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Psychological Determinants of Perceived Quality of Life of Breast Cancer Survivors in Pakistan

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ABSTRACT

Aim of the Study: Study investigate the contribution of psychosocial factors in affecting QoL of BCS. Psychosocial factors encompasses on Psychological Distress Resilience, Body image, self-efficacy, Health Beliefs and Medication Adherence and Doctor-Patient Relationship.

Methodology: A sample of breast cancer survivors (N=150) was recruited using non-probability purposive sampling. The Sample was collected from different public and private sector cancer hospitals of Lahore. The assessment measures included Breast Cancer Patient version QoL (QoL-BC) (Ferrell et al., 1998), Body Image after Breast Cancer Questionnaire (BIBCQ; Baxter et al., 2006), The Breast Cancer Survivor Self efficacy Scale (Champion et al., 2013), Health Beliefs and Medication Adherence in Breast Cancer (HBMABC), The Brief Resilience Scale (Bruce W Smith, 2008), Breast Cancer Prevention Trial (BCPT) Symptom Checklist, Doctor-patient Relationship Questionnaire and Kessler Psychological Distress Scale (Kessler & Mrocezk, 1992).

Findings: QoL was negatively influenced by psychosocial variables such as psychological distress, health beliefs, physical health status, and body image while QoL was positively influenced by resilience, self-efficacy, and doctor-patient relationships. The relationship between psychological distress, health status and body concerns were found to be positive and significant. It found that BCS with higher levels of psychological distress tend to have poor body image while BCS with higher level of resilience tend to have better QoL as resilience provide buffer in managing difficulties of treatment and therapy effects. Self-efficacy moderated between psychosocial constructs and QoL, while doctor patient relationship mediated between psychosocial constructs and QoL among BCS.

Conclusion: This research empirically filled the void and helps to establish interventions to foster positive effects of the dreadful disease and also promote effective living with the course of the breast cancer.

Keywords: Depression; Quality of Life, Breast Cancer Survivors, Psychosocial Determinants.

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1. INTRODUCTION

Psychosocial Determinants are any exposures that may influence bodily health outcomes through psychological mechanisms. Psychosocial factors can include psychological distress, depression or anxiety, and other emotional problems, body image, psychological traits such as resilience, self-efficacy, and social disruptions, all of which can compromise the effectiveness of health care and negatively impact BCS' return to good health status (Macleod & Smith, 2013). BCS go through impaired effects in number of domains (i.e., physical, emotional and social) in all most all stages of their cancer survivorship journey, all of which are recognized components of QoL (Bloom et al., 2014; Burgess et al., 2015). The psychological and psychosocial issues are often undervalued among BCS. During regular oncological follow-up examinations, mental needs of patients living with no current signs of cancer are frequently unnoticed (Yang & Chen, 2012). Psychological consequences include worst body image, lower level of self-efficacy, psychological distress, Depression and anxiety (Goyal et al., 2018).

Breast cancer oncologic treatments result in dramatic changes to women's appearance mostly scarring, hair-loss, loss of the breast and impairment in physical functioning as nausea, fatigue, breast and arm pain, with a marked impact on the way women perceive and conceptualization about their own self. (Ong et al., 2017). Body dissatisfaction was observed as strongest predictor of QoL by Ettridge et al. (2022), they also reported that both negative and positive components of body image are relevant to QoL. Lopes et al. (2018) also reported that Body changes and negative self-evaluation have their effect upon QoL. Carreira et al. (2018) also reported increased risk of anxiety and depression in BCS as compared to other cancers. BCS report more symptoms of anxiety and depression, especially if they have gone through chemotherapy (Lim et al., 2011), with depression and anxiety persisting for a large proportion of women even 5 years after diagnosis and treatment (Burgess et al., 2005). Indeed, more recent studies suggest even longer term effects on mental health, highlighting that as treatment and survival rates increase, so will rates of long-term depression and anxiety in cancer survivors (Niedzwiedz et al., 2019).

