**A CLOSER LOOK AT SELF ESTEEM AND PERCEIVED SOCIAL SUPPORT: THEIR ROLE IN DEPRESSION AMONG WOMEN DIAGNOSED WITH BREAST CANCER AND CARDIAC ILLNESS**

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**ABSTRACT**

**OBJECTIVE**

Chronic illnesses such as cancer and heart diseases are among those illnesses which are quite prevalent and tax one’s resources to fight with illnesses. Patients with these illnesses have to take the burden of disease both physically and psychologically. Association of medical illnesses (i.e., cancer & cardiac) with mental health problems have not been studied in Pakistan. So, the present study aims to find the predictive association of depression with self-esteem (SE) and perceived social support (PSS) among women with chronic illness (breast cancer and angina).

**STUDY DESIGN**

Cross-sectional study design

**PLACE AND DURATION OF STUDY**

Present study was conducted in Karachi, Pakistan from April- July, 2016.

**SUBJECTS AND METHODS**

A sample of 102 women diagnosed with breast cancer (51) and Angina (51) with the age ranges between 30-60 years (Mean age = 47.6, SD=10.68), were taken. They were recruited from different hospitals including Sindh Government Hospital, Dar-ul-Sukoon and Dow university Hospital Karachi, Pakistan using purposive sampling technique. Patients’ Health Questionnaire-9, Rosenberg Self-Esteem, and Multidimensional Perceived Social Support was administered.

**RESULTS**

Findings show that self-esteem has contributed to lowering depression in women diagnosed with cardiac illness (Angina) as well as cancer (breast Cancer).Perceived social support has a significant effect on depression in women with cardiac illness (Angina) however it has a non-significant contribution in the reduction of depression in women with cancer (breast cancer).

**CONCLUSION**

Chronic illnesses not only bring physical strains but also affect one's psychological health. Long-term treatments and variations in severity demand psychological resources to cope up with these illnesses. Findings of present study can add in literature and further assist health care professionals in considering the psychological cost of these illnesses and to design and implement evidence based treatment intervention, before, during and after the treatment services for women with chronic illnesses.

**KEYWORDS**

Self-Esteem; Multidimensional Perceived Social Support; Depression; Women; Chronic Illnesses; Cardiac; Cancer

# **INTRODUCTION**

Challenges to human health are amassed quickly, and chronic illnesses are exclusive. These health issues are proliferating rapidly. These clinical conditions are persistent which affects an individual's life severely [1]. According to researchers in the field of health [2] these long lasting and fatal clinical conditions are difficult to cure though manageable. Chronic diseases are one of the leading causes of death, figures around the globe show about 17 million deaths because of cardiac arrest, with 7 million people dying due to cancer, and deaths related to lung diseases are 4 million. There is research evidence which shows that the number of people who die from diabetes are almost 1 million [3]. In line with the physical infirmity of the diagnosed individuals, the psychological aspect of chronic diseases is far more lethal and negatively influences the quality of life.

Several studies in different cultures show a high risk of depression with chronic physical conditions [4]. A study conducted by researchers Nitti and associates [5] found the association of depression with chronic illness in Asian adults and found depression to be one of the prevalent comorbid conditions of chronic illnesses. A study conducted by researchers Massie and Holland [6] found that women receiving treatment for breast and uterus cancer have a high level of psychological distress. Researchers conducted a study on Asian women that revealed a high level of depression linked with cancer [7]. Researchers conducted studies and found that mildly depressed mood in the absence of a major depressive disorder can reduce the chances of positive treatment outcome and impairs important areas of functioning of patients diagnosed with cardiac illnesses [8]. Other studies showed that depression is 4-5 times more prevalent in patients diagnosed with cardiac illnesses, this can also be considered to adversely affect the prognosis of heart problems [9]. These researchers further found that the risk for depression gets higher in elderly patients of ages 50 to 60 with moderate to severe depression. Researchers put forward that getting a diagnosis of a chronic illness like cancer for the first time signifies a significant impact on the emotional as well as overall life balance [10].

