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Perceived Social Support and its Association with Mental Health of Mothers of Children with Chronic Medical Conditions

Zara Israr and Zaeema Riaz Ahmad
University of Karachi, Pakistan

The objective of the research was to establish the association between perceived social support and stress, self-esteem, anxiety and depression respectively. For this purpose, mothers of children with chronic medical conditions were recruited as participants from various government hospitals of Karachi. Mothers of children diagnosed with cancer (n=50) and thalassemia (n=50) were included in the sample. The Parental Stress Scale and Aga Khan University Anxiety and Depression Scale were used to determine the variables of maternal stress and anxiety and depression. Rosenberg Self Esteem Scale was incorporated to determine self-esteem levels. Additionally, Multidimensional Scale of Perceived Social Support was included, along with an informed consent and demographic form. The Urdu version of all measures were used. A significant, negative relationship was obtained between perceived social support and maternal stress (r= -.40, <.05) and anxiety and depression (r= -.51, <.05). Moreover, a significant positive relationship between perceived social support and self-esteem (r=.57, <.05) was also determined.

Keywords: chronic childhood medical conditions; maternal stress; anxiety and depression; self- esteem; perceived social support; correlational

Perceived Social Support and its Association with Mental Health of Mothers of Children with Chronic Medical Conditions

Chronic childhood conditions, considered to be globally on the rise, are defined as illnesses that run a prolonged course and are non- contagious in their origin. They generally do not have a certain etiology, have numerous risk factors, and a period of dormancy that is long. The illnesses may have profound functional impairment or disability and may also be incurable (McKenna & Collins, 2010).

In recent times, medical advancements have made it possible for children with previously fatal illnesses to have a better prognosis. The National Alliance for Caregiving (2004) maintains that caring for a family member who is ill is usually a family endeavor, however, demands dictated by society and culture have led to the suggestion that women may take up the responsibility of a family-caregiver. In addition to the norms, in some cases it may even be a women's personal preference to

Correspondence Address: Zara Israr. Institute of Clinical Psychology, University of Karachi, Pakistan. Email: zara.israr@hotmail.com

Contribution of Authors

1. The first author is the primary writer of the article and is a PhD scholar at ICP. This paper is a part on her thesis.
2. The author has contributed since the conceptualization of this research work through providing technical feedback.

act as care provider. In Pakistan, much like everywhere else in the world, mothers are the primary source of providing care to the ill. The World Health Organization (2015) reports Pakistan as having the third highest infant mortality rate. Extreme conditions such as poverty, illiteracy and growing rate of population and inflation are a major concern and despite constant efforts by the state, the country face prolonged endeavor in providing quality health services. The scarcity of adequate resources superimposed by inaccessibility to basic health care further pave way for mother figures to carry out care related tasks.

Perusal of existing literature reveal that researchers over the years have found that caring for individuals with medical conditions, particularly children with chronic childhood conditions, may directly or indirectly lead to substantial psychological distress. It is determined that the multiple roles a caregiving mother may have to adopt may give rise to several unavoidable instances, eventually which turn into enervating psychological problems. These may include problems of a physical nature including stress, fatigue and burnout, emotional disturbances such as depression and feelings of antipathy towards the patient (National Alliance for Caregiving, 2009). Researches carried out by Strike and Steptoe (2004) and Toker et al., (2005), concluded that that the incidence of prolonged burden, fatigue and stress because of the demands of chronically ill child are found to be elevated in maternal figures. In the same vein, the American Psychological Association names subclinical stress, anxiety and depression as the most established mental problems resulting from extensive caregiving. Researchers, Pinquart and Sorensen (2003) and Vitaliano, Scanlon and Zhang (2003) reported caregivers to be prone to elevated risk of depression and physical incapacity as compared to non-caregivers. Review of literature on the effects of chronic childhood conditions, particularly childhood cancer, indicate additional stress for parents (Ellis et al., 2008; Power et al., 2003).

In the light of such a taxing adversity as looking after an ill individual, it is pertinent to have a strong support system that can act as a buffer and ensure healthy wellbeing (Dollete, Steese, Phillips, & Matthews, 2004). It is suggested (Lakey & Cohen, 2000) that high distressed populations may be influenced by the protecting abilities of social support. The properties of stress that induce illnesses are buffered or mediated by social support and therefore ensures good health. In general, social support refers to the variety of ways in assistance is garnered form others around an individual. Garung (2006) put forth a definition of social support; he defined it as “the feeling of being worthful, appreciated, cared about, and loved by people involved in a person’s life.” It can be garnered by different sources such as members of family, friends, teachers or role models and community or social groups. In the current age, social media may also be one of the sources from which support social stems.

