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▪ Vol. VIII, No. II (Spring 2023) ▪ p- ISSN: 2708-2091 ▪ e-ISSN: 2708-3586 ▪ L-ISSN: 2708-2091

▪ Citation: Fatima, Z., Aziz, I., & Noureen, S. (2023). Impact Of Social Support and Coping Mechanisms on Health-Related Quality of Life Among Heart Patients. *Global Social Sciences Review*, *VIII*(II), 403-410. https://doi.org/10.31703/gssr.2023(VIII-II).41

# Impact Of Social Support and Coping Mechanisms on Health-Related Quality of Life Among Heart Patients

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**Pages:** 403 – 410 **DOI:** 10.31703/gsr.2023(VIII-II).41 URL: http://dx.doi.org/10.31703/gsr.2023(VIII-II). 41

**Abstract:** *Heart disease is a prevalent ailment that adversely impacts the structure and function of the cardiovascular system worldwide, primarily affecting the heart and blood vessels. Research has indicated a higher prevalence of heart disease in Asian countries compared to Western nations, with South Asia bearing a considerable burden. Pakistan, as a developing country, is also grappling with the challenges posed by heart disease. Consequently, this research aimed to comprehend the significance and social support role and managing mechanisms in association with the quality of life-related to the health experienced by individuals with heart conditions. The research methodology employed in this study was a survey design, and data collection took place in hospitals located in Sargodha. A purposive and snowball sampling technique was utilized to gather information from 140 heart patients. The findings explored significant differences in social support, managing mechanisms, and quality of life-related to the health of heart patients based on their gender.*

**Key Words:** Heart Diseases, Construction, Mechanisms, Health-Related. Social Support

## Introduction

Heart disease is a type of sickness that affects the construction or capability of the core of people all over the world by affecting the heart or maybe veins (Biglu et al., 2016). It is one of the most common human executioner infections (Ruan et al., 2018; Ilayaraja & Meyyappan, 2015) and a major impediment to practical human outcomes (Roth et al., 2015). The World Health Association (WHO) has documented cardiovascular disorders as the primary source of expiry all over the world. Death rates from heart infections vary by location across the world. When compared to the rest of the globe, the graph is high in Asia, Russia, and the Middle East (Alizadehsan, 2019). Every year approximately, one million people die because of heart disease, dying every 30 or 60 seconds either with a heart attack, heart failure, or some other kind of heart disease (Ilayaraja & Meyyappan, 2015). Data revealed that death tolls from heart diseases have increased from 41% (12.3 million to 17.3 million from 1990 to 2013 (Alkeshuosh et al., 2017). People of underdeveloped nations suffer disproportionately from heart disease. Around 82% of fatalities due to heart diseases occur in low- and middle-income nations, with men and women dying at roughly the same rate. It is anticipated that by 2030, around 23.6 million individuals will die from heart disease each year. South-East Asia will see the greatest increase in the number of fatalities (Biglu et al., 2016). Heart disease is a form of cardiovascular illness. The cardiac system is made up of the blood veins and the heart. There are several kinds of cardiovascular infections. However, they are classified into a few most common types based on how they harm the

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structure or capacity of our hearts (Farley et al., 2012). The most prevalent cardiovascular illness is ischemic heart disease (CAD) (CVD). It happens due to significant blockage (greater than 50%) in at least one of the coronary arteries, and it frequently results in a cardiac arrest. It foundations millions of fatalities and billions of dollars in monetary damages globally (Alizadehsani et al., 2019). Arrhythmias are cardiac rhythm abnormalities that cause the heart to beat too low, too high, or in an unorganized manner. Arrhythmias come in different forms. Some have no symptoms or warning signals, while others might be fatally abrupt (Rappel, 2022; Lopez et al., 2021).

