

**RESEARCH PAPER****Religious Gratitude, Hope, and Post-Traumatic Growth after
Diagnosis of Cardiovascular Disease****¹Iqra Gulzar, ²Muhammad Nasar Iqbal* and ³Hafiz Salman Latif**

1. Research Scholar: Lahore School of Behavioural Sciences, The University of Lahore, Punjab, Pakistan
2. Sr. Lecturer, Lahore School of Behavioural Sciences, The University of Lahore, Punjab, Pakistan
3. Research Scholar, Department of Psychology, Bahauddin Zakariya University, Vehari Multan, Punjab, Pakistan

***Corresponding Author:** psynasir@gmail.com**ABSTRACT**

In the realm of psychological and spiritual well-being, this research delves into the intricate dynamics of religious gratitude, hope, and post-traumatic growth. The present study was conducted with the aim to find out the relationship between religious gratitude, hope and post-traumatic growth among patients of cardiovascular disease. Data was collected from the Lahore and Multan cardiology hospitals. A cross-sectional based correlational research design was used. The sample consisted of (N=100) cardiac patient and it was collected by using non- probability purposive sampling technique. The age range of the sample was 35 to 60 years. Data was collected by using three tools i.e., Religious Gratitude Scale (RG), Adult Hope scale (AHS) and Post-Traumatic Growth Inventory (PGTI). The result revealed that there was significant positive relationship among religious gratitude, hope and post-traumatic growth in diagnosed patients with cardiovascular disease. Understanding the role of religious gratitude and hope can inform healthcare providers on how to incorporate spiritual and psychological support into patient care plans. This may lead to more holistic, patient-centered approaches that promote emotional well-being alongside medical treatment.

Keywords: Cardiovascular Disease, Hope, Religious Gratitude, and Post-Traumatic Growth**Introduction**

Cardiovascular disease is a leading cause of death worldwide (Saglietto et al., 2021). Its prevalence is rapidly increasing, particularly in developing countries, and it has a devastating impact on modern society (Nangia et al., 2016). In 2008, approximately seventeen million people succumbed to cardiovascular diseases. Presently, cardiovascular disease stands as a major contributor to mortality rates, sparking international concern for the well-being of individuals' worldwide (Roth et al., 2015). This is an alarming situation, highlighting the importance of understanding how cardiovascular diseases spread and how they can be prevented, controlled, and treated through various means and resources (Einarson et al., 2018). Given the rapid spread of CVD, it poses a significant challenge to the global healthcare system. However, with the adoption of comprehensive measures and the establishment of a unified social institution, this disease can be curtailed (Sweeney et al., 2023).

Heart disease serves as an umbrella term encompassing various conditions that affect the heart's function in different ways. This includes coronary artery disease, congenital heart defects, heart rhythm abnormalities, and many others. Typically, the terms "heart disease" and "cardiovascular disease" are interchangeable (Wang et al., 2019). Stress is a common experience in everyday life, triggering the release of stress hormones, which

increase sweating, breathing, heart rate, and blood pressure as the body responds to perceived stressors (Zawadzki et al., 2019). While these reactions may be helpful in the short term, long-term stress can be detrimental (De Calheiros Velozo et al., 2023).

Gratitude plays a pivotal role in life, directing us toward a more positive existence. Embracing a life of appreciation is more fulfilling (Wood et al., 2010). The feeling of gratitude, or the act of being grateful, plays a vital role in our society by fostering genuine and strong relationships (Smith & Denton, 2009).

Hope encompasses a wide range of emotions, including joy, happiness, awe, and excitement (Smith et al., 2014). Lopez and Cunha (2008) differentiate hope from optimism, stating that hope involves not only believing the future will be better than the present but also taking action to make it so. Hope empowers individuals to address challenges with the right mindset and approach, leading to progress and goal attainment. Trust is a fundamental need in our daily lives (McGeer, 2008).

Post-traumatic growth refers to the positive behavioral changes in individuals following traumatic experiences (Jayawickreme et al., 2021). It encompasses five dimensions, including improved relationships, enhanced personal confidence and strength, spiritual transformation, and a greater appreciation for the gift of life (Blackie et al., 2017). Post-traumatic growth is a phenomenon where individuals exhibit positive behavioral changes after grappling with life's tragedies (Jayawickreme & Blackie, 2014). Traumatic events, such as acute or chronic illness, injury, or bereavement, can induce significant psychological and emotional stress (Maqbool et al., 2022). While individuals facing these challenges may experience increased resilience and efficiency, they may also encounter negative impacts. Positive changes often include fostering better relationships, discovering new life possibilities, improving personal potential, enhancing spiritual perspectives, and deepening their appreciation for life (Plews-Ogan et al., 2019).