Other studies have emphasized the individual's observation and perception linked to their capacities to deal with a stressful situation and considered self-evaluation as an elementary aspect in the preservation of life quality. Enhancing the self-esteem of patients with breast cancer is one of the essential factors to reduce depressive symptoms as self-esteem works as a fundamental factor to maintain the quality of life when affected by depression [11]. Researchers found that patients with diagnosis of chronic illnesses who have low SE have difficulty to meet the expectations which were expected from them, and this negatively affects their mental health, and as a result increase the risk for depression. Other researchers also found that these conditions negatively influence, and increase the risk of illness [12]. In their study, Qin and colleagues [13] found that 34% variance in depression by life satisfaction was accounted for via self-esteem in cardiovascular patients.

Other environmental factors have a contribution in mental health outcomes. One of the important variables is the role of “social support” which has a linkage with high self-esteem, which leads to optimism and consequently reduces the level of depression [14]. Studies have highlighted the importance of family and friends in favorable outcomes of treatments of cancer and other chronic illnesses [15].

In light of the literature and previous research, the present study aims to explore the significance of self-esteem and perceived social support from family, friends, and significant others during the diagnosis of one of the lethal chronic illnesses including breast cancer and patients with angina at the very initial stages in women. One of the most significant objectives in considering women as a sample of the study is as in developing countries like Pakistan, there are limited health care facilities, and the access to high quality health services is very difficult. If such services are available, then these are expensive enough and people are often reluctant to avail these services, as they are unable to pay for those services. One of the other potential reasons is the reliance of a woman on a man in culture like Pakistan for most of their needs. As women are mostly dependent on their male guardians. If their male partner or a guardian is not available then they can’t get access to health care services on time, or get access to the healthcare facilities as the problem gets severe enough to manage. In such circumstances, diagnosis of even a minor health issue, women lose their autonomy and consider themselves worthless and more dependent and their mental health affects negatively.

After reviewing the literature, we framed hypotheses for present study which are given below.

1. There would be a significant predictive association of self-esteem with depression among female patients with chronic illnesses (cancer: breast cancer & cardiac disease: angina).

2. There would be a significant predictive association of perceived social support with depression in female patients with chronic illnesses (cancer: breast cancer & cardiac disease: angina).

**METHOD**

**Sample**

A cross sectional study design was used to carry out this study. A sample of 102 women diagnosed with chronic illness (i.e., Cancer with breast cancer =51 and Cardiac disease with Angina=51) were recruited for present study. Participants’ ages range between 30 to 60 years (Mean age = 47.7 years; SD = 10.68). The sample was taken from both Government and Private sector hospitals including Sindh Government Hospital, Darul Sukoon and Dow university Hospital Karachi, Pakistan, using purposive sampling technique with the permission of the authorities and with the consent of the relevant consultants and women diagnosed with cancer and cardiac diseases.

Inclusion and exclusion criterion was established for the sample of the study, which is as follow;

**Inclusion criteria**

· 30 to 60 years old women, diagnosed with breast cancer and angina were included by confirming the diagnosis from the reports and discussing with the relevant consultants.

· Women with initial stages of the illness and who were taking treatment for their medical problems were recruited.

· Patients who were under treatment (minimum of one month but less than one year) for their respective illnesses were included.

· Married women diagnosed with breast cancer and cardiac diseases (angina) who were currently living with their husbands were included.

**Exclusion criteria**

· Those patients who contacted consultants for the first time but were with the advanced stage of illness were excluded.

· Women with cancer who had under gone mastectomy were excluded from the study sample.

· Participants, who were separated, divorced, and or widows were excluded from the study.

· Women with pre-existing mental disorders and other physical diseases (i.e., arthritis, diabetes, and asthma) or disability were excluded from the study.