Problems with the anatomy of the heart, like its walls, valves, muscles, or blood arteries next to the heart, are referred to as structural heart disease. It can be present from birth (congenital) or develop after birth as a result of infection, wear and tear, or other factors (Júnior et al., 2015). Congestive failure is a dangerous ailment that is caused when the heart is injured or weakened. The two most prevalent reasons for heart failure are cardiac arrest and excessive blood oppression (Wong et al., 2019; Inamdar & Inamdar, 2016; Ziaeian & Fonarow, 2016). Several prior research has found that rising age, female sex, and a lack of education and information about healthy lifestyles are all connected with a higher prevalence of heart disease (Ruan et al., 2018). Extreme developments in human ways of living have shifted human civilizations away from developed food sources and active ways of life and toward fast food and latent ways of existence in recent years (Prabhakaran & Yusuf, 2010). The combination of such lifestyles and growing cigarette usage has increased the risk factors for cardiac diseases (CVDs) (Biglu et al., 2016). Several factors may increase the risk of cardiac illness. Among these risk factors include a family history of hypertension, sleep apnea, hypertension, diabetes, hypertension, cholesterol, smoking or using nicotine and liquor, less physical exercise, a bad or unpleasant dietary routine, and so on (Shafique et al., 2015). This form of assistance is made available to an individual through well-disposed relationships, gatherings, and organizations. A social assistance office provides extensive physical, educational, and social assistance (Chen et al., 2018). Lakey & Cohen (2000) gave three perspectives on friendly help: one on stress and adapting one more on friendly/social constructionism, and a third on relationship/social connections. As indicated by the pressure and adapting point of view, support benefits well-being by buffering individuals from the adverse consequences of stress. Individuals react differently to traumatic events based on the incident and the coping technique they choose (Bonanno & Burton, 2013). Heart patients are frequently exposed to persistent pressure during their illness, and they employ a variety of survival methods to alleviate this pressure (Akinsulore et al., 2020). A few coping theories have been mentioned in the previous literature, with commitment and disengagement coping being one of the most prominent and commonly recognized. Commitment/engagement coping involves techniques that directly oppose the stressor or associated discomfort, whereas withdrawal/disengagement coping involves procedures that aim to avoid the stressor(s) or associated discomfort.

## Literature Review

The topic of social support has been extensively researched, and there are several definitions of social assistance. According to Heo et al. (2010), social help is defined as people's abstract encounters with significant people or social communication. These survival tactics act as a buffer against possible costs connected with ongoing infections, hence improving the beneficiary's prosperity. Genuine aid is frequently provided by a single person's interpersonal organization and includes nearby, material, examination, and enlightening assistance. Nonetheless, he considered assistance as being linked to an individual's appraisal of the accessibility and type of assistance. As an outcome, it is difficult to investigate the connection between social assistance and cardiovascular sickness, as well as the spread of health-related quality of life among its patients (Tariq et al., 2020). Several earlier studies employed the stress-buffer paradigm to explore the function of social support in abnormality pathogenesis and sickness recovery. According to the findings of those studies, social support is an important component that promotes both health maintenance and sickness recovery. Social support has been recognized as facilitating treatment adherence, and various studies on adherence to heart disease medications have been carried out, including social support. Enhanced social support can be a safeguarding and defensive element in adapting to difficulties forced by living with heart disease (Enriquez et al., 2019). Perceived social support is considered to be necessary when stress and anxiety are present among individuals (Xiao et al., 2017). Social support has a constructive effect on

health vigilance and disease management. It might therefore be employed in predicting mental health as a beneficial psycho-social component (Gu et al., 2016).

One of the most rapidly increasing fields of research and application in psychology is the study of social assistance and its link to mental wellness (Thoits, 2011). However, some researchers believe that social assistance functions largely as a buffer to shield people from the detrimental consequences of stress and anxiety (Cohen et al., 1985). Both directions of social support are correct, it can be beneficial in all situations, and it may be especially efficient as a stress buffer during stressful times (Bavik et al., 2020; Enriquez et al., 2019). Peer assistance is the most crucial aspect which impacts directly or indirectly an individual's physical and emotional wellness despite having stressful circumstances. Social assistance contributes substantially to reducing psychological suffering. Studies proposed a few manners by which various sorts of social help may safeguard an individual's health. Elevated levels of stress and anxiety are the outcomes of an absence of familial and emotional support. Studies show that the quality of life is enhanced r with enhanced familial and social support, especially among women suffering from heart disease (Yousaf et al., 2015).

