahi F. Effect of nurse communication with patients on anxiety, depression and stress level of emergency ward patients. *Journal of Critical Care Nursing*. 2010;3(1):3-4.
- [24] Antony MM, Bieling PJ, Cox BJ, Enns MW, Swinson RP. Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment*. 1998;10(2):176.
- [25] Zung WW. SAS, self-rating anxiety scale: Rockville, Md; 1976.
- [26] Sahebi A, Asghari MJ, Salari RS. Validation of depression anxiety and stress scale (DASS-21) for an Iranian population. *Iranian Psychologists*. 2005;4(1):299-313.
- [27] Samani S, Joukar B. A study on the reliability and validity of the short form of the depression anxiety stress scale (DASS-21). *Journal of Social Sciences and Humanities of Shiraz University*. 2007;26(3):65-77.
- [28] Gupta A, Sharma R. Burden and coping of caregivers of physical and mental illnesses. *Delhi Psychiatry Journal*. 2013;16(2):367-74.
- [29] Abbasi A, A Shamsizadeh M, Asayesh H, Rahmani H, Hoseini SA, A Talebi M. The relationship between caregiver burden with coping strategies in family caregivers of cancer patients. *Journal of Nursing Education*. 2013;1(3):62-71.
- [30] Mohammadinia N, Rezaei M, Heydarikhat N, Sharifipour H, Darban F. Assessing stressors and coping styles in medical sciences students. *Quarterly Journal of Nursing Management*. 2012;1(1):9-16.
- [31] Sajadian A, Hydary L, Mokhtari Hesari P. Common breast cancer family care giving problems. *Iranian Quarterly Journal of Breast Diseases*. 2015;8(2):7-14.
- [32] Rahmani Anaraki H, Mahmoodi GR, Rouhi G, Asayesh H, A Nasiri H, Rakhshani H. General health status of neurologic patients' caregivers and the related factors. *Journal of Research Development in Nursing & Midwifery*. 2013;9(2):49-55.
- [33] Batra BS, Ghildiyal R, Mathews MM. Coping strategies among caregivers of patients with schizophrenia: a descriptive study. *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*. 2014;1(14):20-29.
- [34] Motaharian E, Rad ARM, Ziaee M, Zade NH. Investigating the relationship between coping strategies and quality of life among the principal caregivers of children with hemophilia. *Modern Care Journal*. 2015;12(2):68-73.

**PARTICULARS OF CONTRIBUTORS:**

1. Assistant Professor, Department of Nursing, Zabol University of Medical Science, Zabol, Sistanvbalouchistan, Iran.
2. Instructor, Department of Nursing, Zabol University of Medical Science, Zabol, Sistanvbalouchistan, Iran.
3. Instructor, Department of Biostatistics, Zabol University of Medical Science, Zabol, Sistanvbalouchistan, Iran.
4. Instructor, Department of Nursing, Zabol University of Medical Science, Zabol, Sistanvbalouchistan, Iran.
5. Student, Department of Nursing, Zabol University of Medical Science, Zabol, Sistanvbalouchistan, Iran.

**NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:**

Dr. Hosien Shahdadi,  
Ferdowsi St, Zabol, Sistanvbalouchistan-9993139146, Iran.  
E-mail: hosienshahdadi@gmail.com

**FINANCIAL OR OTHER COMPETING INTERESTS:** None.

Date of Submission: **Dec 11, 2016**  
Date of Peer Review: **Dec 23, 2016**  
Date of Acceptance: **Feb 01, 2017**  
Date of Publishing: **Apr 01, 2017**