Literature Review

It is a valuable asset we receive from other individuals in our community. Saying "thank you" is a small gesture through which we navigate social interactions, maintaining the smooth operation of life's machinery based on cooperation and mutual support (Klein, 2011). In today's business-oriented world, those who remain thankful and practice gratitude can lead more fulfilling lives and mitigate difficulties in their circumstances (Algoe & Haidt, 2009).

The Holy Quran, the sacred book of Islam, emphasizes the importance of gratitude to God for guidance in life. In the Fourteenth Surah of the Quran, it states, "If you are grateful, I will give you more" (14:7). Those who maintain a spirit of gratitude in all aspects of life are believed to receive greater blessings from God (Koran, 2:185). Sufism, an ancient belief within Islam, has a perspective on gratitude with two stages: being thankful to God for the gift of life and remaining grateful even in times of hardship, as those hardships may bring hidden blessings from God (Post, 2011). It's essential to remember that nothing can fully repay God, as the feeling of gratitude itself is a gift from God. In various social contexts, people express gratitude in diverse ways. People often deeply experience the emotion of gratitude, and different events illustrate how we demonstrate our gratitude to God in various social situations and intervals (Wood et al., 2008).

Cardiovascular disease is a leading cause of morbidity and mortality worldwide. Given its widespread impact, understanding the psychosocial factors that influence individuals' coping mechanisms and recovery following a CVD diagnosis is of paramount importance (Rehman et al., 2021). A diagnosis of cardiovascular disease can be emotionally and psychologically distressing. Individuals may experience a wide range of emotions, including fear, anxiety, and depression. It is essential to investigate factors that can mitigate these negative emotions and facilitate psychological well-being (Vlachakis et al., 2018).

Religion and spirituality have been shown to play a significant role in how individuals cope with stress and adversity (Aggarwal et al., 2023).

Gratitude and hope are positive psychological constructs that have been associated with improved mental health outcomes. Grateful individuals tend to focus on positive aspects of their lives, which can lead to enhanced well-being (Sansone & Sansone, 2010). Hope is closely linked to resilience and the ability to envision a better future, even in challenging circumstances (Duggal et al., 2016). In summary, this research aims to address an important gap in our understanding of the psychological and spiritual dimensions of coping with cardiovascular disease. By exploring the relationships between religious gratitude, hope, and post-traumatic growth, the study can provide insights that contribute to more holistic and effective healthcare interventions for individuals facing this significant health challenge.

Hypotheses

It was hypothesized that

- There would be a positive relationship among Religious Gratitude, hope and post-traumatic growth (psychological changes) in the patients of CVD.
- There would be a negative relationship among Religious Gratitude, hope and post-traumatic growth (psychological changes) in the patients of CVD.

Material and Methods

This study was conducted to find out the relationship among religious gratitude, hope, and post-traumatic growth after diagnosis of cardiovascular disease. Inform consent was taken from the participants. Participants were ensured that their data will be kept confidential. Participants were selected on the basis of inclusion criteria specifically cardiovascular disease. Cross-sectional research design, along with purposive sampling technique was used to collect data from the cardiovascular disease patients. The total sample size was (N=100). Age range of the participants was 20 to 40 years and divided it into two categories i.e., young adults and middle adults. Data was collected from two different districts of Punjab, Pakistan.

For measuring gratitude related to religion, Religious Gratitude Scale was used, developed by (Amjad et al., 2013) consisted 8 items with .75 Cronbach's alpha reliability. Adult Hope Scale (AHS) was used to assess the hope level of cardiovascular disease patients. It was developed by Snyder et al. (2007). This scale was consisted of 12-item with .80 Cronbach alpha reliability.

Post-Traumatic Growth Inventory (PTGI) was used to assess the psychological changes in cardiovascular patients. Tedeschi and Calhoun, (1996) developed the PTGI short form using the original PTGI scale. This scale consisted 21 items with .88 Cronbach's alpha reliability.

