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Unveiling the Link between Perceived Social Support and Psychological Well-being: A Study on Satisfaction with Life among Cardiovascular Patients

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Abstract: *Cardiovascular diseases affecting the heart and blood vessels are the primary global cause of mortality (McNamara et al., 2019). The current investigation explored the relationships between perceived social support, psychological well-being, and life satisfaction in individuals diagnosed with cardiovascular disease. In a recent study conducted in Sialkot, Pakistan, 100 individuals diagnosed with cardiovascular disease (CVD) were purposively sampled. The evaluation utilized custom demographic questionnaires and standardized tools, including the Multidimensional Scale of Perceived Social Support, Ryff 42-item Psychological Well-being Scale, and Satisfaction with Life Scale. Data analysis employed descriptive and inferential statistics, encompassing normality tests, correlation coefficients, T-tests, and regression analysis to examine the relationships among variables. The study uncovered a compelling association, indicating a notably strong positive correlation (r = .51, p < 0.01) between perceived social support and psychological well-being, suggesting that increased social support may contribute to improved mental wellness. Additionally, the investigation revealed another significant finding, highlighting a robust positive correlation (r = .60, p < 0.01) between perceived social support and life satisfaction, emphasizing the positive impact of social support on overall life contentment. Individuals diagnosed with cardiovascular disease (CVD) and strong perceived social support generally exhibit positive psychological well-being and increased life satisfaction.*

Key Words: Perceived Social Support, Psychological Well-being, Life Satisfaction, CVD Patients

Introduction

Cardiovascular diseases (CVDs) are increasing day by day in Pakistan. It was rare to have a heart attack or any heart or vascular disease in the past. But now, it has become common and also the leading cause of death. Not only old individuals but also young adults suffer from CVD. People who are psychologically disturbed are more prone to have CVD, and even in severe cases, most people die. Cardiovascular diseases are a set of diseases that affect one or more parts of the heart and blood vessels. CVDs are the main cause of death in the world (Mc Namara et al., 2019). There are many different types of cardiovascular diseases, and some of them are arrhythmia, peripheral artery disease, pulmonary stenosis, coronary artery disease, aortic disease, cerebrovascular disease, etc. Coronary heart disease, cerebrovascular disease, and rheumatic heart disease are commonly faced by the person. It affects people of all ages, sexes, ethnicities, and socioeconomic levels (Felman, 2019). The etiology of cardiovascular diseases mainly depends on the definite type. Aging and infections lead to valve diseases. In general, high blood pressure (hypertension) and high cholesterol (hyperlipidemia), excessive weight or obesity, a diet with high levels of sodium, sugar, and fat, lack of physical activity, and overuse of alcohol commonly become the causes of cardiovascular diseases (Cleveland Clinic, 2021).
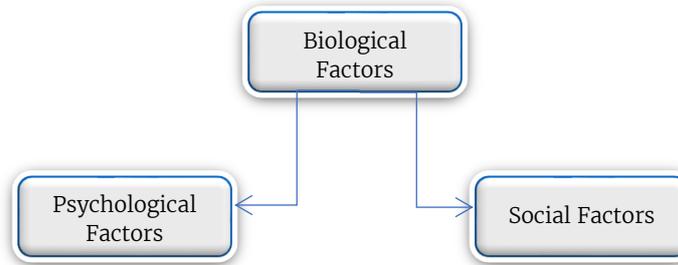
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Model for Cardiovascular Diseases

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The biopsychosocial model states that a person's medical condition is not only influenced by biological factors but also affected by psychological and social factors (Physiopedia, 2023). The condition of patients with CVD may also be affected by how they feel during their disease and how social factors, such as their social relationships, play an important role in their recovery/betterment. Psychological and social factors affect the individual's life during illness and may also become risk factors. Perceived Social support is described as a perceived accessibility of social connections that offer love, esteem, social affiliation, and other critical provisions. Social support improves mental health and acts as a useful agent against stressful events in life (Alsubaie et al., 2019). The social integration assessment, which gives an indication of the extent to which each person belongs to a social network, is often used to assess the structural aspects of support. The researchers usually divide functional support into two categories: perceived support or people's subjective interpretation of the support. (Kent de Grey et al., 2018).

Psychological well-being is defined as the "perception of coherence with the challenges that exist in life" (Keyes et al., 2016). Psychological well-being has the main components of self-acceptance, good relationships with others, environmental mastery, and personal development (Iani et al., 2016). The most important aspect of psychological well-being is a sense of "self-assurance," defined as a core feature of mental health along with characteristics of self-actualization, optimal functioning, and growth.