Several studies indicate that symptoms of psychological disorders such as stress, mood disorders and other psychiatric vulnerabilities relate in the negative with an individual’s supportive contacts. Furthermore, on the contrary, a positive association between such contacts in a persons’ surroundings with physical and psychological health has been established. It has been reported that life crisis including mourning, ill health and other significant stresses are moderated by the construct of social support, thereby enhancing mental health (Nahid & Sarkis, 1994). Investigators have found social support to have a vindicating association with stressful experiences (Shield, 2004). The occurrence of distress is also said to be lower because of it (Caron & Liu, 2011). Overall, it is said to have a strong correlation with mental health. McCubbin, Balling, Possin, Frierdich, and Byrne (2002) in their work concluded that the prevalence of stress and depression in parents of children suffering from cancer is reduced by the presence of a support system. Previous research (Teoh & Rose, 2001) indicate that low level of support received socially is a significant predictor of declined psychological health. It is found to significantly correlate with anxiety and depressive disorders, problems related to

attention, social problems, bodily complaints, and receding image of self. In Pakistan, researches conducted on the association of social support with variables of psychological health report similar findings as rest of the world. A research conducted in Lahore, Pakistan (Imran et al., 2010) concluded in its findings the partiality of female care figures towards elevated levels of depression and anxiety as compared to male caregivers. The female caregivers also reported a lower level standard of life. Likewise, in another research, it was found that for a chronically ill child, the usually disease related tasks are carried out by the mothers as compared to fathers. Consequently, they may be victim to stress episodes, as well as posttraumatic stress symptoms. Bunting and McAuley (2004) further reported their findings and maintained that mothers who perceived more social support report better mental health outcomes in comparison to those with decreased support. Additionally, maternal support has also been linked to reduction in stress. An inverse correlation between social support and depression has been suggested in the past.

A distinction is made while discussing social support; actual versus perceived social support. Actual support is conceptualized in terms of what is said, given or done for an individual at a time of need. In simpler words, it is the help obtained by an individual from others (Norris & Kaniasty, 1996; Sarason, Sarason & Pierce, 1990). In contrast, social support considered to be readily at disposal is referred to as perceived social support (Wills & Schinar, 2000). It indicates to a person's conviction that there is availability of assistance in case of need, be it positive or negative, and provides what is thought to be as needed by that individual. Holahan et al., (1995) indicated that the perception of social support is not dependent on the received quantity, rather it is super massed by quality and that it tends to correlate more positively with mental health. Similarly, in a survey conducted by McDowell and Serovich on people diagnosed with HIV/AIDS (2007) results suggested that for almost all the participants the perception of social aid had a commendable positive interaction with mental health in comparison to support that was present in actual.

Adjunct to stress, anxiety and depression, a positive correlation is also reflected between the variables of social support self-esteem. Self-esteem as defined by Rosenberg (1965) is a self- appraisal by the individual in accordance to a situation. It can be either positive or negative. It is a personal construct that may greatly enhance (in case of high self-esteem) or diminish (low self-esteem) psychological well-being. Social support is said to be a precursor to self-esteem by several theorists. Researchers have found a positive link of social support on self- esteem according to predicted direction.

Cohen (1988) provided an explanation regarding the association of social support and well-being (the stress buffer model). According to him, where mental and physical health is concerned, social support tends to stimulate emotions, perceptions and behaviors. If particularly considering psychological well-being, it is assumed that social support tends to operate on these response systems to ensure effective management of their functioning, while preventing dysfunction by restricting extreme responses. This regulation is said to be aided by communication catering to expectations, suitable norms and rewards and reprimands, in addition to facilitating aid required to manage suitably (Caplan, 1974).

Thoits (1986), speculated that the buffering may be based on two assumptions. First, the harm posed by a situation may be defined in a potentially less threatening manner because of the belief that others will come forth with obligatory reserves. This notion may have a beneficial effect

and provides the individual with a better perception of handling demands in a more effective manner. The second assumption maintains that the emergence of a pathological outcome to a stressful situation may be adjudicated by the availability of social support. This negotiation is carried out by determining a solution to adversity, by rendering the problems as insignificant, or by introducing an interference. The neuroendocrine system may also be tranquilized by it so that people are less sensitive to perceived stress.