Results and Discussion

Table 1
Internal Reliability of the used Scales

Scales	<i>a</i>
Religious Gratitude Scale	.78
Agency subscale.	.82
Pathway subscale	.75
Post-Traumatic Growth Inventory	.72

Note. *a*= Cronbach's alpha reliability

The above table listed scales and sub-scales, and their corresponding reliability coefficients, which measure the consistency and reliability of the scales in assessing specific constructs. These scales include the Religious Gratitude Scale (0.78), Agency Subscale (0.82), Pathway Subscale (0.75), and the Post-Traumatic Growth Inventory (0.72).

Table 2
Pearson Correlation, Mean and Standard Deviation on Religious Gratitude, Agency, Pathway sub-scales of Hope and Post-traumatic Growth (N = 100)

Variable	1	2	3	4
1.Religious Gratitude	---	.20*	.26**	.31***
2.Agency subscale.	---	---	.39***	.29**
3. Pathway subscale	---	---	---	.27**
4.Post-traumatic Growth	---	---	---	---
<i>M</i>	21.84	17.99	16.01	19.81
<i>SD</i>	4.82	4.38	3.25	3.97

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Table 2 displays the Pearson Correlation coefficients among religious gratitude, the agency subscale, the pathway subscale, and post-traumatic growth. The findings suggest a positive correlation between religious gratitude and the agency subscale, pathway subscale, and post-traumatic growth. Furthermore, both the agency subscale and pathway subscale are positively correlated with post-traumatic growth.

Table3
Independent sample t-test for Age and Religious Gratitude (N = 100)

Variables	Adults	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i> <	95%		Cohen's d
						<i>LL</i>	<i>UL</i>	
Religious Gratitude	Young	22.63	4.19	2.29	.02*	0.96	1.33	0.10
	Middle	24.29	4.24					

Note. *M*= Mean, *SD*= Standard Deviation, * $p < 0.05$, *LL*= Lower Limit, *UL*= Upper Limit, $p < 0.05$ *

The table provides statistical data for "Religious Gratitude" in a group of young adults and middle adults. It shows a mean difference between two categories of adulthood. The results revealed that middle adults have more religious gratitude as compared to the young adults. A t-test resulted in a significant difference ($p < 0.05$ *) with a small effect size (Cohen's $d = 0.10$).

Discussion

This study investigated the relationship between religious gratitude, hope and post-traumatic growth (psychological changes) diagnosed with cardiovascular disease patients. It was hypothesized that there would be a positive relationship among religious gratitude, hope and post-traumatic growth (psychological changes) in the patients of cardiovascular disease. Results proved the hypothesis and revealed that a positive relationship exist between religious gratitude, hope and post-traumatic growth (psychological changes) in the patients of cardiovascular disease.

The present research posited that a correlation exists between religious gratitude, hope, and post-traumatic growth in individuals with cardiovascular disease. In other words, individuals with high levels of religious gratitude and hope were expected to experience higher levels of post-traumatic growth. The results demonstrated a strong beneficial correlation between religious hope, gratitude, and post-traumatic growth (psychological modifications). Significant relationships between religious thankfulness, hope, and post-traumatic growth have also been shown in earlier research (Subandi et al., 2014; Hullmann et al., 2014; Byra, 2016).

Additionally, the current study highlighted a noteworthy favorable relationship between religious hope and appreciation. This suggests that those who have a strong sense of religious thankfulness also typically have high hopes. According to Fehring et al. (1997), older people have higher degrees of intrinsic religiosity and spiritual well-being, which are linked to happier and more hopeful dispositions. Hope and a pleasant emotional state are associated with intrinsic religiosity, whereas spiritual well-being is associated with both of these things.

The study's findings show a significant difference in middle-aged adults' and young adults' religious thankfulness. In particular, middle-aged people showed noticeably greater levels of religious thankfulness than younger people did. This implies that, in a religious setting, one's age may have a significant influence on how one experiences and expresses thankfulness. These findings highlight the possibility that when people move from young adulthood to middle age, a stronger bond with faith and spirituality may form, encouraging a higher level of religious thankfulness in this population. This conclusion was validated by earlier research (Krause, 2006; Emmons & McCullough, 2003).

Conclusion

In conclusion, this research illuminates the potent and revolutionary influence of religious thankfulness on people enduring hardship. We have established a strong positive correlation between religious thankfulness, hope, and post-traumatic growth through thorough study and empirical data. These results highlight the significance of practicing thankfulness in the framework of one's religious or spiritual beliefs since it can be a ray of hope in the face of misfortune and tragedy. Finding meaning and resiliency in one's faith can help people cope with trauma and life's obstacles when they acknowledge and accept its blessings. A more resilient and prosperous existence can result from the significant psychological growth that can be sparked by the increased sense of optimism that comes from religious thankfulness.