Both depression and anxiety comes under the broader construct of psychological distress. Poor QoL was observed in those who have higher psychological distress (Khattak, Sajjad & Naeem, 2012). Breast cancer negatively affect the QoL of the patients, especially the psychological, social and spiritual wellbeing. However, surgical intervention in breast cancer patients led to considerable worsening of the QoL with respect to physical and social wellbeing and increased distress of illness and fear factor (Khan, Zaffar & Mahmood, 2020).Some psychological factors plays an important role.

Ye et al. (2017) discovered that the relationship between stress and QoL was mediated by resilience. Resilient cancer patients really demonstrated better adaptive functioning. (Lam et al., 2017; Dubey et al., 2015). Data showed that cancer patients' perceptions of their QoL were significantly influenced by anxiety, sadness, and self-efficacy (Omran & Mcmillan, 2018).

Self-efficacy affected QoL by reducing perceived stress and increasing QoL (Kırca & Kutlutürkan, 2021). Moreover, lower breast cancer symptom burden and lower cancer-specific distress were linked to higher cancer-relevant self-efficacy (Baik et al., 2020).

A person's BCS journey is unique since it appears to be complex, full of emotions, occasionally remission-related anxieties, and hope for a cure. Physical and mental health are included in the post-diagnosis and treatment phase (Kline et al., 2018; Tindle et al., 2018), and long-term treatment continued by BCS to control their illness and also lower the chance of recurrence. (Colin et al., 2011). BCS may need special treatment during follow-up visits due to their diverse psychiatric, medical, and social difficulties.

Positive patient-physician interactions have been found to enhance patients QoL in chronic illnesses such as cancer. Additionally, physicians encourage patients to express their ideas, opinions, and concerns by providing them with thorough and accurate information regarding the treatment, the prognosis of their

disease, and any adverse effects. Patients' QoL is enhanced as a result of increased patient satisfaction and trust (Dehghan et al., 2018).

Regardless of how long it had been since the diagnosis, higher QoL scores were associated with positive views from the doctors. The results of the study demonstrated that there is a significant relationship between BCS's quality of life and the interactions they have with doctors, primarily based on the attitude of the doctors (Zhou et al., 2014).

Present study aimed to explore the contribution of psychosocial determinants (Psychological Distress, Body Image, Health Beliefs and Medication Adherence, Resilience Self-Efficacy, Doctor Patient Relationship in affecting QoL of BCS.

1.1 Study Aim

The aim was to investigate contribution of psychosocial factors or determinants in affecting QoL of Breast Cancer Survivors (BCS).

1.2 Research Questions

1. How do most Breast Cancer Survivors (BCS) perceive their QoL?
2. What are the relative contributions of psychosocial (psychological distress, health beliefs, medication adherence, body image, resilience),in influencing perceived QoL in BCS?
3. Does patient-doctor relationship mediate the relationship between psychosocial, clinical factors and perceived QoL?
4. Does self-efficacy moderates the relationship between psychological, clinical and perceived QoL in BCS?

2. METHODOLOGY

The study was carried out by using descriptive Cross-Sectional Research Design. Sample was limited to (N=150) due to permission issues. Purposive sampling technique was used for data collection. Female BCS with minimum age of 18 and above were recruited as referrals from oncologists/ General Physicians during their follow-up visits from the public and private hospitals. Following Inclusion & Exclusion Criteria was followed;

2.1 Inclusion Criteria

BCS with histological confirmed diagnosis of breast cancer (stage I to III) Currently on a schedule of regular follow-up appointments, with Adjuvant or Neo-Adjuvant Therapy, having their last chemo session at least one month prior to follow-up checkup and Radiotherapy minimum one week prior to follow-up checkup.

2.2 Exclusion Criteria

BCS with advance stage metastasis cancer less than one year into their survivorship journey, with history of another cancer with no formal education (who could not read and write), Pregnant women and having physical or psychological Disorders.

2.3 Assessment Measures

After initial Screening, Demographic Information included personal, familial, educational and occupational characteristics and Clinical information which was comprised upon general health Indicators and disease specific information was gathered along with following assessment measures which were translated into native (Urdu) language.

