ORIGINAL ARTICLE

RELIGIOSITY AS A PREDICTOR OF POST-TRAUMATIC GROWTH AND PSYCHOLOGICAL DISTRESS AMONG HEART PATIENTS: MEDIATING ROLE OF PERCEIVED SOCIAL SUPPORT

Rida Zahra[1], Rani Aroo Zainab[1], Zartasha Qamar[1], Attia Rehman[1], Sadia Niazi[1], Anam Yousaf[1]

[1]**Department of Psychology, University of Sargodha, Sargodha, Pakistan**

Objectives: This study investigates the indirect effect of religiosity on post-traumatic growth and psychological distress through perceived social support among heart patients.

Methodology: A cross-sectional research design was employed, gathering data from a purposive sample of 140 heart patients, with equal representation of both men and women, from public and private hospitals in Sargodha. Data collection utilized the Urdu-translated versions of the Short Muslim Practice and Belief Scale, Interpersonal Support Evaluation List, Post-Traumatic Growth Inventory, and DASS-21 to assess religiosity, perceived social support, post-traumatic growth, and psychological distress, respectively.

Results: Perceived social support significantly mediated the relationship between religiosity and post-traumatic growth, amplifying the strength of this association. Additionally, it mediated the relationship between religiosity and psychological distress by alleviating the negative impact on psychological health.

Conclusion: This study illuminates the positive influence of religiosity on social support while simultaneously mitigating psychological distress among heart patients. Moreover, perceived social support not only diminishes distress but also fosters post-traumatic growth, serving as a vital mediator in these dynamics. These findings offer insights for interventions aimed at leveraging religiosity and social support to enhance mental well-being in this population.

Keywords: Psychological distress; post-traumatic growth; perceived social support; religiosity

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INTRODUCTION

The escalating prevalence of heart diseases underscores the critical necessity for comprehensive research into the intricate factors impacting the mental well-being of individuals grappling with cardiovascular challenges. As the incidence of heart-related ailments continues to rise, understanding the nuanced interplay between religiosity, perceived social support (PSS), post-traumatic growth (PTG), and psychological distress (PD) becomes imperative. Religiosity, often regarded as a pivotal facet of coping mechanisms, carries significant implications for individuals navigating cardiac health issues. It encompasses a set of religious values, beliefs, and behaviors that serve as sources of guidance, solace, and personal development in one's life journey. Similarly, religiosity entails the adoption of a value system to inform decision-making and actions in the world around us.[1]

Perceived social support (PSS) encompasses the perception of being cared for, respected, and valued within a social group.[2] It reflects individuals' perceptions of the availability of practical assistance and emotional support from friends, family, and acquaintances during challenging times.[3] Studies have consistently demonstrated a positive correlation between religiosity and perceived social support. Religious individuals are more inclined to provide support to others in need and perceive greater support availability during personal crises.[4] Furthermore, individuals undergoing significant life events often receive social support tailored to their religious affiliations.[5]

Post-traumatic growth (PTG) emerges from the struggle with profound life challenges, wherein individuals experience positive psychological transformations amid adversity.[6] Unlike merely returning to pre-trauma levels of functioning, PTG involves the development of new skills and perspectives that foster personal growth and resilience.[7] Research underscores a robust positive correlation between post-traumatic growth and perceived social support, particularly among individuals grappling with heart-related conditions. Social support serves as a protective buffer, enabling individuals to navigate traumatic experiences and cultivate PTG effectively.[8]

Psychological distress (PD) encompasses non-specific symptoms of stress, anxiety, and depression. Studies have consistently reported a negative correlation between psychological distress and perceived social support.[9] Perceptions of supportive social networks among individuals facing cardiac challenges are associated with reduced psychological distress and improved overall quality of life.[10] Moreover, religiosity has been linked to lower levels of psychological distress, with religious coping mechanisms influencing various aspects of the stress-appraisal process.[11] Strong religious orientations have been shown to mitigate psychological suffering and enhance overall well-being.[12]

While individual studies have explored the relationships between these variables in various contexts within Pakistan, comprehensive investigations into their amalgamation among this specific population are limited. This study holds significant potential for healthcare professionals, enabling them to tailor interventions that integrate patients' faith and support systems for enhanced treatment outcomes. By elucidating the associations between religiosity, PSS, PTG, and PD in heart patients, this research facilitates the delivery of holistic care that addresses their physical, psychological, and spiritual needs, thereby fostering improved overall health outcomes. Such insights into the psychological mechanisms underlying trauma offer invaluable guidance for both researchers and practitioners, enriching our understanding of factors influencing mental health outcomes.