The alternative to stress buffering model, the main effect model (House, 1981) proposes that social resources have an advantageous effect on people regardless to whether they are under stress or not. The main-effects hypothesis asserts that the extent of social support benefits achieved by an individual is dependent on the person's participation in the social network. In a nutshell it refers to the belief that more support will lead to enhanced well-being and vice versa. Another benefit of a vast social network is that it acts as a powerful source in gaining appropriate information, boosting behaviors relevant to health. This approach further postulates that isolation (in case of low social support) leads to heightened negative mood and further brings about estranged feelings. The individual may also feel less control on situations and decreased self-esteem.

The present article focused on exploring the way in which stress, anxiety and depression in mothers may be related to social support, a construct known to act as a buffer against adverse life events. Moreover, the link of self- esteem, thought of to be a substantial contributor to mental health was also researched. The present research included mothers of children diagnosed with cancer (n=50) and thalassemia (n=50). Statistics indicate that these illnesses are growing rapidly worldwide and have a noteworthy domination on the health capacity of care providers. According to figures presented in a study conducted by Steliarova-Foucher et al., (2017) yearly, an approximate of 300,000 children aged 0-19 years are diagnosed with cancer. The global incidence is seen to mirror locally as well, however due to the absence of a National Cancer Registry in Pakistan a conclusive estimate is not possible. In a report presented by Indus Health Network (2019) it was stated that nearly 8000 children in Pakistan are diagnosed with cancer every year. Furthermore, research indicates that countries with high income percentage have an 80% cure rate, however in developing countries (middle to low income), approximately only 20% of the diagnosed are successfully cured (Howard et al., 2018). Low rate of survival in lower- and middle-income countries can be attributed to poor diagnosis accuracy, treatment ventures that are inaccessible or abandonment of therapy during course and adverse effects of the treatment causing fatality or relapse. In addition, lack of access to important medicines and costly advance technologies also contribute to the low success rate of survival. In Pakistan, statistics indicate that estimated 50% of the children go undiagnosed and without treatment, whereas 40% of the pediatric population seek medical attention at very advanced stage of the disease (Bhurgri, 2004; Aziz, Sana & Saeed, 2003). The low incidence rate may not only be because of costly treatment and inaccessibility to treatment, but also lack of awareness amongst people regarding the prognosis of the illness in child population. At present, Pakistan has only 13 centers for pediatric cancer care, mostly charitable organizations. The present research primarily encompassed mothers of children undergoing chemotherapy, with leukemia, neuroblastoma and lymphomas as commonly occurring cancers. A pivotal role is played by social support for mothers of children diagnosed with cancer. The mothers are closely attuned to the illness related experiences of the child. A mother who does not feel isolated, may have a more proactive role in accepting and meeting the demands of her child. Researchers Hoekstra- Weebers and colleagues (2001) carried an investigation related to levels of psychological distress on parents of pediatric cancer patients. Results indicated that mothers, as compared to fathers were more active in seeking support from others, with minimal reliance on problem focused coping.

In the same vein, thalassemia is another uprising condition. Pakistan is a country with a powerful racial blend from an extensive background of invasions and commercial relationships leading to vast genetic variety. This supplemented by a robust cultural affinity towards within family marriages has overseen a comparatively high incidence of disorder of an inherent nature, like β-thalassemia. To withstand children affected with β-thalassemia in Pakistan, monthly blood transfusions accompanied by iron-chelation therapy is carried out since blood transplants are costly endeavors. Keeping in consideration the increasing importance and prevalence of these illnesses globally as well as in Pakistan, the present study included mothers of children diagnosed with the afore mentioned medical conditions.

Hypotheses

1. A relationship will exist between Perceived Social Support and Maternal Stress in the mothers of children with chronic conditions.
2. A relationship will exist between Perceived Social Support and Anxiety and Depression in the mothers of children with chronic condition.
3. A relationship will exist between Perceived Social Support and Self-Esteem in the mothers of children with chronic conditions.

Method

Research Design

A cross sectional design study was employed to determine the association perceived social support has with maternal stress, anxiety and depression and self- esteem.