These are constant over time and across contexts. Adjusting is frequently divided into two types: reactive adjusting (a response to the stress trigger) and proactive adjusting (proposing to kill future stressors). Proactive humans function better in balanced situations as they are more regulated, firm, and little responsive to updates, whereas open people perform better in more diverse circumstances (Algorani & Gupta, 2022). Every individual employs one of the techniques in light of the concept of stress or danger, previous convictions, or transient variables, for example, changing approach in reaction to response and criticism (Lazarus, 1993). Within these broad categories, a variety of more specific survival tactics have been developed (Tattersall et al., 1999). Patients who use maladaptive techniques to deal with difficulties or stress are more likely to engage in prosperity risk assessments than patients who employ appropriate coping strategies for survival. They are also less likely to be supporters and are more likely to smoke or drink (Sánchez et al., 2010). Because the concepts of QoL and HRQoL overlap, the terms have been used inversely in the literature (Karimi & Brazier, 2016). HRQoL, on the other hand, should be separated from QoL by comprehending its convenience for particular well-being issues (Theofilou, 2013). HRQol incorporates more people's health state and reflects the outcome of illness and related therapy (Karimi & Brazier, 2016).

## Objectives

1. To analyze the interplay between social support, coping mechanisms, and the health-related quality of life among individuals diagnosed with heart conditions.
2. To assess the effects of social support and coping mechanisms on the health-related quality of life experienced by individuals with heart ailments.
3. To investigate the variations between research variables depending on demographics i.e., gender and age of heart patients.

## Hypotheses

To attain the above-mentioned goal of the study following hypotheses were constructed:

1. There is a positive correlation between social support and health-related quality of life of heart patients.
2. There is a positive correlation between coping mechanisms and heart patients.
3. Coping mechanisms are likely to be positively associated with health-related quality of life among heart patients.
4. Differences are likely to be found in social support, coping mechanisms, and health-related quality of life-based on gender and age among heart patients.

## Research Methodology

### Research Design

The current study took a quantitative approach and relied on cross-sectional survey data. The snowball and purposive sampling approaches were used to collect data. Data was gathered using self-report measures. The demographic sheet describes and includes all demographic information like age, gender, qualification, family structure, marital status, number of children, and so on.

## Sample

In the current study, a sample of heart patients ($n$ = 150), with the age between 40 years to 60 years. The snowball sampling approach was used to acquire data.

## Instruments

### Perceived Social Support Scale (Zimet et al., 1988)

The scale utilized in this study was originally developed by "Gregory Zimet, Nancy W. Dahlem, Sara G. Zimet, and Gordon K. Farley" in 1988. It consists of a self-report questionnaire comprising twelve items in total. There was 7 point Likert scale, ranging from 1 to 7 (7 for stronger feelings ). Moreover, the scale is further distributed into three subscales family, friends, and significant people, each consisting of four items. The internal consistency of this scale, as measured by Cronbach's alpha reliability coefficient, yielded values ranging from .91 to .92 (Nosheen et al., 2017).

## Data Collection

Data was gathered from government and private hospitals located in and around the city of Sargodha. As a researcher, it was challenging for me to obtain data from hospitals since there are few hospitals in Sargodha that treat heart diseases. I first selected the hospital and then followed the procedure of seeking permission for data collection. After getting formal permission from hospital authorities, data was collected. Furthermore, the majority of the participants were cooperative and appreciated the present study's researcher taking the initiative in addressing the difficulties of such patients, as there is insufficient medical and financial support for such patients.

## Data Analysis

The data were analyzed through "SPSS (Statistical Package for Social Sciences) Ver- 21)", including reliability analysis, descriptive statistics, correlation, and mean differences. Reliability analysis of the study instruments was done to establish alpha reliability coefficients. A descriptive analysis was carried out to examine the data trend. To discover relationships between variables, bivariate/Pearson correlation studies were used. To infer a causal relationship between variables, regression analysis was performed. To find meaningful differences in demographic data, one-way ANOVA and an independent sample t-test were used.