The primary objective of this research was to examine the direct impact of religiosity and perceived social support, as well as the indirect influence of perceived social support, on post-traumatic growth and psychological distress. Based on these objectives, the following hypotheses were posited:

- Religiosity and perceived social support will significantly predict post-traumatic growth in heart patients.
- Religiosity and perceived social support will significantly predict reduced psychological distress among heart patients.
- Perceived social support will mediate the relationship between religiosity and post-traumatic growth.

Perceived social support will mediate the relationship between religiosity and psychological distress, mitigating its adverse effects.

METHODOLOGY

Study Design: The current study employed a cross-sectional research design, which allows for the examination of variables at a single point in time. This design is well-suited for exploring associations between variables and is particularly useful in understanding the relationships between religiosity, post-traumatic growth, perceived social support, and psychological distress among individuals diagnosed with coronary heart disease.

Setting: The study was conducted at the Department of Psychology, University of Sargodha, spanning from March 14, 2023, to September 29, 2023. Participants were recruited from both public (DHQ) and private (Sadiq, Munir, Mubarak, Khatamun-Nabiyeen) hospitals in Sargodha city, ensuring a diverse representation of individuals seeking healthcare services.

Participants: Using a purposive sampling technique, participants were selected based on specific inclusion criteria, including a diagnosis of coronary heart disease and outpatient status. Exclusion criteria involved concurrent diagnosis with another disease and hospitalization. The study initially engaged 150 heart patients, with a final analysis conducted on a subset of 140 participants after excluding 10 due to incomplete or randomly filled responses, ensuring data integrity.

Variables: The key variables examined in the study included religiosity (measured through the Short Muslim Practice and Belief Scale),[13] post-traumatic growth (assessed via the Post Traumatic Growth Inventory),[14] perceived social support (measured

using the Interpersonal Support Evaluation List),[15] and psychological distress (evaluated through the Urdu-translated version of the Depression, Anxiety, and Stress Scale).[16]

Data Sources/Measurement: Data were collected through self-reported, valid, and reliable questionnaires administered in Urdu, ensuring accessibility and cultural relevance for the participants. These instruments provided comprehensive assessments of religiosity, post-traumatic growth, perceived social support, and psychological distress, employing Likert-type response formats for nuanced measurement.

Bias: Efforts were made to minimize bias through rigorous sampling techniques, clear communication of study objectives to participants, and assurance of confidentiality. Additionally, the exclusion of participants with incomplete or randomly filled responses mitigated potential bias in the data analysis phase.

Ethics: Ethical considerations were paramount throughout the study to safeguard the rights and well-being of participants. Prior to data collection, ethical approval was obtained from the Board of Studies (BOS) at the University of Sargodha (UoS/Psy-147), ensuring adherence to institutional guidelines and ethical standards. Informed consent was obtained from all participants, who were provided with detailed information about the study's purpose, procedures, and potential risks and benefits. Confidentiality and anonymity were assured, with participants' data used solely for research purposes and kept secure throughout the study. Participants were also informed of their right to withdraw from the study at any time without repercussions.

Study Size: The study size was determined using a priori power analysis with G*Power 3.0, ensuring sufficient statistical power to detect meaningful effects. The analysis accounted for the anticipated effect sizes, significance level (α), and desired power (1-β). This rigorous approach to sample size determination contributed to the study's ability to accurately assess the relationships between variables of interest. Additionally, the normal distribution of data, as confirmed by descriptive statistics, provided further validation of the adequacy of the sample size, reinforcing the robustness of the study's findings.

Quantitative Variables: Quantitative variables included scores on religiosity, post-traumatic growth, perceived social support, and psychological distress scales, allowing for the assessment of their relationships through statistical analyses.