Sample

The sample comprised of a total of 100 participant mothers of children diagnosed with a chronic medical condition. The two chronic medical conditions were set to be pediatric cancer and thalassemia (n= 50 mothers; each chronic medical condition). The sample was selected from different private and government hospital/health establishments situated in Karachi using the convenient sampling technique.

Inclusion Criteria

The sample only comprised of mothers of children, male or female, with ages ranging between 10 to 18 years. The children whose mothers were recruited as participants met the diagnosis of any of the determined medical conditions, i.e. cancer and thalassemia. A strict inclusion criterion was not employed regarding the type of cancer due to limited facilities that catered specifically to pediatric cancer and thalassemia. However, to ensure homogeneity, mothers of children undergoing chemotherapy in the case of cancer and receiving supportive therapy (blood/plasma transfusions in the case of thalassemia) were included.

Exclusion Criteria

The sample did not include mothers of children with any diagnosed psychiatric illness. Additionally, mothers of children with any physical disability were not made part of the research.

Ethical Considerations

Questionnaires were administered only on the adults who gave their consent for volunteering in the research. All the ethical procedures as determined by Board of Advanced Studies

were followed in the administration and scoring of the questionnaires and confidentiality of all participants was maintained.

Description of Measures

The current study incorporated the use of Informed Consent Form, Personal Information Form, The Parental Stress Scale (Berry & Jones, 1995), Aga Khan University Anxiety and Depression Scale (Ali, Jehan, Reza, & Khan, 1998), Rosenberg Self- Esteem Scale (Sardar, 1998), and Multidimensional Scale of Perceived Social Support (Akhtar et al., 2010). For all the scales, their translated versions (in Urdu language), were used.

Informed Consent Form. A consent form was administered to the participants in which permission to take part in the study was taken. It was elucidated that the information gathered will purely be voluntary and explained the right of the participant to leave the study at any given time. Confidentiality was also discussed.

Personal Information Form. It was given to collect personal and family information, in addition to information related to the illness of the child. This form included items regarding age, gender, educational level of participant mother and spouse, occupation, number of children, family structure (nuclear or joint), socioeconomic status, name and stage of child's medical condition, duration of illness, treatment approach, duration of treatment, and results of treatment.

The Parental Stress Scale. The PSS (Berry & Jones, 1995) is a self-reported scale, comprising of 18 items. The items are based on two themes. The positive (or pleasure) theme considers items related to benefits gained emotionally and focusing on self enhancement and development. The negative aspect takes into consideration resource requirement, opportunity costs and constraints. The answers are required to be marked by parents based on their relationship with their offspring. A five-point scale ranging from strongly disagree (1), to strongly agree (5) is utilized. In the current research, the scale was applied to only mother participants. The back to back translation method was employed to translate in Urdu language. The PSS indicates adequate reliability (Cronbach's alpha= .83).

Aga Khan University Anxiety and Depression Scale. The AKUADS (Ali, Jehan, Reza, & Khan, 1998) developed at the Aga Khan University (AKU), Karachi is a native screening measure. It has a total of 25 items, while items are based on 12 psychiatric and 13 somatic symptoms. The scale is differential in nature and is rank ordered for severity. The respondents are required to record their responses keeping in consideration how they have felt over the last 2 weeks. 4 options (never: 0, sometimes: 1, mostly: 2, and always: 3) are provided to the respondent to indicate their responses. The scale presents good construct validity, and internal consistency. At a score of 20 it has a sensitivity of 66°k, a specificity of 79%, a positive predictive value of 83 and a negative predictive value of 60.

Rosenberg Self- Esteem Scale. A 10-item measure to assess global self- esteem, the RSES (1965) uses a 4-point Lickert type response format to record answers. Possible answers vary from Strongly Agree to Strongly Disagree. The minimum and maximum score ranges from 0 and 30 respectively. It is said to have very high reliability. The translated version of Rosenberg Self Esteem Scale (Sardar, 1998) was used, with a Cronbach alpha of .63 (Fareed & Akhtar, 2013).

Multidimensional Scale of Perceived Social Support. MSPSS (Zimet, Dahlem, Zimet, & Farley, 1988) accounts for support system generated socially by care providers. Social support is

measured across three domains; friends, family and significant others. The responses reflect participants perception of support from each of these three sources. It has a total of 12 items divided in three sub-scales; friends, family and significant others. A 7-point Likert-scale ranging from 1 (very strongly disagree) to 7 (very strongly agree) is used to mark responses. A score can be obtained for the total scale as well as for each of the three sub-scales. For ease of understanding, the Urdu version of the scale, translated by Akhtar et al., (Akhtar et al., 2010) was used in the current research. In the current research, internal consistency of .92 is obtained.

