



HEART AND KIDNEY PATIENTS; CORRELATIONAL PATTERNS OF SOCIAL SUPPORT WITH COPING STRATEGIES AND SUBJECTIVE WELL-BEING

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ABSTRACT... The prevalence of chronic diseases is exceptionally high (37.9%) among the adult population of Pakistan. Social support could play a significant role in shaping the coping strategies and determining the subjective wellbeing of chronically ill patients. **Objectives:** This research documents the correlation patterns of social support with coping strategies and subjective well-being among Heart and Kidney Patients. **Methods:** The primary data was collected from four major hospitals in Lahore by using purposive sampling method. For the collection of quantitative data, a hospital-based, cross-sectional survey was conducted with 275 admitted patients (131-heart and 144-kidney) 184 male and 91 female (20 to 110 years of age) by using a structured interview schedule. Pearson Product-moment Correlation and Multiple Regression Analysis were performed on the data set. **Results:** Strongest correlation was found between emotional and informational social support ($r=.853$). Instrumental social support also indicates strong relationship with the emotional social support ($r=.838$). There was a moderate positive correlation ($r=.339$) between behavioral coping, emotional social support and informational social support ($r=.424$). Data show a negative relationship between physical coping and subjective well-being ($r=.381$). Results of the study suggest that emotional ($\beta=.230$) and informational ($\beta=.217$) social support affect the patients' ability to actively engage in behavioral and physical coping for the subjective well-being; however, physical coping indicated negative effects ($\beta=-.225$) on the subjective feelings of well-being. **Conclusions:** A strong correlations among four types of social support exists and behavioral coping has the strongest impact on the subjective well-being ($\beta=.629$).

Key words: Chronic Illness, Coping Strategies, Social Support, Subjective well-being.

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Chronic illnesses cause dependency in physical, psychological, and social domains of life¹. Social scientists have been focused their attention at different levels of chronic illness. They analyzed social, psychological, physical and behavioral dimensions of adjustment with chronic illnesses. Disease management and coping strategies account for the reduction of the severity of both the symptoms and the impact of illness and enhance the subjective well-being. Studies assert that psychosocial variables accounted for 59% of the variance in disability associated with chronic pain².

Potential social support works to change the behavioral patterns or altering perceptions of illness. It builds an environment which helps to shape the coping responses. It has been found

that social resources play an important role in improving life satisfaction and well-being³. Researchers assert that support is uniformly positive because of its effects on well-being⁴. Social support from the family also assists an individual to build the environment by changing the situation, the meaning of the situation, and the emotional reactions to change the situation⁵. This environment helps to understand the problem, enhances internal control, reduces the negative effects and protects the patients from the consequences of chronic illness⁶. Individuals suffering from chronic illness are at a high risk and are vulnerable to the complications from disease.

Social support results in the encouragement of chronic patients' to deal with the symptoms of illness, enable them to change the situation, and

face realities, choose the means of improvement (such as dietary and physical or functional efforts) for modifications in daily life, and needs the demands of illness along with the treatment⁷. Social scientists as well as psychologists agree on the dynamics of functional limitations, changes in choices and unavoidability of psychological stress. Therefore, an individual needs a lot of social support to face day to day challenges and stressful events of illness to cope with and maintain his/her subjective well-being. Holahan et al. (1997⁸) reported that a more supportive social context was associated with active coping, which in turn was related to lower depressive symptomatology.

Social Support

Emotional Social Support

Emotional social support refers to the confronting gestures like encouragement which are intended to alleviate, hopelessness, depressions, and current difficulties. Available resources and family helps the sufferers to enhance emotional strengths through motivation and encouragement, sharing of ideas and experiences to divert attention from illness and engage in healthy practices so that patients feel better and important about themselves.

Informational Social Support

Informational support refers to giving advices by the family members to the patients or information through press, mass media, and literature about prevention, treatment, and choices in food. It enables the patients how to handle the situation.

Material Social Support

Material support refers to the services to the patients such as transportation, companionship at home and during hospitalization, financial assistance for treatment, food and fulfillment of other needs.

Instrumental Social Support

Instrumental support refers to the provision of tangible support such as physical care and personal hygiene, medicines, assistance at

household tasks from family or from social network.

Coping

Physical Coping

Physical coping deals with the physical efforts, movement and actions for eating, bathing, going to the toilet, changing clothes, getting into and out of bed and a little bit of walking. These efforts are the prime focus of physical coping in this study keeping in view the physical limitations and bodily difficulties during the illness.