Recommendations

A few recommendations were made in light of the research findings, which show a significant positive relationship between religious gratitude, hope, and post-traumatic growth in patients with cardiovascular disease. For example, healthcare providers should think about incorporating spiritual and religious interventions into patients' overall treatment plans. This could entail using techniques like prayer, meditation, or counseling that respect the patient's religious convictions in order to promote religious thankfulness and hope. Create and carry out assistance initiatives with the goal of promoting hope and thankfulness in religion. These initiatives could take the form of counseling sessions, workshops, or support groups that concentrate on the spiritual and religious aspects of dealing with disease. Educate medical staff members—such as nurses, therapists, and doctors on the significance of identifying and meeting patients' spiritual and religious needs.

References

- Aggarwal, S., Wright, J., Morgan, A., Patton, G., & Reavley, N. (2023). Religiosity and spirituality in the prevention and management of depression and anxiety in young people: a systematic review and meta-analysis. *BMC psychiatry*, 23(1), 1-33.
- Algoe, S. B., & Haidt, J. (2009). Witnessing excellence in action: The 'other-praising' emotions of elevation, gratitude, and admiration. *The journal of positive psychology*, 4(2), 105-127.
- Amjad, N., Ahmad, S., & Zaidi, G. (2013). Exploring gratitude in a Muslim Pakistani context. International Conference of Cross-Cultural Psychology, University of California. https://www.researchgate.net/publication/303016558_gratitude_in_muslim_context
- Blackie, L. E., Jayawickreme, E., Tsukayama, E., Forgeard, M. J., Roepke, A. M., & Fleeson, W. (2017). Post-traumatic growth as positive personality change: Developing a measure to assess within-person variability. *Journal of Research in Personality*, 69, 22-32.
- Byra, S. (2016). Posttraumatic growth in people with traumatic long-term spinal cord injury: predictive role of basic hope and coping. *Spinal Cord*, 54(6), 478-482.
- De Calheiros Velozo, J., Vaessen, T., Lafit, G., Claes, S., & Myin-Germeys, I. (2023). Is daily-life stress reactivity a measure of stress recovery? An investigation of laboratory and daily-life stress. *Stress and Health*, 39(3), 638-650.
- Duggal, D., Sacks-Zimmerman, A., & Liberta, T. (2016). The impact of hope and resilience on multiple factors in neurosurgical patients. *Cureus*, 8(10).
- Einarson, T. R., Acs, A., Ludwig, C., & Pantou, U. H. (2018). Prevalence of cardiovascular disease in type 2 diabetes: a systematic literature review of scientific evidence from across the world in 2007–2017. *Cardiovascular diabetology*, 17(1), 1-19.
- Emmons, R. A., McCullough, M. E., & Tsang, J.-A. (2003). The assessment of gratitude. In S. J. Lopez & C. R. Snyder (Eds.), *Positive psychological assessment: A handbook of models and measures* (pp. 327–341). American Psychological Association.
- Fehring, R. J., Miller, J. F., & Shaw, C. (1997). Spiritual well-being, religiosity, hope, depression, and other mood states in elderly people coping with cancer. *Oncology nursing forum*, 24(4), 663–671.
- Hullmann, S. E., Fedele, D. A., Molzon, E. S., Mayes, S., & Mullins, L. L. (2014). Posttraumatic growth and hope in parents of children with cancer. *Journal of psychosocial oncology*, 32(6), 696-707.
- Jayawickreme, E., Infurna, F. J., Alajak, K., Blackie, L. E., Chopik, W. J., Chung, J. M., ... & Zonneveld, R. (2021). Post-traumatic growth as positive personality change: Challenges, opportunities, and recommendations. *Journal of personality*, 89(1), 145-165.
- Klein, M. (2011). *Envy and gratitude and other works 1946-1963*. Random House.
- Krause, N. (2009). Religious involvement, gratitude, and change in depressive symptoms over time. *The International journal for the psychology of religion*, 19(3), 155-172.
- Lopes, M. P., & Cunha, M. P. E. (2008). Who is more proactive, the optimist or the pessimist? Exploring the role of hope as a moderator. *The Journal of Positive Psychology*, 3(2), 100-109.
- Maqbool, R., Iqbal, M. N., Rafiq, M., Anjum, A., Qamar, S., & Ahmed, M. M. (2022). Alexithymia, Posttraumatic Growth, and Life Contentment among Cardiac Sufferers. *Pakistan Journal of Medical Research*, 61(3), 134-138.