Life satisfaction means one's acceptance of life, life's circumstances, and a sense of fulfillment of one's needs or wants from life as a whole. Satisfaction is derived from a Latin word which means to do something enough or to make enough. Greater life satisfaction not only makes us happy and satisfied with ourselves but also positively affects our overall physical and mental health. According to the researchers, life satisfaction is correlated with many diseases. (Beutell, 2006). Physical health, emotional health, and success in defining one's identity are the three main determinants of happiness and life satisfaction (Bakkeli, 2021). The two main factors that determine life satisfaction are environment and personality. In the environment in which a person grows up and matures, a person establishes rules and limits for their sense of life satisfaction based on the resources and circumstances that the environment provides for the person. Personality is another factor that affects life satisfaction. Genetics also play a role in a person's sense of life satisfaction. Culture, age, gender, education, income, and employment are other factors affecting life satisfaction. (Veenhoven R, 2013).

Theories of Psychological Perspectives in CVDs

The social support theories given by Cohen and Wills in 1985 are the "main effect theory" and the "buffer's theory of social support." Main Effect Theory illustrates that people with strong social support are less likely to have physical and mental health problems (Cohen & Wills, 1985).

According to Buffer's Theory of Social Support, social support works as a buffer and reduces the changes in the immune system and behavior, which is the result of stressful events and assists in preventing illness (Cohen & Wills, 1985; Dean & Lin, 1977).

Bottom-up and top-down theories are centered on the idea that a lifetime of contentment is the sum of its parts and constitutes prejudice, a measure of satisfaction with different areas of life (Shapiro & Margolin, 2014).

Psychological Perspectives on Cardiovascular Disease

Cardiovascular diseases (CVDs) have various psychological dimensions that impact both their development

and management. Here are some psychological perspectives relevant to CVDs:

Stress and CVD: Psychological stress and negative emotions like anxiety, depression, and chronic stress can contribute to the development and exacerbation of CVDs. Chronic stress may lead to behaviors like overeating, smoking, or lack of exercise, which are risk factors for CVDs. (Encyclopedia, 2023)

Influence of lifestyle on CVD: Unhealthy behaviors such as poor diet, lack of physical activity, smoking, and excessive alcohol consumption significantly contribute to the development of CVDs. Understanding the psychological factors that influence these behaviors is crucial in prevention and management. (Javad Sharifi-Rad, Célia F. Rodrigues,, & Farukh Sharopov, 2023)

Psychosocial Impact: Loneliness and social isolation act as a negative influence on cardiovascular diseases. Social support, socioeconomic status, and relationships play a role in CVDs. Strong social support networks can positively impact recovery and management, while loneliness or lack of support can negatively affect both physical and mental health. (Ning Zia, 2018 Mar 20; 28(9).

Personality Traits: Certain personality traits, such as Type A personality (competitive, ambitious, aggressive), have been linked to a higher risk of CVDs. This is due to the potential for increased stress levels and a propensity toward certain risk behaviors. (Sahoo, 2018)

The findings of a study showed that perceived social support indirectly correlated with the psychological well-being of adolescents. No specific gender difference had been seen for these variables, i.e., perceived social support and psychological well-being (Poudel, Gurung & Khanal, 2020). During the pandemic, it was seen that loneliness reduced the social support that affected the psychological well-being of young adults. People who had low social support had a high rate of depression. The gender difference was also seen in the research that females had more loneliness, low social support, and low psychological well-being (Lee, Cadigan & Rhew, 2020). Lack of social support is linked with a higher risk of unwanted cardiovascular disease. When no social support is available, the person experiences severe stress, which subsequently increases the risk of cardiovascular disease. A person must improve their social support by forming meaningful relationships with others in order to live a healthier and happier life (Suchy-Dicey et al., 2022). The findings of the cohort study showed that women were more prone to worse psychological well-being for cardiovascular diseases (CVD) as compared to men (Sun et al., 2022). It was seen that perceived social support and life satisfaction positively correlated. People who have high perceived social support are more satisfied with their lives (Srivastava et al., 2021). The observed research is on the health benefits of cardiovascular disease. The health benefits of positive psychological well-being, life satisfaction, life purpose, and positive emotions have been studied in recent years, especially with cardiovascular disease. This research is associated with well-being and cardiovascular disease in both healthy individuals and those with a diagnosed disease. There is a pathway link between cardiovascular disease and psychological well-being and stress-buffering (Boehm, 2021).

