Open Access

Pak J Med Res
Vol. 61, No. 3, 2022

Original Article

Alexithymia, Posttraumatic Growth, and Life Contentment among Cardiac Sufferers

Rabia Maqbool[1], Muhammad Nasar Iqbal[1], Muhammad Rafiq[1], Ambreen Anjum[2], Shahyan Qamar[1], Mirza Marfood Ahmed[1]
Department of Psychology[1], Lahore School of Professional Studies, The University of Lahore, Lahore, The Islamia University of Bahawalpur[2], Bahawalpur.

Abstract

Background: Cardiovascular diseases are a common and increasing number of deaths in developing and developed countries. Heart diseases are considered chronic and affect blood flow that leads to a number of psychological issues. Cardiac issues cause a major disturbance in the quality of life of the patient.
Objective: To find out the relationship among alexithymia, posttraumatic growth, and life satisfaction among cardiac sufferers at DHQ Teaching Hospital and Siddique Sadiq Memorial Trust Hospital Gujranwala (Punjab; Pakistan).
Study type, settings & duration: A cross sectional study was conducted DHQ Teaching Hospital and Siddique Sadiq Memorial Trust Hospital, Gujranwala from February to August 2020.
Methodology: One hundred patients of heart attack from both genders aged 21-60 years. Toronto alexithymia scale (TAS-20), Posttraumatic growth inventory (PGI), and Satisfaction with life scale was used to collect data from the heart attack patients.
Results: The results of this study revealed that alexithymia including three sub-factors i.e. difficulty in identifying feelings, difficulty in describing feelings, and externally oriented thinking is significantly negatively correlated with life satisfaction while posttraumatic growth i.e. new possibilities and appreciations of life significant positive correlated with life satisfaction.
Conclusion: It was concluded that alexithymia has negative association with the satisfaction of life while posttraumatic growth is positively correlated with life satisfaction.
Key words: Alexithymia, cardiac patients, life satisfaction, posttraumatic growth.

Introduction

The cardiovascular system is responsible to deliver oxygen, nutrients, and hormones to cells and organs in our body. It also removes waste from our body. Furthermore, the cardiovascular system maintain our body temperature. In short, the fit a person is, the better the cardiovascular system.

Corresponding Author:
Muhammad Nasar Iqbal
Department of Psychology
Lahore School of Professional Studies
The University of Lahore, Lahore.
Email: psynasir@gmail.com
Received: 10 April 2021, **Accepted:** 17 March 2022,
Published: 18 October 2022

Authors Contribution

RM & MNI conceptualized the project. MNI & MMA and did the data collection. MNI & SQ did the literature search. RM & AA performed the statistical analysis. Drafting, revision & writing of manuscript were done by MR & AA. SQ and MMA were also participated in write up.

Copyright © 2022 The Author(s). This is an Open Access article under the CC BY-NC 4.0 license.

Coronary artery disease, high blood pressure, heart attack, and stroke damage cardiovascular system. Heart disease is a class of diseases that involve the heart, affecting the tube structure which carries blood in the veins and arteries of the heart. Cardiovascular disease is another name for heart disease. Several diseases are involved in coronary artery diseases like myocardial infarction angina, stroke, congenital heart disease, hypertensive heart disease, and heart failure.[1] Heart disease are considered to be chronic and affect blood flow. This procedure is based on blood flow from the heart to the brain and peripheral area.[2] Now a days, cardiovascular diseases are leading to an increasing death rate. Studies indicated that due to heart attack, 7.1 million deaths occurred in 1999.[3] Heart diseases are the main cause of death.[4] Cardiovascular diseases are common and responsible for increasing number of deaths in developing and progressing countries.[5]

Alexithymia is caused by defective in prefrontal cortex and leads to cognitive impairment. Alexithymia is a risk factor of cardiovascular

disease.[6] Alexithymia is a personality trait that is associated with difficulties in identifying, communicating, and expressing emotions. It is a psychological trait in which the ability to think about emotion is reduced. Alexithymia can also cause impairment in ability to narrate, and recognize emotions.[7] Studies have revealed that mental health issues(post-traumatic stress disorder, anxiety and depression)increase after cardiovascular deficit occur including heart failure, heart attack and stroke.[8]

Post-traumatic growth is a positive and constructive psychological change when a person experience adversity and other challenges to develop a better level of functioning. People experience a positive psychological change and accept challenges and have better functioning in life.[9] These circumstances provide a range of solutions for the challenges, means reliable resources to face their challenges, and their way to understand the world where they are placed. Studies have been documented about posttraumatic growth concerning different kinds of natural traumatic conditions and human-made traumatic situations such as threaten diseases, immigration, abuse, war, and death of loved ones.[10]