Statistical Analysis

Stress, self-esteem, anxiety and depression were analyzed through Pearson Product Moment Correlation. Statistics were computed through Statistical Package for Social Sciences (SPSS, V 20.0).

Procedure

The sample for the present study was recruited from various government and private institutions of Karachi. It comprised of 50 participant mothers for each of the two medical conditions under investigation, i.e., pediatric cancer and thalassemia (total 100 participating mothers).

The first step was to identify the organizations catering to the desired population and approach them for consent. On positive affirmation, the objective of the study was explained to likable candidates. Their queries were dealt with and confidentiality was discussed. On agreeing to participate, the participant mothers were then presented with the informed consent form. A brief interview was then conducted which comprised of questions catering to the demographics of the participating subject. Primarily focus was given to aspects relating to the chronic medical condition the child was diagnosed with. These questions included information regarding the name and stage of child's medical condition, duration of illness, treatment approach, duration of treatment, and results of treatment.

The mothers were then presented with the Parental Stress Scale (Berry & Jones, 1995) to measure levels of existing stress in the participant as a result to the child's chronic medical condition. Subsequently, the Aga Khan University Anxiety and Depression Scale (Ali, Jehan, Reza, & Khan, 1998) and the Rosenberg Self- Esteem Scale (Sardar, 1998), were administered to the sample population to determine levels of self-esteem, anxiety and depression respectively. The participants were also provided with the Multidimensional Scale of Perceived Social Support (Akhtar et al., 2010) to measure perceived social support.

All the measures were administered to the mothers of children with chronic medical condition i.e. cancer and thalassemia in an interview format. The examiner sat individually with every participant mother and read out the questions to her, with the form in front of them for ease of understanding. The contributors were in the end thanked for their participation.

Results

Table 1

Descriptive Statistics (Mean and Standard Deviation) for the Variables Maternal Stress, Self Esteem, Anxiety and Depression, and Perceived Social Support

Variables	Medical Conditions			
	Cancer *n* = 50		Thalassemia *n* = 50	
	M	***SD***	***M***	***SD***
Maternal Stress	52.44	3.36	47.08	7.70
Self Esteem	18.26	2.23	20.78	3.77
Anxiety & Depression	27.96	10.98	24.30	12.09
Perceived Social Support	4.39	.80	4.79	1.07

The following tables illustrate the relationship, as analyzed through Pearson Product Moment Correlation between maternal stress, anxiety and depression, self-esteem and perceived social support respectively. Analysis of the results for each variable is presented separately, succeeding the tables.

Table 2

Correlation between Perceived Social Support and Maternal Stress in the mothers of children with chronic medical conditions

Variables	*R*	Sig.
Perceived Social Support	-.40	.000*
Maternal Stress		

*<.05

Results in Table 2 reveal a significant, negative relationship between the variables of perceived social support and maternal stress (Table 2).

Table 3

Correlation between Perceived Social Support and Anxiety and Depression in the mothers of children with chronic medical conditions

Variables	*r*	Sig.
Perceived Social Support	-.51	.000*
Anxiety & Depression		

*<.05

Results in Table 3 indicate that there is a significant, negative relationship between perceived social support and the psychological variable of anxiety and depression (Table 3).

Table 4

Correlation between Perceived Social Support and Self-Esteem in the mothers of children with chronic medical conditions

Variables	***r***	**Sig.**
Perceived Social Support	.57	.000*
Self-Esteem		

*<.05

Results in Table 4 indicate that there is a significant, positive association between the variables of perceived social support and self-esteem (Table 4).

Table 5

Regression Coefficients' Results, Perceived Social Support with Maternal Stress

Unstandardised Coefficients			**Standardised Coefficients**		
Variables	*b*	*SE*	*95% C.I***	*p*-value <.05	*β*
Constant	62.29	2.91	56.5,68.0	000*	
Maternal Stress	2.72	.62	-3.961, -1.496	000*	-.40

Note. N = 100. p <.05, R^2 = .16, *adj* R^2 = .15, F (1, 98) = 19.296, p = .000.