2.4 Data Collection Tools

2.4.1 Quality of Life (QoL-BC)

Ferrel and Grant (1998) developed breast cancer patient quality of life (QoL-BC). There are 46 questions total, which are grouped in an ordinal scale. The 46 questions are divided into four categories: physical well-being (8 items), psychological well-being (22 items), social well-being (9 items), and spiritual well-being (14 items). The four categories of QoL are physical well-being, psychological well-being, social well-being, and spiritual wellbeing (7 items).

2.4.2 Body Image after Breast Cancer Questionnaire (BIBC-Q)

Body Image after Breast Cancer Questionnaire (BIBC-Q) which was developed by (Baxter et al., 2006). It is a multidimensional scale created to evaluate how breast cancer affects how people perceive their bodies. The survey comprises 45 general questions, two optional questions for women who have had one or both breasts removed, and six questions for those who have not had either breast removed. Six scales make up the BIBCQ questionnaire: (1) vulnerability (V), (2) body stigma (BS), (3) a scale of limitations (L), (4) concerns with the body (BC), (5) a scale of transparency (T), and (6) concerns with the arm (AC), which measures concerns with symptoms pertaining to the arm and its appearance.

2.4.3 Breast Cancer Survivor Self-Efficacy Scale (BCSSES)

Breast Cancer Survivor Self-Efficacy Scale by (Champion et al., 2013). It is a one-dimensional, self-report scale with 11 items that measures perceived capacity to control quality of life issues and symptoms brought on by breast cancer diagnosis and treatment. A 5-point Likert-type scale with a range of 1 (strongly disagree) to 5 is employed (strongly agree). A total score is generated by adding the self-efficacy scores, with higher scores indicating greater self-efficacy. Its accuracy in predicting BCS was .89.

2.4.4 Health Beliefs and Medication Adherence in Breast Cancer (HBMABC)

A screening instrument based on the Champion's Health Belief Model Scale (Brier et al., 2016). A Likert-type scale with a range of 1 (meaning strongly disagree) to 5 is used for each question (indicating strongly agree). The three factors such as perceived susceptibility, perceived rewards, and perceived barriers, mapped onto the theoretical frameworks that guided the creation of the HBMABC.

2.4.5 The Brief Resilience Scale (BRS)

The Brief Resilience Scale constructed by (Smith et al., 2008). The six items on the brief resilience scale (BRS) range from strongly disagree to strongly agree on a 5-point Likert scale.

24.6 Doctor-Patient Relationship Questionnaire (DPRQ-9)

The degree of the doctor-patient relationship was evaluated using the Doctor-Patient Relationship Questionnaire (Van der Feltz-Cornelis et al., 2004). It is a nine-item scale that provides a succinct assessment of the therapeutic elements of the patient-physician relationship in primary care. The following answer scale with a 5-point Likert-type style was used: 1 for completely inappropriate, 2 for somewhat inappropriate, 3 for appropriate, 4 for generally inappropriate, and 5 for entirely appropriate.

2.4.7 Breast Cancer Prevention Trial (BCPT)

Breast Cancer Prevention Trial (BCPT) developed by (Stanton et al., 2005) Prevention from BC or those at risk for the disease can quantify their physical symptoms using the term trial. It is a self-administered questionnaire that uses a 5-point Likert scale, from 0-very much so to 4-extremely, to evaluate side effects. It includes the following elements: (1) hot flashes, (2) nausea, (3) bladder control, (4) vaginal issues, (5) musculoskeletal discomfort, (6) cognitive issues, (7) weight issues, and (8) arm issues.