Life satisfaction (LS) is considered as the well-being involved in daily activities such as achievements in life, relationships with others, self-perception, mood, and how effective someone deals with his/her daily life. Life satisfaction can be measured on the living standards, education level, socio-economic status, life experiences, and other matters related to life.[11] Stress, anxiety and depression caused by alexithymia can be a predisposing factor to poor health related quality of life.[12]

Pakistan is also among under-developed regions with high rates of heart diseases, however, there is very limited documented data regarding cardiovascular diseases and its relationship with psychological disorders.[13]

As the studies have indicated that cardiac patients not only suffer from the physical and physiological symptoms but also face psychosocial issues which may include a reduction in the ability to think and identify emotions.[14] This particular issue may affect posttraumatic growth and life satisfaction among cardiac patients.

So, this study is aimed to explore a relationship among alexithymia, posttraumatic growth, and life satisfaction in patients with cardiac issues. Further, this study will be aimed to enhance the psychological well-being of the patients.

Methodology

It was cross-sectional research conducted at the DHQ Teaching Hospital and Siddique Sadiq Memorial Trust Hospital, Gujranwala. The consent was taken from the participants. A purposive sampling technique was used to collect data. Sample size was selected according to the guidelines of Cohen's (1988)[15] (that is 5 or 7 cases per predictor variable. There are 20 items of current study's predictor. So, 5*20=100 sample size is good enough for the current study). The data was collected from 100 patients who suffered heart attack (men=57, women=43). The age range of participants was 21 to 60 years. The demographic information of the patients were collected through a form generated by the researcher including gender, age, education, and frequency of heart attack.

A self-rated scale Toronto alexithymia scale[16] was used to explore the problem in recognizing feelings and consist of 7 items (e.g., "I am often confused about what emotion I am feeling"); the problem in narrating feelings include 5 items (e.g., "it is difficult for me to reveal my innermost feelings, even to close friends") and externally oriented thinking has 8 items. This is a five-point Likert scale and has ranged from 1 to 5 strongly disagree to strongly agree. The reliability of the scale is .81. A self-rated scale Posttraumatic growth inventory[17] was used to assess the positive outcomes of the patient who experienced a traumatic event. This scale consisted of 21 items with five points Likert scale. The reliability of post-traumatic growth inventory is .90. Satisfaction with Life Scale [18] was a common scale used to measure the overall life satisfaction of the people. This scale consisted of 5 items with 7 points Likert scale. This scale has ranged from 1 strongly disagree to 7 strongly agree. A score from 5 to 9 indicated that a person has extreme dissatisfaction with life. 15 to 19 score shows someone has slightly dissatisfied with life. A score from 21 to 25 indicated slightly satisfied with life whereas 26 to 30 scores indicated high satisfaction. A neutral point on the scale indicates participants neither satisfied nor dissatisfied with life. The reliability of the scale is .87. All the patients were informed that the information was kept confidential, and data obtained from them will be used only for the research purpose.

Statistical Package for the Social Sciences (SPSS-21) version was used to analyze the collected data from the patients. Alpha *p*-value ≤0.05 was considered significant.

The Ethical approval was obtained from Ethics Review Committee of University of Lahore, Lahore.

Results

The data was collected from 100 heart attack patients. According to the demographic data, about 57% of patients were men, 35% of patients belonged to 21 to 40 years of age and 65% from 41 to 60 years of age. From the demographic, 65% of patients belonged to those who experienced a one-time heart attack, 25% of patients experienced a two-time attack, and 10% of patients experienced more than two times.

Table-1: Descriptive properties of the scales.

Scales	*No. of Items*	*Mean ± SD*	*α*
Alexithymia	20	55.01±11.73	.78
Post Traumatic Growth	21	57.55±18.66	.86
Life Satisfaction	5	21.41±8.16	.86

Alpha coefficients of all scales used in the present study were satisfactory including all measures (Table-1). Table-2 showed the correlation of alexithymia with post-traumatic growth and life satisfaction and post-traumatic growth with life satisfaction. Alexithymia is significantly negative correlated with post-traumatic growth (r =-0.37***, ***p <0.001), and life satisfaction (r =-0.32**, **p <0.01). Whereas post-traumatic growth is significantly positively correlated with life satisfaction (r =0.36***, ***p <0.001). (Table-2)

Table2: Correlation among study variables. (N=100)

Scales	*Alexithy-mia*	*Posttra-umatic Growth*	*Life Satisfac-tion*	*p-values*
Alexithy-mia	-	-.37***	-.32**	***p< 0.01*
Posttrau-matic Growth	-	-	.36***	****p< 0.001*
Life satisfact-ion	-	-	-	-

Table-3: Regression co-efficient of alexithymia, post traumatic growth and life-satisfaction in cardiac patients. (N=100)

Variables	*B*	*SE*	*β*	*p*
Alexithymia	-.16	.07	-.22	.027* (*p<0.05)*
Post Traumatic Growth	.12	.04	.28	.006** (*p<0.01)*
R^2= .16				

*Note: *= p <0.05, **= p <0.01*

Table-3 shows the impact of alexithymia and posttraumatic growth in the life satisfaction of cardiac patients. The R2 value of .16 discloses that the predictor variable explained .16% variance in the outcome variable with F (2, 97) = 10.29, p <.001. The findings revealed that alexithymia negatively predicted life satisfaction (β =-.22, p <0.05). While posttraumatic growth is positively predicted life satisfaction (β =.28, p <0.01).