*significant values, p<.05

*C.I. = Accelerated confidence intervals

Results of the regression indicate that perceived social support explain 15% of the variance and that it is a significant predictor of maternal stress (Table 5).

Table 6

Regression Coefficients' Results, Perceived Social Support with Anxiety and Depression

Unstandardised Coefficients			**Standardised Coefficients**		
Variables	*b*	*SE*	*95% C.I***	*p*-value <.05	*β*
Constant	42.32	5.46	31.4, 53.1	.000*	
Anxiety and Depression	-3.52	1.16	-5.83, -1.21	.003*	-.29

Note. N = 100. p <.05, R^2 = .08, *adj* R^2 = .07, F (1, 98) = 9.17, p = .003.

*significant values, p<.05

*C.I. = Accelerated confidence intervals

Results of the regression indicate that perceived social support explain 7.6% of the variance and that it is a significant predictor of anxiety and depression (Table 6).

Table 7

Regression Coefficients' Results, Perceived Social Support with Self-Esteem

Unstandardised Coefficients			Standardised Coefficients		
Variables	*B*	*SE*	*95% C.I***	*p*-value <.05	*β*
Constant	12.36	1.45	9.46, 15.25	000*	
Self-Esteem	1.55	311	.94, 2.17	000*	.45

Note. N = 100. $p < .05$, $R^2 = .20$, *adj* $R^2 = .19$, $F(1, 98) = 25.11$, $p = .000$.

*significant values, p<.05

*C.I. = Accelerated confidence intervals

Results of the regression indicate that perceived social support explain 19% of the variance and that it is a significant predictor of self-esteem (Table 7).

Discussion

The hypotheses stated that there will exist a relationship between perceived social support with maternal stress and anxiety and depression respectively. Findings reveal a significant, negative relationship for mental health problems; maternal stress and anxiety and depression in relation to perceived social support (*r= -.40, <.05 and r= -.51, <.05*) respectively.

In Pakistani culture, mothers are the primary caregivers in health-related concerns. In the face of a crises as traumatic as a child being diagnosed with a chronic health condition, their responsibilities increase tenfold. They not only have to dedicate large portion of their time looking after the ill, but simultaneously also manage other aspects of home and/or work life. In such a scenario, there is great expectation, and at times also availability of help, be it emotional, social or financial, from family and friends. Joint family is quite prevalent in Pakistan, and thus the presence of a support system, real or perceived, is likely to play an important in the caregiving individual. Findings of the current research hold true as it indicates the existence of an association connecting social support to problems related to mental health. In the past, perusal of findings reveals that social assistance offers a defense against event of life that are worrisome. Moreover, it enables the person to handle stress in a more competent manner and provide effective and appropriate coping skills to deal neurotic tendencies.

Numerous findings in the past highlight that parents of children with chronic illnesses tend to become socially isolated because of the strenuous demands of caregiving. These demands may further add significantly to their stress and anxiety (Chiou & Hsieh, 2008; Kratz, Uding, Trahms, Villareale, & Kieckhefer, 2009).

According to Cobb (1976) social support inculcate in people the feeling that they are loved and well cared for. The experience of being a part of a network that communicates thereby acts as a protector against psychopathologies. Additionally, an association was found to exist between social support and reduced symptoms of depression. Bisschop et al., (2004) posited that psychological well-being is improved by social support by fulfilling an individual's need for belonging, while reducing loneliness. Therefore, the probability of developing depression and other comorbid pathologies decreases. The idea of the presence of adequate support tends to act as a mediator, thereby increasing effective coping. Davis, Morris and Kraus (1998) study on American pregnant women and Aranda, Castaneda, Lee and Sobel (2005) study on Mexican pregnant women also highlight how social support acts as protection in stressful times. Finding of their work elucidated that support prevents the appearance of stress disorders and depression or moderate the severity of psychological symptoms. In the absence of such support, be it familial or friends, the probability of falling prey to

psychological disorders increase. In researches by Benzeval (1998) and William and Lorraine (2005), results have shown that mothers who are single handedly looking after children experience increased affective disorders, including depression and anxiety. An amplified exposure to a variety of organized stressors; which may include financial constraints, socially garnered support or the stress of caregiving may lead to birth of these neurotic illnesses. Sacco and Vaughan (2006) found that negative social interactions amongst members of a family may result from reduced levels of social support which in turn may cause elevated incidence of depression.