**Measures**

**The Patient-Health Questionnaire-9 (PHQ-9)**

This is a clinical scale to screen out depression with nine items ranging from 0-3. This scale is intended to use in research studies focusing on medical conditions. Scores on PHQ-9 can be from 0-27, with “severity levels” ranging from “mild” (5-10), “moderate” (10–14), “moderately severe” (15–19), and “severe” (20–27). PHQ-9 is a psychometrically sound instrument with good reliability and validity. The Urdu translated version of PHQ-9 [16], was used in this study. In the current study, the Cronbach’s alpha obtained for PHQ was .799, with “split-half reliability” of .89.

**Rosenberg Self Esteem Scale (RSES)**

This scale consisted of 10 items, which measures an individual's “self-esteem” (SE). The response format of RSES ranges from “strongly agree” to “strongly disagree.” Items including 2, 5, 6, 8 & 9 can be scored as reversed before summing up the total RSES. Total scores range from 0 to 30. For the present researcher, we used the RSES-Urdu version [17]. This is extensively used in researches with good psychometric properties test-retest correlations are typically in the range of .82 to .88, and Cronbach's alpha for various samples are in the range of .77 to .88 [18-19] the internal consistency of RSES is 0.77 [20], and “test-retest reliability” is 0.85 [21]. RSES scores correlated with depression (r=.65) and anxiety (r=.71) in an ABI population [22]. In current study, the Cronbach alpha obtained for RSES was .718.

**The Multidimensional Perceived Social Support (MPSS)**

It is a valid 12-item developed by Zimet and colleagues [23]measure used to evaluate perceptions about “support from family, friends, and a significant other.” The response format for this scale ranges from “Very Strongly Disagree” to “Very Strongly Agree”, where “Very Strongly Disagree =1”, and “Very Strongly Agree=7”. Individual obtaining high scores on MPSS reveals the “high level of perceived social support.” In the present study, the MPSS-Urdu version [24] was used. The internal consistency (Cronbach alpha) of MPSS was 0.92. It represents good construct validity and internal consistency. In current study, the Cronbach alpha obtained for PHQ was .844.

**Procedure**

The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Departmental Ethical Review Committee, Institute of Clinical Psychology, and the University of Karachi. (NO: ICP-1(101)/1040-A, November 19, 2018).” A permission letter with sample protocols of present study were presented to concerned authorities of different institutions/hospitals. After obtaining approval, researchers consulted the oncologists and the cardiologists to confirm the diagnosis and recruit the sample. Patients were then approached. A written, as well as verbal consent was taken from the patients or from the caregivers to take part in the study as per requirement. Only those patients and their family members or caregivers who were willing to participate in the study were then brief about the study objectives. Researchers established rapport with the participants individually and assessed them based on pre-established inclusion and exclusion criteria. Those patients who were not fulfilling the inclusion criteria were excluded from the study procedure.

An open discussion and interviews were scheduled with each participant to get the responses on the scales so that the patients may not feel overburdened and also can discuss their feelings without any fear of judgment. First, the semi-structured demographic form describing age, socioeconomic information, presenting problems, medical history, history of the problem, family, social/ friendship history was then filled. The Patient-Health Questionnaire-9, Multidimensional Perceived Social Support, and Rosenberg Self-Esteem Scale were rated. The participants were appreciated with thanks for their participation in the study. They were also provided with the email addresses to contact for any query, feedback, and related concerns.

The researcher administered all measures in individual sessions, during their visits to hospital. The average time taken to complete these measures was 15-20 minutes with each participant. All measures were scored and then interpreted according to the instructions given by the authors of those measures. Researchers have openly addressed their concerns and the willingly participated patients in the study were given a right to withdraw the study without any loss. Researchers discussed and arranged required lecture sessions for the families and patients related to different psychological concerns. More than 50 women with mild depressive symptoms were counseled and most of the women with severe depression were referred to psychologists and helped them in their appointments.