- McGeer, V. (2008). Trust, hope and empowerment. *Australasian Journal of Philosophy*, 86(2), 237-254.
- Nangia, R., Singh, H., & Kaur, K. (2016). Prevalence of cardiovascular disease (CVD) risk factors. *medical journal armed forces india*, 72(4), 315-319.
- Plews-Ogan, M., Ardelt, M., & Owens, J. (2019). Growth through adversity: Exploring associations between internal strengths, posttraumatic growth, and wisdom. *The Journal of Value Inquiry*, 53, 371-391.
- Post, S. G. (2011). *The hidden gifts of helping: How the power of giving, compassion, and hope can get us through hard times*. John Wiley & Sons.
- Rehman, S., Rehman, E., Ikram, M., & Jianglin, Z. (2021). Cardiovascular disease (CVD): assessment, prediction and policy implications. *BMC Public Health*, 21(1), 1-14.
- Roth, G. A., Forouzanfar, M. H., Moran, A. E., Barber, R., Nguyen, G., Feigin, V. L., ... & Murray, C. J. (2015). Demographic and epidemiologic drivers of global cardiovascular mortality. *New England Journal of Medicine*, 372(14), 1333-1341.
- Saglietto, A., Manfredi, R., Elia, E., D'Ascenzo, F., GM, D. F., Biondi-Zoccai, G., & Munzel, T. (2021). Cardiovascular disease burden: Italian and global perspectives. *Minerva Cardiology and Angiology*, 69(3), 231-240.
- Sansone, R. A., & Sansone, L. A. (2010). Gratitude and wellbeing: the benefits of appreciation. *Psychiatry (edgmont)*, 7(11), 18.
- Smith, C. A., Tong, E. M., & Ellsworth, P. C. (2014). The differentiation of positive emotional experience as viewed through the lens of appraisal theory. *Handbook of positive emotions*, 11-27.
- Smith, C., & Denton, M. L. (2009). *Soul searching: The religious and spiritual lives of American teenagers*. Oxford University Press.
- Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., & Sigmon, S. T. (2007). Adult hope scale (AHS). *Journal of Personality and Social Psychology*, 60, 570-585.
- Subandi, M. A., Achmad, T., Kurniati, H., & Febri, R. (2014). Spirituality, gratitude, hope and post-traumatic growth among the survivors of the 2010 eruption of Mount Merapi in Java, Indonesia. *Australasian Journal of Disaster and Trauma Studies*, 18(1), 19.
- Sweeney, M., Cook, S. A., & Gil, J. (2023). Therapeutic opportunities for senolysis in cardiovascular disease. *The FEBS Journal*, 290(5), 1235-1255.
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. *Journal of traumatic stress*, 9(3), 455-471. <https://doi.org/10.1007/BF02103658>
- Vlachakis, C., Dragoumani, K., Raftopoulou, S., Mantaïou, M., Papageorgiou, L., Tsaniras, S. C., ... & Vlachakis, D. (2018). Human emotions on the onset of cardiovascular and small vessel related diseases. *in vivo*, 32(4), 859-870.
- Wang, T., Chen, L., Yang, T., Huang, P., Wang, L., Zhao, L., ... & Qin, J. (2019). Congenital heart disease and risk of cardiovascular disease: a meta-analysis of cohort studies. *Journal of the American Heart Association*, 8(10), e012030.
- Wood, A. M., Froh, J. J., & Geraghty, A. W. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical psychology review*, 30(7), 890-905.

- Wood, A. M., Maltby, J., Stewart, N., Linley, P. A., & Joseph, S. (2008). A social-cognitive model of trait and state levels of gratitude. *Emotion, 8*(2), 281.
- Zawadzki, M. J., Scott, S. B., Almeida, D. M., Lanza, S. T., Conroy, D. E., Sliwinski, M. J., ... & Smyth, J. M. (2019). Understanding stress reports in daily life: A coordinated analysis of factors associated with the frequency of reporting stress. *Journal of Behavioral Medicine, 42*, 545-560.