One reason accounting for the positive relation of social support on alleviating symptoms of stress, anxiety and depression in women could be their openness and willingness to share emotional problems with people around them. Woznick and Goodheart (2002) in their research concluded that mothers with children in treatment rarely take time for themselves and often feel guilt for neglecting the other family members, household obligations, and careers, but are often able to find solace in aid provided by the medical team, families undergoing similar trauma, and friends. The findings of the current research are also parallel to existing literature with respect to cultural factors. Members of a Pakistani family are generally close knitted, and a major source of psychological and financial support. They generally tend to come together in the face of adversity with intense interaction and strong support network.

Additional findings (Table 5and 6) further strengthen the obtained results. Regression analyses indicate that perceived social support is a significant contributor to participants levels of stress *(F*(1,98) = 19.29, p = .000) and anxiety and depression (*F*(1, 98) = 9.177, p = .003).

Additionally, it was hypothesized that there will exist a relationship between perceived social support and self-esteem. Results of the current research account for the existence of a significant, positive relationship between the two variables *(r= .57, <.05*).

In a research conducted by Muhlenkamp and Sayles (1986) on positive health practices, existence of a positive association between self-esteem, social support and life style was concluded. The ever-growing demands imposed by long term diseases may prove to be challenging and tiresome for the mothers of offspring with chronic conditions, resulting in a constant struggle. Erdogan and Kahraman (2008) and Wise (2007) in their works concluded that in addition to emotional strain, mothers may experience guilt and decline in self-worthiness, which may in turn hinder their efforts to seek familial or support from friends.

According to Hall et al., (1996) daily life stressors can also be mediated by self-esteem. The construct may lend its influence in the form of a social resource for a depressed individual. It may also act as an internal reserve that is protecting in nature and shield from harmful instances in an environment conducive to stress. A healthy self-esteem would encourage mothers to seek company, share and invite the experience of others around her, thereby increasing the likelihood of effective coping. In contrast, mothers, who while caring for an ill child develop low self- esteem due to lack of personal space, or negligence and disregard towards needs of the self, may fall prey to emotional and psychological disturbances. The low self-esteem may act by creating a vicious cycle where one is reluctant to ask for help and ultimately narrowing one's social network. A person with a strong self-esteem, on the other hand, experiences less stress as he/she can protect himself/herself from psychological challenges and is able to respond to situations more positively.

It is therefore concluded that actual availability or merely the perception of social support leads to channeling the strain associated with caring for children with medical problems and reducing the probability of developing mental health problems. The perception of socially available assistance tends to reduce the adverse influence associated with a stress inducing event, multiple psychological illness, including neurotic conditions like anxiety and mood issues are kept at bay by its protecting nature. It further enhances self-worth and promotes well-being.

Limitations and Implications

There are certain restrictions of the research conducted that may be kept in context while drawing inferences. A cross sectional design was implemented to research the relationship of social support with various variables construing mental health (stress, anxiety and depression) along with self-esteem. Thus, any comment on the causality cannot be made. In future, the research design could be modified in order to study the variables of the particular research. Also, the sample was recruited from the city of Karachi, and hence findings cannot be generalized across different cities of Pakistan. For future studies, it is recommended that sample be recruited from different cities of Pakistan to provide for a nationwide representation. Additionally, the study may be replicated while considering various other chronic medical conditions prevalent in Pakistan. The present study included only mother figures of children diagnosed with chronic medical conditions. Researches can be conducted on both parents to account for gender differences related to the propensity of developing psychological vulnerabilities because of stressful experiences. It is also suggested to investigate whether social support is perceived to be equally beneficial across different socioeconomic groups.

The results obtained signify the importance of social support in facilitating sound mental health and self-esteem. The knowledge garnered can be used to create awareness through interactive sessions amongst parents or primary attendants of children with enduring diseases to lower levels of distress and effective handling of the child's diagnosis. Additional coping skills, focusing on problem solving be taught to mothers for effective handling of their child's illness. Organizations catering to the ill can be facilitated in the development of support groups to provide caregivers a feeling of belonging to a unit and encourage them to share their emotional burden to promote psychological well-being. Additionally, policy makers can benefit; regulations are needed to be approved on national level to make it compulsory for health institutions to take special measures to establish support groups in hospitals and health facilities, with special focus on providing financial aid to the parents of chronic ill children.

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