Psychological Coping

Psychological coping deals with the sharing and expressing of emotions, feelings, thoughts, tolerance, anger, and to gain sympathy during illness. Every patient constructs perceptions about different situations or levels of illness/disease progression (slow or faster); although the level of perception, tolerance and patience may vary from person to person among gender, from illness to illness and in different situations. This process shapes the responses in psychological coping. Coping may be positive or negative linked or associated with supportive environment. Positive coping responses reflect how individuals' takes the situation as a challenge. Surrender before the situation reflects negative coping responses. Patients from different gender and social classes may express or share emotions, feelings, and thoughts differently in their existing illness and socio-economic conditions.

Behavioral Coping

Behavioral coping deals with the demonstration of perceptions/choices, patterns of health care practices, degrees of compliance with the prescribed treatment, and participation in recreational activities: watching T.V., playing cards, etc. Depending on the nature of illness, behavioral coping may vary among gender in different age groups in different social classes as human behavior stems with the socio-economic background too.

Subjective Well-being

In this study, subjective well-being was measured in terms of extent of satisfaction in the functioning of daily life such as performance of routine activities, taking medicines and exchange of views etc. Measurement of "extent" for subjective well-being has significant value in the analysis of study data. Interpretation of results may help to predict the subjective well-being. Self-rated subjective well-being will provide a guide line in socio-psycho health research.

Heart and Kidney Diseases in Pakistan

Pakistan is a developing country where a majority of population belongs to the lower socioeconomic class. Poverty increased a range of risks for poor health outcomes⁹. In other words, poverty reduced coping resources. Socio-economic status may influence health behaviors. In Pakistan, prevalence of chronic diseases is 37.9% of the overall adult population with 16.4% and 21.5% being the rural and urban prevalence respectively¹⁰. Above 45 years, one in three Pakistanis (33%) is hypertensive. World Health Organization Report (2003) mentioned that 42 % of all deaths in Pakistan are due to chronic diseases. Root causes of both diseases are more or less same - diabetes and hypertension.

Major cardiovascular diseases in Pakistan include ischemic heart disease, valvular heart disease, congenital heart disease, pericardial disease and tumors of the heart. It was reported in the National Health Survey of Pakistan (NHSP) 2001¹¹ that Ischemic Heart Disease (IHD) accounts for 12% of adult mortality in Pakistan. Two causes were mentioned in the survey: 1) tobacco use and 2) hypertension. Tobacco use was estimated at 29% and 3.4 % in adult males and females respectively. Hypertension was estimated at 10 % in the national population.

According to the latest WHO data published in April 2011, kidney Disease Deaths in Pakistan reached 12,544 or 0.98% of total deaths. The age adjusted Death Rate is 12.28 per 100,000 of population ranks Pakistan #117 in the world. This is an alarming situation for Pakistan. High treatment cost of heart and kidney diseases is

becoming difficult even for middle class. Therefore, this is the time to emphasize on the preventive measures and reduce the risk factors that play a significant role in both diseases. For handling the situation, sociological dimensions equally need considerations other than medical interventions. Therefore, in this context there is a need to know how to meet the challenge especially at individual level. This study was designed to examine how socio-demographic variables influence social support in coping and subjective feeling of well-being among heart and kidney patients.

METHODS

Cross-sectional survey was conducted with 275 admitted patients (131-heart and 144-kidney) 184 male and 91 female (20 to 110 years of age) by using a structured interview schedule. Due to the scarcity of financial resources and limited time frame, the researcher used convenience sampling method to collect the data from admitted male/female patients above the age of 20 years. Another reason for this sampling method was of 100 percent accessibility and availability of the patients.

Data Sources

Government hospitals were used as a main source to obtain the subjects for the study. Three hospitals in Lahore city (General Hospital, Mayo Hospital, Jinnah Hospital) were covered which have the biggest dialysis units and heavy turnover of the kidney failure patients. For heart patients, only Punjab Institute of Cardiology (PIC), Lahore was selected. This tertiary care hospital is providing services to the maximum number of heart patients not only to the patients of Lahore city but also to the patients of other nearby cities.

Respondents

In this study 275 interviews were conducted. Out of 275, 131 interviews were conducted from heart patients (92 males and 39 females) admitted in a Cardiac hospital and 144 interviews were conducted from kidney patients (92 males and 52 females) enrolled in the dialysis units of the selected government hospitals and at the time of data collection.

Instrument

An interview schedule was constructed which comprised of four sections and 132-items. First section was about the socio-demographic information. Other three sections were about social support, coping strategies and subjective well-being.