Discussion

The current study was aimed to examine the relationship among alexithymia, post traumatic growth and life-satisfaction in cardiac patients. Findings of the current research indicate that there was a significant negative correlation between alexithymia and post traumatic growth. Results also revealed that life satisfaction has a significantly negative correlated with alexithymia and positive with post traumatic growth. Linear regression was used to find out the prediction between dependent and independent variables. Regression result of present study indicated that alexithymia has significantly negative predictor of life satisfaction while posttraumatic growth found positive predictor of life satisfaction among cardiac patients.

A study conducted in the USA, explored the negative relationship between alexithymia and posttraumatic growth while alexithymia was a negative predictor of posttraumatic growth.[19] These results matched the findings of the current study.

A study conducted in Finland, shows a negative relationship between alexithymia and life satisfaction, although depression and other confounding variables were controlled. It is one of the major risk factors for dissatisfaction in life.[20] The results of this study was similar to a study found negative relationship between alexithymia and life satisfaction. Another study found the same results as the current study that alexithymia was negatively associated with the satisfaction of life.[21]

People who were suffering from traumatic event experiencing psychological distress in their lives. These traumatic events also lead people to posttraumatic growth. According to a study which is conducted in North Carolina, shows a positive impact of posttraumatic growth on meaning in life and life satisfaction. The results of this study revealed the same as our study.[22]

A study conducted in China on cardiac patients reported that cardiac patient experience post-traumatic stress disorder (PTSD) symptoms and showed a positive correlation with alexithymia. As PTSD has a negative characteristic and cardiac issue increases the stressful symptoms. According to this study post-traumatic growth has a positive characteristic that is why current study report negative correlation among post-traumatic growth with alexithymia.[23]

A study was conducted on cadaveric donor reported relationship between post traumatic growth and alexithymia. In this study researchers have found post-traumatic growth has a significantly moderate negative correlation with alexithymia. Disease or disorders which may lead to death cause similar results such as a study was conducted on cancer patients showed negative correlation between post traumatic growth and alexithymia.[24]

A study reported that cardiac patient experience post-traumatic stress a disorder (PTSD) symptom that leads to low level of life satisfaction. Cardiac disorder is a life threatening disease that cause stress among people. This study reported negative correlation among PTSD and life satisfaction. As PTSD has a negative characteristic it showed reverse results from current study. Post-traumatic growth has a positive characteristic that is why showing positive correlation with life satisfaction.[25]

A study was conducted in Poland on myocardial infarction patients to measure life satisfaction and post-traumatic growth level. The results showed that post-traumatic growth has a positive correlation with life satisfaction. According to current study post-traumatic growth contribute to positive change in patients and improve life satisfaction that is why it is showing positive correlation among post-traumatic growth and life satisfaction.[26]

In this study, the data was collected from a small sample and collected from one city only. In order to generalize these findings, the data should collect from a large sample and taken from different cities and communities.

Conflict of interest: None declared.