Table 1: *Demographic Characteristics of Breast Cancer Survivors (N=150)*

Variables	*M(SD)*	*f (%)*
Age	43.8(9.24)	
Education		
No Formal Schooling		33 (20.9%)
High School		56 (37.3%)
Graduation		50 (33.3%)
Post-Graduation		11 (7.33%)
Husband Education		
No Formal Schooling		30(19.0)
High School		33(21%)
Graduation		18(11.4%)
Post-Graduation		25(15.9%)
Preferred Language		
Urdu		102 (64.4%)
English & Urdu Both		48 (30.4%)
Work Status		
Non-working		93(58.9%)
Working		57 (36.1%)
Family Background		
Rural		91 (57.6%)
Urban		59 (37.3%)
Family System		
Nuclear		88 (55.7%)
Joint		62 (39.2%)
Siblings	4.40(1.67)	
Birth Order		
Only		2(1.3%)
First Born		31(19.6%)
Middle Born		75(47.5%)
Last Born		42(26.6%)
Monthly Family Income	88351.36(127875.87)	
Marital Status		
Engaged		0(0.0%)
Married		105 (70%)
Not Married		20 (12.7%)
Divorced/Separated		25 (16.6%)

Note: Education; 1=not educated, 2=high school, 3=graduation, 4=post-graduation; Husband education; 1=not educated, 2=high school, 3=graduation, 4=post-graduation; Preferred language; 1=Urdu, 2=English and Urdu Both; working Status; 1=non-working, 2=working, 3=housewife; Family background; 1=rural, 2=urban; Family system; 1=nuclear, 2=joint; Marital status; 1=married, 2=unmarried,3=others.

3. RESULTS

3.1 Bivariate Correlation (Psychosocial Factors & QoL)

To assess the relationship between psychological distress, body image, health beliefs, resilience, self-efficacy, health status, doctor-patient relationship and QoL, Pearson Product Moment Correlation was run in order to examine the nature and direction of relationship between all study constructs (See Table 2).

Table 2

Bivariate Correlation between Psychological Distress, Body Concerns, Health Beliefs, Resilience, Self-efficacy, Health Status, Patient Doctor Relationship and Quality of Life in Women with Breast Cancer (N 150)

Variables	***2***	***3***	*4*	*5*	*6*	*7*	***8***	***9***	***10***	***11***	***12***	***13***	***14***	***15***	*16*	*17*	*18*	*19*
1. Psychological Distress	.217**	.254**	.249**	.276**	.056	.352***	.265**	-.353***	.140	-.307***	-.301***	.464***	-.261**	-.559***	-.423***	-.459***	-.287***	-.251**
2. Body Concerns	-	.269**	.198*	.330***	.199*	.341***	.169*	-.227**	.369***	-.185*	-.450***	.026	-.278**	-.261**	.030	-.266**	-.116	-.471***
3. Transparency		-	.297***	.692***	.454***	.467***	.417***	.025	.206*	-.182*	-.250**	.107	-.281**	-.403***	.056	-.404***	-.482***	-.301***
4. Arm concerns			-	.304***	.043	.267**	.073	-.056	.167*	-.267**	-.249**	.232**	-.360***	-.233**	.025	-.239**	-.182*	-.326***
5. vulnerability				-	.524***	.551***	.517***	-.167*	.440***	-.324***	-.367***	.136	-.219**	-.516**	-.062	-.536***	-.526***	-.299***
6. Body Stigma					-	.411**	.299***	-.091	.219**	-.182*	-.200*	-.038	-.147	-.242**	.160	-.304***	-.303***	-.236**
7. Limitation						-	.438***	-.260**	.317***	-.473***	-.419***	.139	-.406***	-.524***	-.110	-.408***	-.554***	-.460***
Health Beliefs							-	-	-	-	-	-	-	-	-	-	-	-
8. Perceived Susceptibility							-	-.156	.376***	-.289***	-.289***	.077	-.185*	-.392***	-.152	-.371***	-.371***	-.127
9. Perceived Benefits								-	-.186*	.468***	.459***	-.174*	.354***	.502***	.242**	.362***	.231**	.450***
10. Perceived Barriers									-	-.375***	-.460***	-.228**	-.303***	-.374***	-.149	-.311***	-.221**	-.429***
11. Resilience										-	.610***	-.083	.530***	.614***	.162*	.474***	.444***	.548***
12. Self-efficacy											-	.066	.585***	.587**	-.013	.450***	.346***	.741***
13. Health Status												-	.039	-.193*	-.246**	-.190*	-.147	.048
14. Patient Doctor Relationship													-	.468***	-.042	.425***	.229**	.573***
15. Quality of Life														-	.460***	.878***	.724***	.520***
16. Physical Wellbeing															-	.218**	.152	-.110
17. Psychological Wellbeing																-	.647***	.397***
18. Social Concerns																	-	.239**
19. Spiritual Wellbeing																-		-