Statistical Methods: Descriptive and correlation analyses were conducted using IBM SPSS (version 24) to explore the relationships between variables. Additionally, structural equation modeling in AMOS (version 24) was employed to assess direct and indirect effects, providing insights into the underlying structure of the studied phenomena. Path analysis in AMOS elucidated the mediating role of perceived social support between religiosity and both post-traumatic growth and psychological distress, enhancing the understanding of complex interrelationships among the variables.

RESULTS

Participants: The study encompassed a total of 140 adults, evenly split between men and women, with ages ranging from 36 to 72 years (mean age = 45.32 ± 13.66). Participants were recruited from diverse backgrounds, ensuring a representative sample of individuals diagnosed with coronary heart disease seeking healthcare services in Sargodha city.

Descriptive Data: Table 1 provides a comprehensive overview of the descriptive statistics, alpha reliability estimates, and correlations among the variables under investigation. The values indicate a normal distribution of the data, with skewness within acceptable limits. Religiosity, perceived social support (PSS), post-traumatic growth (PTG), and psychological distress (PD) exhibited varying mean scores, suggesting diversity in participants' experiences within these domains.

Outcome Data: Correlation analysis revealed significant associations between religiosity, PSS, PTG, and PD. Religiosity exhibited a positive correlation with PSS and PTG, while displaying a negative correlation with PD. Similarly, PSS demonstrated a positive correlation with PTG and a negative correlation with PD, indicating its potential role as a protective factor against psychological distress.

Main Results: The path diagram depicted in Figure 1 illustrates the mediating role of PSS between religiosity, psychological distress, and post-traumatic growth. The model demonstrated a good fit to the data, supported by fit indices $\chi 2 = 5.38$, df = 2, p = .07; CFI

= .96; GFI = .98; RMSEA = .03, indicating the robustness of the proposed structural equation model.

Table 2 further elucidates the direct and indirect effects of religiosity and PSS on PTG and PD. Religiosity exhibited a direct positive effect on PSS and a negative effect on PD. PSS, in turn, demonstrated a direct negative impact on PD and a direct positive effect on PTG. Moreover, PSS significantly mediated the relationship between religiosity and PTG, enhancing the strength of their association. Additionally, PSS played a mediating role between religiosity and PD, mitigating the negative impact of religiosity on psychological distress.

Figure 1: Mediating role of perceived social support between religiosity, psychological distress, and post-traumatic growth

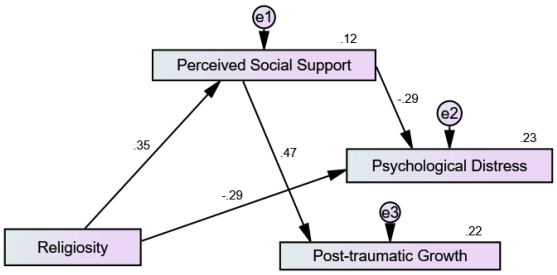

Table 1: Descriptive, alpha reliability estimates and correlations of variables (N = 140)

Variables	1	2	3	4	α	*Mean*	*SD*	Range		Skewness
								Potential	actual	
Religiosity	-	0.35	0.30	-0.39	0.86	38.97	5.27	9-45	21-45	-1.27
Perceived Social Support	-	-	0.47	-0.39	0.88	40.07	6.65	12-48	20-48	-0.72
Post-traumatic Growth	-	-	-	-0.31	0.92	83.81	14.99	0-105	16-104	-1.32
Psychological Distress	-	-	-	-	0.95	21.72	15.91	0-63	0-63	0.67

Table 2: Direct and indirect effects of religiosity and perceived social support on post-traumatic growth and psychological (*N* = 140)

Paths	Coefficient (β)	P-value	95% Confidence Interval	
			Lower	Upper
Religiosity → Perceived social support	0.35	0.001	0.19	0.51
Perceived social support → Psychological distress	-0.29	0.002	-0.47	-0.12
Perceived social support → post-traumatic growth	0.47	0.001	0.30	0.61
Religiosity → Psychological distress	-0.29	0.003	-0.47	-0.11
Religiosity →Perceived social support → post-traumatic growth	0.42	0.001	0.21	0.73
Religiosity →Perceived social support →Psychological distress	-0.31	0.001	-0.55	-0.14