Data Analysis

Different types of social support in coping along with subjective well-being were computed on summated scale across responses to all

items. These variables were dichotomized into categories of 'low' and 'high' (taking median as a cutting point).

RESULTS

Relationship between criterion and predictor variables

Pearson Product-moment correlation coefficient was used to analyze the relationships between the criterion and predictors variables.

	SWB	PhyC	PsyC	BehC	EmoSS	InfSS	MatSS	InsSS
SWB	1.000							
PhyC	-.381**	1.000						
PsyC	.173**	-.034	1.000					
BehC	.528**	.160**	.149*	1.000				
EmoSS	.212**	.186**	.267**	.339**	1.000			
InfSS	.248**	.111	.257**	.424**	.853**	1.000		
MatSS	.099	.202**	.204**	.233**	.790**	.712**	1.000	
InsSS	.043	.301**	.218**	.164**	.693**	.597**	.838**	1.000

Table-I. Pearson's correlations between the study variables

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Note: 1. SWB= Subjective well-being, 2. PhyC = Physical Coping, 3. PsyC = Psychological Coping, 4. BehC = Behavioral Coping, 5. EmoSS =Emotional Social Support, 6. InfSS = Informational Social Support, 7. MatSS = Material Social Support, 8. InsSS = Instrumental Social Support.

Results in Table I shows that there exists a relatively strong correlation between various facets of social support. A moderate correlation exists between physical and behavioral coping ($r=.339$). The weakest correlation found between physical and psychological coping ($r=-.034$). The strongest correlation exists between emotional and informational social support ($r=.853$) and emotional and instrumental social support ($r=.838$). Data shows a moderate positive correlation between behavioral coping and emotional social support ($r=.339$) and with informational social support ($r=.424$). Data also shows a negative correlation between physical coping and the subjective well-being ($r=-.381$). The criterion variable has strongest correlation with behavioral coping ($r=.528$).

The results suggest that positive and negative effects were differently related to subjective

well-being. Positive effects were associated with patients' healthy behavior to cope actively with the chronic illness and feel satisfied and better. Results of the study suggest that emotional social support and informational social support are directly influenced by the patients' ability to actively engage in behavioral coping. Both supports decreased the stress and increased the affects of behavioral coping strategy (such as prevention in food, taking medication regularly, follows the advices given by the doctor, and self-care etc.) for the subjective well-being.

Multiple Regression Analysis

The relationships were examined through Beta weights (standardized regression coefficients) for all seven variables presented in Table II.

It can be seen that the behavioral coping had the strongest relationship with the subjective well-

		Unstandardized coefficients	Standard Error	Standardized Coefficients		
		B	e	β	t	p-value
SWB	α	8.660	1.228		7.050	.000
PhyC	X1	-.303	.058	-.225	-5.244	.000
PsyC	X2	-.052	.038	-.066	-1.387	.167
BehC	X3	.478	.041	.629	11.692	.000
EmoSS	X4	.054	.023	.230	2.340	.020
InfSS	X5	-.220	.086	-.217	-2.576	.011
MatSS	X6	.030	.085	.025	.354	.723
InstSS	X7	-.002	.048	-.003	-.051	.959

Table-II. Measurement of standardized regression coefficient (β) for the predictors of subjective well-being

α Dependent variable: Subjective well-being.

X1PhyC: Physical Coping, X2PsyC: Psychological Coping, X3BehC: Behavioral Coping, X4EmoSS: Emotional Social Support, X5InfSS: Informational Social Support, X6MatSS: Material Social Support, X7InsSS: Instrumental Social Support.

being ($\beta=.629$, $t=11.692$, $p<0.00$, $S.E=0.04$). Emotional social support can also significantly predict the subjective well-being ($\beta=0.230$, $t=2.340$, $p<0.020$, $S.E=0.02$) whereas material and instrumental social support were weakly associated with the subjective well-being. Material social support had insignificant association with the subjective well-being ($\beta=0.025$, $t=0.354$, $p<0.723$, $S.E=0.09$) and Instrumental social support also had insignificant relationship with subjective well-being ($\beta=-0.003$, $t=-0.051$, $p<0.959$, $S.E=0.05$). The negative coefficients indicate that the more the patients interpreted the feeling of well-being as being due to material and instrumental social support, the less they held themselves responsible for coping. Physical coping ($\beta=-0.225$, $t=-5.244$, $p<0.000$, $S.E=0.06$), psychological coping ($\beta=-0.066$, $t=-1.387$, $p<0.17$, $S.E=0.04$) indicates the nature of weak relationship or insignificant role in the subjective well-being. The measurements for the standardized regression coefficients β in the table 2 show that physical coping, behavioral coping, emotional social support and informational social support can significantly predict the subjective well-being although physical coping accounts negative effects on the subjective well-being. The positive coefficients associated with the subjective well-being shows that the more patients interpreted the feelings of well-being as being due to emotional and material social support, the more they cope behaviorally for the well-being.