## Results and Discussion

### Table 1

*"Descriptive Analysis for the Scales Used in the Study" (N=140)*

| Scales | k | M | SD | Range | Cronbach's α |
|---|---|---|---|---|---|
| Perceived Social Support Scale | 12 | 86.34 | 11.26 | 32-73 | .85 |
| Brief COPE | 28 | 74.27 | 13.67 | 29-54 | .92 |
| Health-Related Quality of Life | 19 | 67.25 | 18.35 | 11-25 | .90 |

*"k= Number of items, M= Mean, SD= Standard Deviation"*

The Social Support Scale showed a high degree of internal reliability with a "Cronbach's alpha coefficient" of 0.85. Similarly, the Brief COPE scale demonstrated powerful inner consistency, granting a Cronbach's alpha coefficient of .92. Additionally, the health-related Quality of Life scale demonstrated robust inner reliability, and was measured as .90. Descriptive statistics revealed that the mean score for the social support scale was 86.34, while the mean value for the Brief COPE scale was 74.27. Furthermore, the mean value for health-related quality of life was 67.25, with a standard deviation of 18.35, indicating a normal distribution of data.

### Table 2

*"Pearson Correlation among Study Variables" (N= 150)*

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. SS | - | | | | | | | | | | | |
| 2. FAS | .62** | - | | | | | | | | | | |
| 3. FRS | .56** | .63* | - | | | | | | | | | |
| 4. OS | .49* | .59* | .61** | - | | | | | | | | |
| 5. CM | .66** | .83** | .69** | .72* | - | | | | | | | |
| 6.APC | .72** | -.21* | .48* | .46* | .82** | - | | | | | | |

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 7. AVC | .43* | .46* | .53* | .49* | .63** | .59** | - | | | | | |
| 8. HRQOL | .65** | .49* | .87** | .72** | .76** | .21 | -.70** | - | | | | |
| 9. PHQOL | .34* | .72** | .88** | .31* | .72** | .63** | -.57** | .59** | - | | | |
| 10. PSQOL | .48* | -3.92 | .64** | .43* | .53** | .50* | -.31* | .66** | .79** | - | | |
| 11. SQOL | .64** | .44* | .62** | .39* | .84** | .63** | .21 | .51** | .46* | .82** | - | |
| 12. EQOL | .55** | .52** | .71** | .60** | .75** | .72* | -.56** | .72** | .39* | .48* | .68** | - |

*"Note. SS denotes Social Support, FaSS represents Family Social Support, FrSS signifies Friend Social Support, and OSS denotes Other Social Support. CM stands for Coping Mechanism. APC stands for Approached Coping Mechanism, while AvC denotes Avoidance Coping Mechanism. HRQOL represents Health-Related Quality of Life, whereas PhQOL refers to Physical Quality of Life. PsQOL signifies Psychological Quality of Life, WQOL represents Environmental Quality of Life, and SQOL denotes Social Quality of Life."*

*** p<.01, p<*.05.*

The correlation between the variables under investigation is presented in the above table. The results reveal a substantial and positive relationship between social support and coping mechanisms (r=.66, p<.01), as well as among social support and health-related quality of life (r=.65, p<.01). Furthermore, coping mechanisms exhibit a significant and positive relationship with health-related quality of life (r=.76, p<.01). Hence, these results provide support for hypotheses 1, 2, and 3.

## Subscales

The outcomes presented in the aforementioned table also divulge the interrelationships among the subscales of the study variables. Specifically, family social support (r = .62, p < .01), friend's social support (r = .56, p < .01), and other social support (r = .49, p < .01) exhibit notable positive associations. Within the realm of coping mechanisms, there exist two distinct subcategories: avoidant coping strategies and approach coping mechanisms. It is noteworthy that approach coping (r = .72, p < .01) and avoidant coping (r = .43, p < .01) both manifest substantial positive associations with social support. Moreover, the domains of physical quality of life (r = .346, p < .01), psychic quality of life (r = .48, p < .01), social quality of life (r = .64, p < .01), and environmental quality of life (r = .55, p < .01) all demonstrate significant positive correlations with social support.