DISCUSSION

The present study delved into the predictive roles of religiosity and PSS on PTG and PD, while also exploring the mediating role of PSS between religiosity, PTG, and PD. The first hypothesis, supported by the analysis, underscores religiosity and PSS as significant positive predictors of PTG, aligning with existing literature. Previous research by Chen and Bonanno demonstrated that religious individuals perceive both the quality and quantity of social support more favorably.[17] Furthermore, various studies have highlighted that individuals with stronger religious convictions tend to have more robust social networks, attributing this to the recurrence of religious activities.[18] In the Pakistani context, where religious practices and beliefs are deeply ingrained, faith often serves as a framework for coping with trauma, offering meaning, purpose, and solace. Notably, a study on individuals' quarantine experiences during the COVID-19 pandemic underscored the pivotal role of emotional support from family and friends in managing negative emotions, further emphasizing the significance of social support networks in Pakistani culture.[19]

The analysis also supported the second hypothesis, revealing that religiosity and PSS significantly predict psychological distress in a negative direction. Previous research has consistently shown that religiosity is associated with lower symptoms of depression, particularly in the face of stressful circumstances.[20-23] This relationship between religiosity and psychological distress is further bolstered by the presence of social support, which has been shown to alleviate symptoms of poor mental health by fostering self-disclosure and coping mechanisms.[24] In Pakistan, where communal bonds are strong, individuals are better equipped to navigate obstacles and experience less psychological distress when they feel connected and supported by their community.

Furthermore, the third hypothesis, which posited the mediating role of PSS between religiosity and PTG, found support in the analysis. This finding resonates with previous research, indicating that individuals who engage in religious group activities often report stronger social support networks.[25] Studies conducted on patients have highlighted the strong connection between PTG and perceived social support, suggesting that social resources play a crucial role in facilitating positive changes following severe illness.[26] In Pakistani culture, religiosity serves as a fundamental source of motivation and guidance, thereby strengthening social ties and promoting post-traumatic growth through shared values and support systems rooted in religious convictions.

Lastly, the fourth hypothesis, supported by the study's findings, suggests that perceived social support mediates the relationship between religiosity and psychological distress. This assertion aligns with previous research, which has consistently shown a positive link between perceived social support and religious involvement, mitigating the negative effects of psychological distress.[27-30] Increased religious participation is associated with a broader social support network, facilitating smoother transitions and fostering closer familial ties. Studies have also demonstrated a negative correlation between increasing religiosity and psychological distress.

LIMITATION

Several limitations should be acknowledged, along with suggestions for future research. Firstly, the study did not control for response biases or social desirability effects, particularly in the construct of religiosity, which may have influenced the study's results. To address this, future studies could employ multiple research designs to mitigate response biases and enhance internal validity. Secondly, the relatively small sample size and the homogeneity of participants—all residents of Sargodha City—limit the generalizability of the study's findings to the broader population of Pakistan. To overcome this limitation, researchers could gather data from multiple cities or provinces within Pakistan to ensure greater representativeness and generalizability of the research findings.

CONCLUSION

The findings of this study provide robust support for all hypotheses, demonstrating that religiosity positively influences social support while simultaneously mitigating psychological distress among individuals diagnosed with heart conditions. Furthermore, perceived social support emerges as a key facilitator not only in reducing distress but also in fostering post-traumatic growth, serving as a crucial mediator in these relationships. These insights offer valuable guidance for interventions aimed at leveraging religiosity and social support to enhance mental well-being within this population.

AUTHORS' CONTRIBUTION

RZ and RAZ: Concept and design, data acquisition, interpretation, drafting, final approval, and agree to be accountable for all aspects of the work. RZ, RAZ, ZQ, AR, SN, and AY: Data acquisition, interpretation, drafting, final approval and agree to be accountable for all aspects of the work.

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Address for Correspondence:

Ms. Anam Yousaf, Lecturer, Department of Psychology, University of Sargodha, Sargodha, Pakistan.
Email: anam.yousaf@uos.edu.pk