DISCUSSION

The result reveals that four facets of social support

have a significant positive strong correlation with each other. Emotional social support yielded the strongest correlation with informational social support ($r=.853$). It displayed the weakest association with physical coping ($r=.186$), significant relationships with behavioral coping ($r=.267$) and psychological coping ($r=.267$) and an acceptable correlation of ($r=.212$) with subjective well-being. Informational social support shows the strongest correlation with emotional social support ($r=.853$) and material social support ($r=.712$). On the contrary, the weakest association of informational social support was found with physical coping ($r=.111$). Informational social support has a significant relationship with behavioral ($r=.424$) and psychological coping ($r=.257$). The criterion variable of study (subjective wellbeing) was significantly associated ($r=.248$) with informational social support. Material social support yielded the strongest relationship with instrumental social support ($r=.838$) and emotional social support ($r=.790$). On the contrary it yielded the weakest relationship with physical coping ($r=.202$). The criterion variable (subjective well-being) was weakly associated with material social support ($r=.099$).

The analysis of data revealed the strong relationship of instrumental social support with material social support. ($r=.838$), emotional social support ($r=.693$), and informational social support ($r=.597$). Instrumental social support also has a significant relationship with physical

coping ($r = .301$). Furthermore this variable yielded the weakest relationship with behavioral coping ($r = .164$) and subjective well-being ($r = .043$). As far as subjective well-being is concerned, this variable has a moderate association with instrumental social support ($r = .043$). Thus, we may conclude that as far as the results from analysis of social support are concerned, emotional social support seems to be the most important variable. Three of the other four facets are the strongest correlates of this variable. These findings are consistent with the findings of Finfgeld-Connett (2005¹²). Out of coping strategies, behavioral coping and physical coping show great impact on well-being.

Results of this study show significant transformation of patients' behavior (choices, interaction, and patterns of health care practices). Transformation also strengthened the patients' feelings and emotions ($r = .428$). Levy (1983¹³) provided preliminary evidence that social support is positively related to compliance behavior. Material social support shows insignificant association with feelings of subjective well-being ($r = .176$), psychological coping ($r = .232$) and behavioral coping ($r = .264$). Results indicated that instrumental social support (caring) enhances beneficial effects on physical coping¹⁴ as linked with feelings of personal accomplishment¹⁵. For subjective well-being (SWB), instrumental social support showed insignificant association ($r = .065$).

As far as coping strategies are concerned, analyses of data revealed that there was a moderate correlation of physical coping was found with feelings of subjective well-being although it was a negative correlation amounting ($r = -.422$). The weakest association was however yielded with material social support ($r = .071$).

A second conceptual dimension of coping was the psychological one. This variable yielded the strongest association with behavioral coping of ($r = .428$). The weakest relationship was associated with instrumental social support ($r = .039$). Moreover, psychological coping was not significantly associated with feelings of subjective well-being ($r = .236$).

Behavioral coping had the strongest relationship with feelings of subjective well-being ($r = .681$) and the weakest with instrumental social support ($r = .171$). The result is consistent with the study findings of Croyle et al., (2003¹⁶) where patients use behavioral strategy and minimization of depressive symptomatology associated with better QOL. Filipp and Klaure (1990¹⁷) study of cancer patients on threat minimization found the effective coping factor in well-being maintenance as well as enhancement.

Figure 1 indicates relationships between facets of social support, coping and feelings of subjective well-being. In the process, it may be