**Statistical Analysis**

Statistical Package for Social Sciences (SPSS-V. 21) was used to statistically analyze the data. Descriptive statistics (frequencies, percentages, mean, standard deviations, and confidence intervals) were used to analyze the characteristics of the sample. Multiple Regression analysis was used to examine the predictive association of self-esteem and multidimensional perceived social support with depression among women with chronic illness (cardiac and cancer patients in the initial stages). Monthly income for patients with Cardiac issues was from PKR 27500.00- 540000.00 (M=77725.49) for Cancer patients was from PKR 39000.00 - 120000.00 (M=80735.29), and the total sample it was from PKR 27500.00 - 540000.00 (M = 79230.39).

**RESULTS**

Table 1 refers to the demographic characteristics along with severity of depression of the sample including 102 women (n=51 Breast Cancer and n=51 Angina). The mean age of the entire sample is 47.6 with the mean age of 46.0 for cancer and mean age of 49.0 Cardiac patients. The severity level of depression in Table 1 shows severe depression on PHQ-9, 34.6% (f=18) in women diagnosed with cardiac (Angina) and 50.9% (f = 50) in women diagnosed with Breast Cancer.

Analysis of multiple regression indicates (Table 2) a significant model of the study (F=16.400, p<0.05). The predictive variables of RSE and MPSS are highly associated with each other (R=.637) and contributed to 40.6% (R**2**=.406) change in depression in women with cardiac illness. Results indicate self-esteem to be more influential (B= -.306, beta=-.304, t= -2.257, p<.05) as compared to multidimensional perceived social support (b= -.161, Beta= -.415, t= -3.080, p<0.05) to determine depression in cardiac illness (Table 2). In addition, findings (Table 3) consider significant others (intimate partners) (b = -217, Beta = .285, t = -.2.327, p<0.05) as compared to family (b = -.177, Beta = -.225, t = -1.754, p>0.05) and friends (b =-.033, Beta =-.030, t = -.224, p>0.05) during the stress of their illness in cardiac patients. The predictive variables of RSE and MPSS For cancer patients are also significantly associated with each other (R=.524) and contributed to 27.4% (R**2**=.274) change in depression in women with cancer. Results indicate self-esteem to be a significant predictor of depression in a sample of cancer women (B=-.430, beta=-.130, t=-3.296, p<.05) (Table 5) as compared to multidimensional perceived social support (B=-.080, beta=-.054, t=-1.475, p>.05) to determine the level of depression in patients diagnosed with cancer.

**Table 1**

**Demographic characteristics and level of depression of the women with chronic illnesses (N=102)**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Cardiac** | **Cancer** | **Total** |
| **Ages** | N | % | N | % | N | % |
| 30-40 years | 12 | 23.5 | 21 | 41.17 | 33 | 32.35 |
| 41-50 years | 15 | 29.4 | 13 | 25.5 | 28 | 27.45 |
| 51-60 years | 24 | 47 | 17 | 33.33 | 41 | 40.2 |
|  | ***M SD*** | ***M SD*** | ***M SD*** |
|  | 49 9.512 | 4611.646 | 47.610.681 |
| **Income group** |   |   |   |   |   |   |
| Low | 18 | 35.3 | 21 | 41.2 | 39 | 38.23 |
| Middle | 27 | 52.9 | 21 | 41.2 | 48 | 47.05 |
| Upper middle | 6 | 11.8 | 9 | 17.6 | 15 | 14.72 |
| **Family Structure** |   |   |   |   |   |   |
| Nuclear | 20 | 39.2 | 23 | 45.1 | 43 | 42.16 |
| Joint | 31 | 60.8 | 28 | 54.9 | 59 | 57.84 |
| **Severity Level for Depression** | ***F*** | ***%*** | ***F*** | ***%*** | ***F*** | ***%*** |
| *Mild (5-10)* | 00 | 00 | 00 | 00 | 00 | 00 |
| *Moderate (11-15)* | 11 | 21.5 | 5 | 9.8 | 16 | 15.68 |
| *Moderate- Severe (16-20)* | 15 | 29.5 | 19 | 37.2 | 34 | 15.68 |
| *Sever (21 and above)*  | 25 | 48.9 | 27 | 53.1 | 52 | 50.98 |