References

1. Mendis S, Puska P, Norrving B. Global atlas on cardiovascular disease prevention and control. World Health Organization; 2011. (Accessed on 10th Septemeber 2022) Available from URL:https://www.who.int/publications/i/item/9789241564373
2. Hallerod B, Gustafsson J. A longitudinal analysis of the relationship between changes in socioeconomic status and changes in health. Soc Sci Med 2011; 72: 116-23.
3. Grau M, Bongard V, Fito M, Ruidavets J, Sala J, Taraszkiewicz D. Prevalence of cardiovascular risk factors in men with stable coronary heart disease in France and Spain. Arch Cardiovasc Dis 2010; 103: 80-9.
4. Ashrafuzzaman M, Huq M, Chakraborty C, Khan MR, Tabassum T, Hasan R. Heart Attack Detection Using Smart Phone. Int J Technol Enhan Emerg Engineer Res 2013; 1, 237.
5. Kelly BB, Fuster V. Promoting cardiovascular health in the developing world: a critical challenge to achieve global health. National Academies Press; 2010. (Accessed on 10th Septemeber 2022) Available from URL:https://www.ncbi.nlm.nih.gov/books/NBK45693/
6. Ciccarelli N, Baldonero E, Milanini B, Fabbiani M, Cauda R, Di Giambenedetto S, et al. Cognitive impairment and cardiovascular disease related to alexithymia in a well-controlled HIV-infected population. Infez Med 2019; 27: 274-82.
7. Thorberg FA, Hasking P, Huang YL, Lyvers M, Young RMD, Connor JP, et al. The Influence of Alexithymia on Alcohol Craving, Health-Related Quality of Life and Gender in Alcohol-Dependent Outpatients. J Psychoact Drugs 2020; 52(4): 366-76.
8. Edmondson D, von Känel R. Post-traumatic stress disorder and cardiovascular disease. Lancet Psychiat 2017; 4(4): 320-9.
9. Strickland J, Parry CL, Allan MM, Allan A. Alexithymia among perpetrators of violent offences in Australia: Implications for rehabilitation. Aust Psychol 2017; 52(3); 230-7.
10. First J, First NL, Stevens J, Mieseler VL, Houston JB. Post-traumatic growth 2.5 years after the 2011 Joplin, Missouri tornado. J Fam Soc Work 2017; 21(1): 5-21.
11. Margolis S, Schwitzgebel E, Ozer DJ, Lyubomirsky S. A New Measure of Life Satisfaction: The Riverside Life Satisfaction Scale. J Pers Assess 2019; 101(6): 621-30.
12. Nekouei ZK, Doost HTN, Yousefy A, Manshaee G, Sadeghei M. The relationship of Alexithymia with anxiety-depression-stress, quality of life, and social support in Coronary Heart Disease. J Educ Health Promot 2014; 3: 68.
13. Nishtar S.Prevention of coronary heart disease in South Asia. Lancet 2002; 360(9338):1015-8.
14. Marhuenda J, Villaño D, Cerdá B, Zafrilla MP. Nutrition in Health and Disease, Cardiovascular Disease and Nutrition, 2019. InTech Open. (Accessed on 10th Septemeber 2022) Available from URL:https://www.intechopen.com/chapters/65720
15. Cohen J. Statistical power analysis for the behavioral sciences. Abingdon. England: Routledge 1988; 6(8): 222-38.
16. Bagby RM, Parker JDA, Taylor GJ. The twenty-item Toronto Alexithymia Scale-I. Item selection and cross-validation of the factor structure. J Psychosom Res 1994; 38: 23-32.
17. Tedeschi RG, Calhoun LG. The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. J Trauma Stress 1996; 9(3): 455-71.
18. Pavot WG, Diener E, Colvin CR, Sandvik E. Further validation of the Satisfaction with Life Scale: Evidence for the cross-method convergence of well-being measures. J Personal Asses 1991; 57: 149-61.
19. Orejuela-Dávila AI, Cann A, Tedeschi RG. Alexithymia predicts posttraumatic growth and distress after trauma. J Loss Trauma 2017; 22(3): 171-82.

20. Hosseinzadeh A, Tavakoli H, Aghaee F, Azizi M. Relationship between Alexithymia and Life Satisfaction: The Mediating Role of Emotional Intelligence. J Appl Environ Biol Sci 2014; 4(5): 115-9.
21. Shibata M, Ninomiya T, Jensen MP, Anno K, Yonemoto K, Makino S, et al. Alexithymia Is Associated with Greater Risk of Chronic Pain and Negative Affect and with Lower Life Satisfaction in a General Population: The Hisayama Study. PLoS ONE 2014; 9(3): e90984.
22. Joseph S, Linley PA. (Eds.). Trauma, recovery, and growth: Positive psychological perspectives on posttraumatic stress. John Wiley & Sons Inc; 2008.
23. Gao W, Zhao J, Li Y, Cao FL. Post-traumatic stress disorder symptoms in first-time myocardial infarction patients: roles of attachment and alexithymia. J Adv Nurs 2015;71(11): 2575-84.
24. Tomaszek A, Wróblewska A, Zdankiewicz-Ścigała E, Rzońca P, Gałązkowski R, Gozdowska J, et al. Post-Traumatic Growth among Patients after Living and Cadaveric Donor Kidney Transplantation: The Role of Resilience and Alexithymia. Int J Environm Res Public Health 2021; 18(4): 2164.
25. Stoll C, Schelling G, Goetz AE, Kilger E, Bayer A, Kapfhammer HP, et al. Health-related quality of life and post-traumatic stress disorder in patients after cardiac surgery and intensive care treatment. J Thorac Cardiovas Surg 2000; 120(3): 505-12.
26. Ogińska-Bulik N. Satisfaction with life and posttraumatic growth in persons after myocardial infarction. Health Psychol Rep 2014; 2(2): 105-14.