"The current study explored a substantial positive correlation between family social support and friend social support (r=.63, p<.01), as well as other social support (r=.59, p<.01). Family social support was found to have a significant positive relationship with coping strategies (r=.83, p<.01), while exhibiting a significant negative correlation with avoidant coping (r=.46, p<.05). Moreover, family social support demonstrated a significant positive correlation with health-related quality of life (r=.49, p<.05), physical quality of life (r=.72, p<.01), social quality of life (r=.44, p<.05), and environmental quality of life (r=.52, p<.01). However, no significant correlation was observed between family social support and psychic quality of life."

Friends' social support has a significant positive correlation with other social support (r=.61, p.01), coping mechanisms (r=.69, p.01), approach coping (r=.48, p.05), avoidant coping (r=.53, p.05), health-related quality of life (r=.87, p.01), physical quality of life (r=.88, p.01), psychic quality of life (r=.64, p.01).

"Other social support exhibited a significant positive relationship with coping mechanisms (r=.72, p<.05), approach coping mechanism (r=.46, p<.05), and avoidant coping mechanism (r=.49, p<.05). Furthermore, it demonstrated a significant positive correlation with health-related quality of life (r=.72, p<.01), physical quality of life (r=.31, p<.05), and psychic quality of life (r=.43, p<.05). However, no specific value was provided for the association between other social support and psychic quality of life."

Coping mechanisms displayed a significant positive association with approach coping (r=.82, p<.01), avoidant coping (r=.63, p<.01), health-related quality of life (r=.76, p<.01), physical quality of life (r=.76, p<.01), psychic quality of life (r=.53, p<.01), and social quality of life (r=.84, p<.01).

Approach coping mechanisms exhibited a significant negative association with avoidant coping mechanisms (r=.59, p<.01) and a significant positive correlation with health-related quality of life (r=.21, p<.05), physical quality of life (r=.63, p<.01), psychic quality of life (r=.50, p<.05), social quality of life (r=.63, p<.01), and environmental quality (r=.63, p<.01).

Avoidant coping mechanisms demonstrated a significant negative association with health-related quality of life ($r = -.70$, $p < .01$), physical quality of life ($r = -.57$, $p < .01$), psychic quality of life ($r = -.31$, $p < .05$), and environmental quality of life ($r = -.56$, $p < .01$), but showed a non-significant correlation with social quality of life.

Health-related quality of life exhibited a significant positive correlation with physical quality of life ($r = .59$, $p < .01$), psychic quality of life ($r = .66$, $p < .05$), social quality of life ($r = .51$, $p < .01$), and environmental quality of life ($r = .72$, $p < .01$). Furthermore, the results also revealed a significant positive correlation between physical quality of life and psychic quality of life ($r = .79$, $p < .01$), as well as between physical quality of life and social quality of life ($r = .46$, $p < .01$).

## Discussion

The main objective of this research was to look at social support, coping methods, and health-related quality of life-affected cardiac patients. A sample of 150 individuals was drawn from multiple hospitals in Sargodha for this purpose. The psychometric properties of the data were examined, and it was discovered that all of the data were normally distributed and met the normal probability assumption. Furthermore, the alpha reliability analysis revealed a respectable level of alpha reliability on all scales used in this study (i.e. Table 2).

Social support was discovered to be favourably associated with health-related quality of life in cardiac patients (i.e., hypothesis 1). The findings are consistent with prior research demonstrating that a high level of social support may be advantageous in enhancing health-related quality of life among people.

The current study's findings indicate that coping methods have a strong positive connection with health-related quality of life in heart patients. These findings are consistent with heart patients, as are the correlations between the patient's coping mechanisms and their levels of health-related quality of life. Previous study has indicated that patients who can create powerful adaption strategies had higher levels of QoL and prosperity, as well as lower levels of stress at work. Positive results were substantially associated with dynamic issue-centered methods. Meanwhile, avoidant survival practices have been associated with negative outcomes (Dardas, 2015).