**Table 2**

**Summary of coefficients of multiple regression analysis of self-esteem and perceived social support as predictors of depression among women with Cardiac Illness.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | *B* | *SE* | *BETA* | *t* | *P* | *R* | *R2* | *F* | *Df* |
| Constant | 29.161 | 1.777 |   | 16.407 | 0.000 | .637 | .406 | 16.40 |  48 |
| RSE | -.306 | .136 | -.304 | -2.257 | .029 |   |   |   |   |
| MPSS | -.161 | .052 | -.415 | -3.080 | .003 |   |   |   |   |

**Note:** RSE (Rosenberg Self-Esteem), MPSS (Multidimensional Perceived Social Support)

Findings in Table 2(B= -.306, beta= -.304, t=-2.257, p<.05) indicate that one-unit increase in self-esteem, decreases depression seems to 306 units while a unit increase in perceived social support (b= -.161, Beta= -.415, t= -3.080, p<0.05) decreases depression to 161 units.

**Table 3**

**Summary of coefficients of multiple regression analysis of self-esteem and components of social support (Significant Others, Family and Friends) as predictors of depression among women with Cardiac Illness.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Model**1 |  | **Unstandardized Coefficient** | **Standardized Coefficient** | ***T*** | **Sig.** |
|   |   | **B** | **SE** | **Beta** |  |   |
| Constant | 28.696 | 1.817 |   |   | 15.796 | .000 |
| RSESOFAMFRD | -.370-.217-.177.033 | .142.093.101.146 | -.368-.285-.225.030 | -2.605-2.327-1.754.224 | .012.024.086.824 |

**Note:** RSE (Rosenberg Self-Esteem), SO (Significant Others), FAM (Family), FRD (Friends)

Findings in Table 4 show a significant change in depression via self-esteem (b=-.370) and Significant Others as a component of perceived social support show significant effect on depression (b=-.-.217) however, Family (b=-.177) and Friends (b=-.033) in women diagnosed with cardiac illness.

**Table 4**

**Summary of coefficients of multiple regression analysis of self-esteem and perceived social support as predictors of depression among women with Cancer.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | *B* | *SE* | *BETA* | *T* | *P* | *R* | *R2* | *F* | *Df* |
| Constant | 28.949 | 2.295 |   | 12.611 | 0.000 | .524 | .274 | 9.08 |  48 |
| RSE | -.430 | .130 | -.429 | -3.296 | .002 |   |   |   |   |
| MPSS | -.080 | .054 | -.192 | -1.475 | .147 |   |   |   |   |

Predictors: (constants), RSE (Rosenberg Self-Esteem), MPSS (Multidimensional Perceived Social Support Scale)

Findings in Table 4 (B=-.430, beta=-.130, t=-3.296, p<.05) indicate that one-unit increase in self-esteem, decreases depression seems to 430 units while a unit increase in perceived social support (b=-.080, Beta=-.054, t=--1.475, p<0.05) has an insignificant change of 080 units in depression

**Table 5**

**Summary of coefficients of multiple regression analysis of self-esteem and components of social support (Significant Others, Family and Friends) as predictors of depression among women with Cancer.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model**1 |  | **Unstandardized Coefficient** |  | **Standardized Coefficient** |  | ***T*** |  | **Sig.** |  |
|   |   | **B** | **SE** |  | **Beta** |  |  |   |   |   |
| Constant | 29.149 | 2.375 |   |   |   |   | 12.273 |   | .000 |   |
| RSESOFAMFRD | -.433-.112-.006.142 | .133.121.122.130 |   | -.431-.135-.007.139 |  | -3.263.930.051-1.091 |   | .002.357.959.281 |   |

**Note:** RSE (Rosenberg Self-Esteem), SO (Significant Others), FAM (Family), FRD (Friends)

Findings in Table 7 shows a significant reduction in depression via self-esteem (b=-.433) however, the components of perceived social support show non-significant effect on depression (b=-.-112 via Significant Others, b=-.006 via Family and b=-.142 via Friends) in women with cancer.