Literature showed the relationship between perceived social support and life satisfaction. Research conducted in 2022 revealed that perceived social support and life satisfaction positively correlated. People with higher perceived social support also had higher life satisfaction and vice versa (Makas & Çelik, 2022). A previous study showed that people who were lonely and had low social support were not satisfied with their lives. Low social support decreases satisfaction with life among older adults (Onal et al., 2022). According to the researcher's knowledge, previous researchers have explored the relationship between social support, quality of life, and life satisfaction. Current research intends to explore the relationship among three constructs: psychological well-being, life satisfaction, and the role of social support in patients with cardiovascular diseases.

Methods

The research utilized a cross-sectional research design to investigate the relationships among constructs Cardiovascular disease covers a spectrum of conditions, ensuring representation across various cardiovascular diseases (e.g., coronary artery disease, heart failure, arrhythmias, etc.). Current research is

specified in terms of exploring diverse psychological effects on CVD (e.g., psychological well-being, life satisfaction, perceived social support) that may vary among these conditions. Adequate resources and access to participants were available to ensure data collection across a variety of diseases. A purposive sampling method was employed to select a sample of 100 patients diagnosed with cardiovascular disease, encompassing various types of cardiovascular conditions. G-power analysis was utilized to recruit the desirable sample size from the community. To assess the participants, a self-designed demographic questionnaire was employed alongside established measurement tools, including the Multidimensional Scale of Perceived Social Support, the Ryff 42-item Psychological Well-being Scale, and the Satisfaction with Life Scale. Translated scales were used to measure the variables under study where required. Moreover, the researcher explained and helped the participants to present their judgment on the questionnaires.

Data analysis involved a range of statistical methods, including descriptive statistics, the Shapiro-Wilk Normality test, the Pearson Product Moment Correlation Coefficient, Linear Regression Analysis, and the Independent Sample T-test.

Inclusion and Exclusion Criteria

- Only participants having cardiovascular disease were included, and participants with psychological disorders and with any physical disability or any other general medical condition were excluded.
- Both male and female CVD patients were included.

Results

The study conducted a comprehensive analysis of the results using SPSS-25. The Shapiro-Wilk Normality test was applied to check the data's normality. Additionally, the study examined the relationships among perceived social support, psychological well-being, and life satisfaction in cardiovascular disease (CVD) patients by utilizing the Pearson Product Moment Correlation Coefficient. Furthermore, Linear Regression analysis was used to gauge how well perceived social support, as an independent variable, predicted psychological well-being and life satisfaction as dependent variables. Finally, a T-test was employed to investigate whether gender-based differences were present in the data.