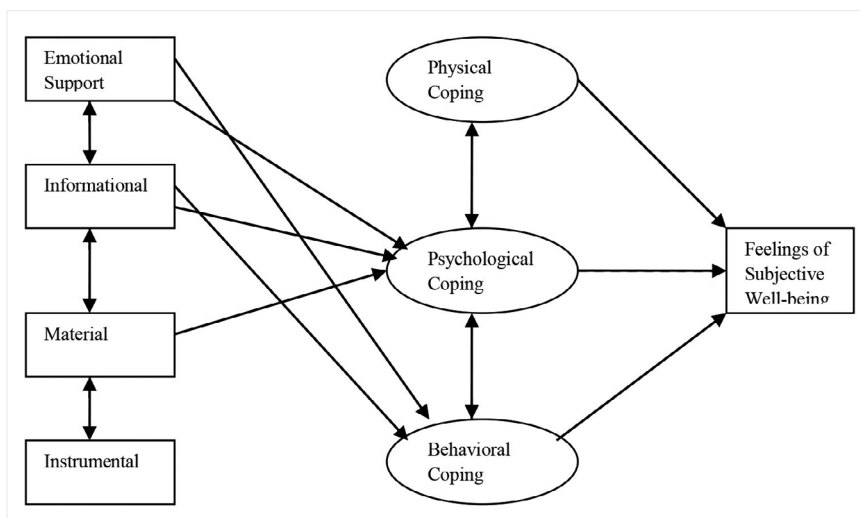


Figure-1. Pathways indicating relationships between facets of social support, coping and feelings of subjective well-being

concluded that emotional and informational social support worked to release stress and depression, enhance satisfaction, slow disease progression, and engage patients for active behavioral and psychological coping. Physical health is associated with physical coping. Due to severity of disease and weak physical health, active physical coping becomes difficult for heart and kidney patients. Medication adherence only provides primary support to physical health¹⁸.

This study revealed that behavioral coping operates on the patients' ability to manage their illness and subjective well-being. Findings suggest that subjective well-being may vary as the role of emotional state and informational source depends on support resources. In other words, subjective well-being depends on the patients' general physical conditions specifically mental health and available resources. This finding is consistent with the theories discussed by Watson & Clark (1997¹⁹). Behavioral coping was strongly associated with subjective well-being. Behavioral coping (directly) and psychological coping (indirectly) influenced subjective well-being. These relationships showed patients' coping efforts (enhanced by family support, education, and income) to alleviate the personal emotional stress and disabilities induced by the chronic illness, in performing daily activities and also indicate adaptation or adjustment to the disease²⁰.

The results of the current study support and extend previous findings by increasing our understanding of how social support plays a significant role in coping and is influenced by the feelings of well-being. Therefore, the role of social support is substantial in coping and well-being. It will be wise to incorporate social support interventions in preventive measures during the treatment of health problems.

CONCLUSIONS

This study was co-relational in nature and identifies particular types of social support and coping patterns that influenced the feelings of subjective well-being instead of identifying

causal relationships. Correlation coefficients showed that all four facets of social support are highly correlated with each other and are valid measures. The strongest correlation exists between the emotional and informational; and emotional and instrumental social support. Among subscales of coping, a moderate correlation exists between physical and behavioral coping at $p < 0.01$ significance level-two tailed test. The weakest correlation was found between physical and psychological coping. The data shows a moderate positive correlation between behavioral coping and emotional social support and with informational social support. Data also shows a negative correlation between physical coping and subjective well-being. The criterion variable has the strongest correlation with behavioral coping.

The results suggest positive and negative effects are related in different ways to the subjective wellbeing. Positive effects are associated with patients' healthy behavior to cope actively with chronic illness and feel satisfied about their well-being. The results of the study suggested that emotional social support and informational social support are directly related to the patients' ability to actively engage in behavioral coping. Both types of support decreased the stress and initiate motivation to engage in efforts making behavior. Both social supports mediate the patients' efficacy according to the situation and work as coping resources resultantly initiate behavioral coping strategy (such as prevention in food, taking medication regularly, follows the advices given by the doctor, and self care etc.) that increase the subjective well-being. It can be argued that coping behaviors are conceptualized as being mediated by people's efficacy beliefs that situational demands do not exceed their coping resources.

Lastly, Multiple Regression Analyses were applied in terms of goodness of model fit with the study data and research hypothesis test. Under model test statistics, a significant model emerged. The multiple correlation coefficient of the model R^2 indicates that regression line fairly fits the data. The data provides a good fit to the theoretical and

conceptual models. The difference between R^2 and the Adjusted R^2 is low, this being an indication of high sampling adequacy. Multivariate analysis results show that behavioral coping have the strongest impact on the feelings of subjective well-being. The positive effects were associated with patients' healthy behavior to cope actively with chronic illness and feel well and satisfied. Results of the study suggest that emotional and informational social support affect the patients' ability to actively engage in behavioral and physical coping for the subjective well-being although physical coping indicated negative effects on the feelings of well-being.

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“Never mistake motion for action.”

Ernest Hemingway (1899-1961)



AUTHORSHIP DECLARATION

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