**DISCUSSION**

This study aimed to elucidate the role of “self-esteem” and “perceived social support” as significant predictors of depression in women diagnosed with chronic illnesses (i.e., Cardiac & Cancer). Analysis revealed that 52% of women diagnosed with breast cancer experience severe levels of depression and about 48% of women with angina experience severe levels of depression. The overall analysis indicates that 15.68% of women diagnosed with chronic illness experience moderate-severe levels of depression (Table 1). These findings are in line with findings of other Asian countries. A study conducted in Thailand [25] showed that 16.7% of women diagnosed with breast cancer reported being depressed. Other studies conducted in Turkey, revealed that 27.7% of women diagnosed with cancer show moderate depression while 19.5% of the females have severe depression [26].

A study conducted by Khan and colleagues in Pakistan showed that women with cardiac problems frequently experience severe levels of depression. Findings of the current study in addition to previous literature by Chen and associates in China indicate that the diagnosis of any chronic illnesses (i.e., cancer) adversely affects mental health such as depression, and also challenges their ability to cope with the diseases. In the Pakistani context, self-esteem and social support have a significant role in mental health and specifically in depression. Findings of the study (see Table 2) show a significant predictive association among variables in women diagnosed with cardiac issues (R=.637), and an overall 40.6% (R**2**=.406) change in depression was contributed by self-esteem and perceived social support with a significant model of the study (F=16.400, p<0.05).

Findings show that both self-esteem and perceived social support have a significant predictive association with depression, however results (B=-.306, beta= -.304, t= -2.257, p<.05) indicate that self-esteem is slightly more influential than perceived social support (b= -.161, Beta= -.415, t= -3.080, p<0.05) to determine depression (see Table 2). When there is a one-unit increase in self-esteem, depression seems to decrease by 306 units while a unit increase in perceived social support decreases depression to 161 units. Study findings are supported by robust pieces of evidence from past researches like Qin and colleagues. Findings of present study (see Table 4) also shows a significant predictive association among variables (R=.52) and an overall 27.4% (R2=.274, F = 9.08, p<0.05) variance. Depression was explained by self-esteem and perceived social support in women with cancer which signifies the fitness of the study model. The coefficients of this model of study highlighted self-esteem to be a significant contributor to depression in women with cancer (B= -.430, beta= -.130, t= -3.296, p<.05) (see Table 5). Self-esteem is believed to be one of the most important factors associated with depression in women diagnosed with cancer [27]. Possible explanations for low level of SE among women could be due to the treatment regime they receive such as “chemotherapies” which alter individual’s organ such as amputation of the breast if women have breast cancer, and other could be significant hair fall. This can not only affect the individual’s self-image but also impact on their social life and other important domains including relationships. This association can be explained in a way that positive self-esteem is linked with mental well-being, pleasure, adaptability in situations, success, accomplishments, and satisfaction. On the other hand, low self-esteem can lead to undesirable consequences like depression.

Taking into account study findings, PSS also exert its part in alleviating depression. On the same account, previous studies conducted found PSS as one of the important factors, if available then it has capacity to produce hope and optimism, which can ultimately affect an individual's health. Individuals with high levels of PSS think that they have potential to take charge and can manage the issues; this can improve their health by reducing the distress related to their illness which later on can have a positive impact on their treatment outcomes [28]. In the context of Pakistan, people prefer to live in joint family setups and look after others' problems. In the face of stressful circumstances, patients need support from family, friends and significant others to manage their conditions and the availability of support contributes to improving psychological well being. If this factor is missing in an individual's life then it can sow the seed of hopelessness and further this could worsen their clinical conditions including depression. Moreover, a deep analysis of the components of PSS among patients with cardiac illnesses in present study shows “significant others” (b = -217, Beta = .285, t = -.2.327, p<0.05) as compared to “family” (b = -.177, Beta = -.225, t = --1.754, p>0.05) and “friends” (b = -.033, Beta =-.030, t = -.224, p>0.05) have considerable role in the face of stressful conditions that was brought by the illnesses.