Figure 1
Pie chart
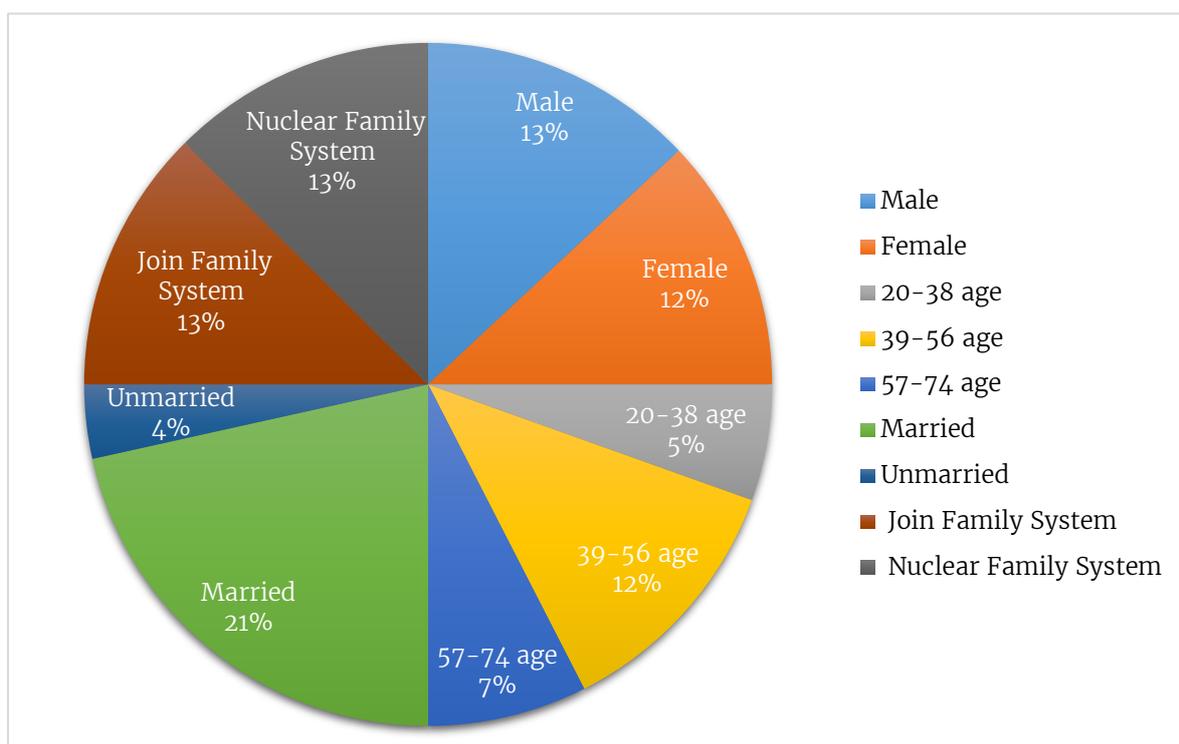
Table 1

Cronbach alpha and descriptive statistics of all the scales

Scales	M	SD	Range	Cronbach's *a*
MSPSS	53.39	15.37	12-84	.90
PWBS	151.80	29.35	42-252	.89
SWLS	19.65	5.33	5-35	.60

The above table indicates that Cronbach's alpha value for MSPSS is .90, which indicates excellent reliability. The reliability of PWBS is very good as Cronbach's alpha value is .89, and Cronbach's alpha value of scale SWLS is .60, which illustrates moderate reliability.

Table 2

Pearson product moment coefficient of correlation analysis for model variables among patients with CVD (N=100)

Variables	1	2	3
1. Social support	–	.60**	.51**
2. Life Satisfaction		–	.51**
3. Psychological Well-being			–

Note: **$p < 0.01$

The above table illustrates that there is a significant positive relationship between social support, life satisfaction, and psychological well-being.

Table 3

Regression analysis summary for MSPSS, SWLS, and PWBS (N=100)

Variables	B	95%CI	Β	t	P
Constant	8.50	(5.41, 11.58)		5.46	.000
SWL	.20	(.15, .26)	.60	7.45	.000
Constant	99.54	(81.42, 117.66)		10.90	.000
PWB	.98	(.65, 1.30)	.51	5.96	.000

Perceived Social Support (SPS) (Predictor) Satisfaction with Life (SWL) and Psychological Well-being (PWB) (Dependent variables)

The regression model shows the effects of PSS on SWL and PWB among patients with CVD. The model predicts that a 1 unit change in PSS brings a 0.60 unit change in SWL and a 0.51 unit change in PWB.

Table 4

Mean Comparison of Male and Female Patients of CVD on Perceived Social Support, Psychological Well-being, and Satisfaction with Life

Variable	Male		Female		t(98)	P	Cohen's d
	M	SD	M	SD			
PSS	52.84	16.32	53.97	14.43	-.36	.715	.07
PWB	152.21	27.84	151.54	30.93	.15	.910	.02
SWL	19.73	5.38	19.56	5.35	.11	.876	.03

N=100

From the above table, it is concluded that there is an insignificant difference in the mean scores of males and females on all scales (MSPSS, PWBS & SWLS). Males have slightly higher mean scores on PWBS and SWLS than females, and females have slightly higher mean scores on MSPSS. Hence, the effect size of MSPSS, PWBS, and SWLS (Cohen's d < 0.2) shows an insignificant difference in mean test scores of males and females.

Discussion

The study delved into the relationship between perceived social support and the psychological well-being and life satisfaction of individuals diagnosed with cardiovascular disease. The initial hypothesis, supported by robust statistical analysis, found compelling evidence linking increased perceived social support to an enhancement in psychological well-being. The results emphatically highlight a noteworthy and positive correlation between social support and psychological well-being, reinforcing the vital role of social support in fostering improved mental health outcomes among individuals managing cardiovascular disease.. (as mentioned in Table 3).

Consistent with prior research, the study's findings align with previous investigations, indicating that heightened perceived social support corresponds with elevated levels of psychological well-being among individuals dealing with chronic diseases. (Yildirim et al., 2023). Social support serves as a powerful source of comfort and connection, akin to a soothing remedy in challenging times. In our cultural context, strong bonds with family, friends, and loved ones often correlate with better health and increased resilience. Those with robust relationships tend to navigate life's difficulties with less psychological distress, enjoying a heightened state of well-being both physically and mentally. Notably, when individuals facing illness receive steadfast support from their network, it significantly enhances their chances of recovery. As per the research findings, substantial social support during illness emerges as the most impactful factor in aiding patients' spiritual, mental, and physical well-being while managing their condition. (Mokhtari et al., 2021).