The results of the study reveal significant disparities in social support, dealing with strategies, and health-related quality of life among cardiac patients, stratified by both gender and family structure. These findings align with prior research, such as the study by Graven in 2014, which also observed a positive correlation between social support and the preservation of health-related quality of life and self-care. It has been empirically demonstrated that external social support fosters the cultivation of self-care behaviours. A subjective account delineated the utilization of external resources, such as family members, friends, and healthcare professionals, to provide informative, personalized, and tangible assistance that facilitated individuals with heart conditions in adhering to their medication and dietary regimens. Additionally, families played a pivotal role in supporting heart patients in adhering to recommended exercise routines.

Prior research has unearthed disparities predicated on gender. Social support emerged as a pivotal determinant in shaping self-care management behaviours, notably in the context of medication adherence. Nevertheless, distinctions materialized in the specific categories of support that confer optimal benefits, contingent upon the gender of the individuals involved. Males, for instance, conveyed a heightened reliance on pragmatic aid, notably originating from their marital partners. In contrast, females articulated a greater dependence on emotional support, predominantly emanating from their spouses and family networks, while concurrently experiencing a dearth of tangible physical assistance (Graven, 2014).

Disparities in the study variables are also elucidated in relation to the age of the patients. As posited by the author, various impediments exert an influence on an individual's capacity to engage in self-care practices and enhance their overall life satisfaction as they advance in age. One notable factor is impaired cognition, which has been empirically linked to suboptimal self-care behaviours and diminished health-related quality of life among the elderly (Riegel et al., 2011; Riegel et al., 2010). Notably, individuals afflicted with heart disease and concomitant cognitive deficits exhibit shortcomings across multiple cognitive domains, encompassing attention/concentration, working memory, long-term memory, language, problem-solving, psychomotor speed, and executive function. These cognitive deficits exacerbate the challenges associated with the initiation and

maintenance of activities related to self-care and health-related quality of life.

Sensory impairments diminished functional status, and the presence of comorbidities have been documented as factors that exert an impact on individuals' ability to execute such tasks, as underscored by Graven in 2013. Moreover, elderly individuals with cardiac ailments encounter physical limitations that detrimentally affect their health-related quality of life. This, in turn, precipitates a reliance on external assistance, a loss of accustomed role functions, alterations in living arrangements, diminished self-esteem, a sense of powerlessness, and transformations in familial relationships, as elucidated by Chiaranai et al. in 2018.

Contrarily, the present study failed to discern any statistically significant disparities predicated on the duration of formal education. According to Mandal et al. in 2016, patients afflicted with heart disease who possessed higher levels of education exhibited enhanced health-related quality of life. This augmentation may be attributed to their heightened access to health-related knowledge, resulting in a more proficient grasp of health-related matters than individuals with limited educational backgrounds, as posited by Lim et al. in 2016. Nonetheless, it is worth mentioning that too much dependence on knowledge may possibly hinder the development of critical thinking skills, which could lead to suboptimal disease outcomes, as indicated by Macabasco-O'Connell et al. in 2011. Furthermore, empirical research has indicated that possessing greater knowledge about a particular medical condition is indicative of a healthier lifestyle and an improved quality of life, as underscored by Solemani et al. in 2020 and Rashidi & Bahrami in 2015. Nevertheless, it is imperative to acknowledge that the findings of the present study run counter to the previously cited conclusions

## Conclusion

The primary objective of this research was to investigate the intricate interplay between social support, coping strategies, and health-related quality of life among a cohort of cardiac patients. The findings of the study underscore the robust association that exists between social support, coping mechanisms, and health-related quality of life within this patient population. Furthermore, the study findings reveal noteworthy disparities in social support, coping strategies, and health-related quality of life among cardiac patients, predicated upon factors such as gender and family structure. Conversely, no significant disparities were identified based on age, level of educational attainment, or place of residence. Specifically, the current study's results elucidate that female individuals afflicted with heart disease tend to receive more substantial familial support when compared to their male counterparts. Additionally, it was observed that men exhibit a greater propensity to employ approach-oriented coping strategies in contrast to women, who demonstrate a proclivity toward employing avoidant coping strategies to a greater extent than men.

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