In contrary to the cardiac patients findings related to women diagnosed with cancer (B=-.080, beta=-.054, t=-1.475, p>.05), reveal that the perception of social support is not very significant in the determination of depression (see Table 5) i.e., there is a very insignificant decrease of 080 units of depression with perceived social support. Findings of present study related to cancer women can be explained that the families or other caregivers get anxious about the diagnosis of illness like cancer therefore, the diagnosed women are mostly not comfortable to seek social support. Women diagnosed with cancer don’t share problems related to the illness with family and friends as they experience them to be anxious [29]. Furthermore, people with chronic health issues such as cancer are going through sufferings and severe depression, and even when they receive support from the environment, they are unable to acknowledge, hence it does not reduce the intensity of illness. They consider social support as sympathy, and get irritable for receiving support and shut down the entry to receive support from the environment. This can be because of the nature of illness where a patient feels helpless and thinks that their life is going to be ended. One of the possible reasons for such findings in a country like Pakistan can be that people with diagnosis of chronic illness may have certain physical limitations and they consider themselves dependent on others. In such conditions, they feel themselves to be a burden on others and worthless and have a fear that other people in family or friends may get judgmental and evaluate them negatively. Most of the sample also shared their feelings like "I am a burden on others and this is the worst condition I have ever gone through", "I prefer to have an end of my life rather than depending on others and to cause extra work for them." Such feelings cultivate helplessness and hopelessness and consequently suffer from depression.

**LIMITATIONS**

Like other studies, present study has few limitations. The tools used in the study are quantitative so the qualitative indicators of these variables should be obtained in future research. Further, this study was conducted using cross sectional design, patients with chronic illnesses (i.e., cardiac & cancer), and the temporal association between the outcome and the exposure could not be determined. And the important limitation is the small sample size, so we recommend inclusion of more females by including male patients with these health conditions and should see the difference between groups on the variables of self-esteem, social support and depression. The differences between cancer as well as cardiac women were not compared for the level of depression, self-esteem and perception of social support.

The effects of different treatments or drugs which have potential impacts on depression were not studied. Women with different types of cancer or heart issues can be studied for further studies. Type, severity and duration of these illnesses can have different impacts on the levels of depression, self-esteem and perception of social support, which is one of the greatest limitations of the study. Future studies may separately see the impact of these chronic illnesses such as, cancer and cardiac illnesses to see their impact on mental health problems.

**CONCLUSIONS**

The findings of the study in line with prior research revealed that self-esteem and perceived social support are significant predictors of depression in women diagnosed with chronic illness. To sum up the study findings it can be stated that the occurrence of intimidating chronic illness in general and cancer and cardiac problems in particular, is alarming all over the world and in Pakistan, it is proliferating very fast. These illnesses have not only limited physical health but also influenced the psychological wellbeing of women. The diagnosis of these illnesses is a stigma in cultures like Pakistan, due to which the diagnosed women critically evaluate themselves and confine their social interactions. So, chronic illness becomes a key stressor to limit self-sufficiency and independence as a consequence of feelings of helplessness and hopelessness. The diagnosed population is thus overwhelmed by irrational thoughts and is predisposed to get negative feedback and to negatively evaluate their abilities. As a result of their self-disparaging thoughts and a strong feeling of inadequacy they mainly isolate themselves from the social connections and show difficulty in gaining satisfactory acceptance and approval in a social group. Thus, low self-esteem and perception of lack of social support is detrimental to well-being and cultivates hopelessness with no interest in life. Based on the findings, understanding these factors can better help planning of treatments for the patients with the prevailing mental health problems associated with the chronic illness.

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**UNDERTAKING FORM**