Additionally, the study hypothesized a positive correlation between perceived social support and life satisfaction. The statistical outcomes of the present research confirmed this assumption, demonstrating a positive and supportive correlation between the two variables. (as mentioned in Table 3).

Social support isn't confined to a single facet of life; rather, it extends its influence across various realms. When individuals possess strong perceived social support and receive assistance from their loved ones during challenging times, it elevates their life satisfaction. Social support enables individuals to lead fulfilling lives, even amidst limited resources, fostering personal development. The number of people in one's social circle holds less significance than the depth of connection and support they provide. Despite a large social circle, a lack of supportive individuals can lead to dissatisfaction. Conversely, a smaller, supportive social circle significantly enhances life satisfaction. Previous research highlighted that individuals receiving support from family, friends, and their social network tend to experience higher levels of life satisfaction. Makas & Çelik (2022) found that social support and life satisfaction correlate significantly.

Recent literature and empirical findings, as indicated in Table 3, highlighted a correlation between perceived social support, psychological well-being, and life satisfaction. This alignment supports hypothesis H3, affirming a significant relationship among perceived social support, psychological well-being, and life satisfaction among individuals with cardiovascular disease.

Individuals with strong psychological well-being exhibit more effective life management and greater life satisfaction. Consequently, increased life satisfaction contributes to an improved quality of life. Therefore, the summary suggests that higher perceived social support is associated with heightened psychological well-being, ultimately enhancing overall life satisfaction. The results of research conducted in 2023 demonstrated that perceived social support and psychological well-being significantly correlated (Nazir et al., 2023). The results of a study conducted by Wu et al. (2022) explored that perceived social support influences life satisfaction, i.e., perceived social support has a significant relation with life satisfaction.

The initial hypothesis suggested gender differences in perceived social support, psychological well-being, and life satisfaction among cardiovascular disease patients. However, the empirical results did not validate this hypothesis. Nonetheless, there's a nuanced distinction when examining males and females. Specifically, females showed slightly higher scores in perceived social support, while males reported slightly elevated levels of psychological well-being and life satisfaction compared to females, as indicated in Table 4.

Conclusion

The analysis, outcomes, and discussions in the study effectively clarify its intended goals. The research underscores that cardiovascular disease (CVD) stands as the primary cause of mortality, impacting numerous facets of a patient's life. From these findings, it's evident that the perceived level of social support emerges as a crucial predictor for the psychological well-being and life satisfaction of individuals dealing with CVD. Furthermore, the study reveals that there aren't notable gender differences in perceived social support, psychological well-being, and life satisfaction among patients with CVD.

Study Recommendations

The study's conclusions highlight the pivotal role of social support in the lives of cardiovascular disease (CVD) patients, emphasizing the need for healthcare providers to integrate assessments of social support into treatment plans. Interventions should be designed to strengthen support networks to enhance psychological well-being. Despite the absence of gender differences in perceived support, ongoing monitoring is crucial, prompting the development of gender-sensitive support programs catering to diverse needs. Education for patients and caregivers about the impact of social support is essential, encouraging the active pursuit of supportive relationships. Holistic CVD care, acknowledging both physical and psychosocial dimensions, should be implemented, while community-based programs offer platforms for shared experiences. Longitudinal studies and intervention trials can track changes and assess the effectiveness of support interventions over time. Integrating mental health services into standard care plans ensures comprehensive addressing of psychological well-being concerns. Collectively, these recommendations contribute to patient-centered approaches to managing cardiovascular disease.

Study Implications

The study's robust analysis reveals the profound impact of cardiovascular disease (CVD) on patients, emphasizing its status as a leading cause of mortality and its pervasive effects on various aspects of life. A critical revelation is the significant role of perceived social support in predicting the psychological well-being and life satisfaction of individuals coping with CVD. The absence of notable gender differences in these aspects among CVD patients further underscores the universality of these findings. As implications, healthcare practitioners should prioritize integrating social support assessments into CVD treatment plans, recognizing its pivotal role. Additionally, interventions aimed at enhancing social support networks can substantially contribute to improved psychological outcomes. These implications underscore the importance of holistic, patient-centered approaches that prioritize the psychosocial aspects of care for individuals dealing with cardiovascular disease.

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