**p<.05.,* ***p<.01,* *p<.001*

The results showed that psychological distress was found to be significantly positively associated with body concerns perceived susceptibility and health status while it was found to be significantly negatively correlated with perceived benefits, resilience, self-efficacy, doctor patient relationship and QoL. Resilience was also found to be significantly positively associated with, self-efficacy, patient doctor relationship and quality of life. Self-efficacy was found to be significantly positively associated, patient doctor relationship and QoL. Health status was significantly negatively correlated with physical and psychological wellbeing, while patient doctor relationship was significantly positively associated with QoL in women with BC.

3.2 Hierarchal Multiple Linear Regression Analysis (Psychosocial Factors & QoL)

Table 3: *Hierarchal Multiple Linear Regression Analysis Predicting Quality of Life through Psychological Distress, Body Concerns, Health Beliefs, self-efficacy, resilience,Patient Doctor Relationship, Demographic and Clinical Factors (N = 150)*

	Quality of Life		
	ΔR2	**β**	***SE***
Step I		-	-
Age	.112***	.22*	.12
Education		.16	.14
Family System		.07	.03
Family History		-.29**	.16
Diagnosis		-.21*	.12
Stage		-.26*	.16
Co-morbidity		-.23*	.15
Step II	.190***		
Psychological Distress		-.32***	.18
Body Concerns		-.28**	.15
Perceived Susceptibility		.07	.09
Perceived Benefits		.32**	.18
Perceived Barriers		-.21*	.12
Resilience		.33**	.19
Self-efficacy		.12	.10
Physical Health Status		-.25*	.13
Patient Doctor Relationship		.34***	.19
Total R^2	.302***		

*p<.05, **p<.01, ***p<.001

The results of hierarchical multiple linear regression analysis showed that after controlling for the effect of demographic and clinical factors in step I, the model explained 11.2% of variance for women with breast cancer. Findings showed that age, family system, family history, diagnosis, comorbidity and stage were significant predictors of QoL.

Whereas the psychological distress body image concerns, health beliefs (perceived susceptibility, benefits and barriers), resilience, self-efficacy and physical health status were entered in step II. The model account for 19 % of variance for quality of life. Findings suggested that psychological distress, body image concerns, perceived susceptibility, perceived barriers and physical health status were found to be significant negative predictors of QoL. Likewise, perceived benefits, doctor patient relationship, and resilience were significant positive predictors of QoL for women with BC.

3.3 Moderation and Mediation Analysis

The study of the underlying causal mechanisms and processes by which psychosocial factors affect health is becoming more and more important as the science of health psychology develops. Attention to additional ("third") variables that can clarify how two variables are related is necessary to answer research questions that inquire how, when, for whom, which, and under what circumstances. This in-depth analysis of the relationships between variables includes, for instance, the moderation and mediation processes (MacKinnon & Luecken, 2018). For this purpose, Structural equation model (SEM) using Partial least squares (PLS), especially Smart PLS v. 4.0 (Ringle et al., 2022), was employed to estimate the moderating role of self-efficacy was estimated between psychological distress, body concern, health beliefs, resilience and quality of life among women with breast cancer. Further mediating role of doctor patient relationship between psychological distress, body concern, health beliefs and quality of life among women with breast cancer.

PLS has several advantages that make it more suitable for the current investigation, including less stringent statistical assumptions, such as a smaller sample size, and the capacity to estimate complicated models such as mediation and moderation (Astrachan et al., 2014). To estimate the statistical significance of the structural model for path coefficients, a 500 bootstrapped sample was prepared for standard errors and t-statistics.

3.4 Self-Efficacy and QoL

According to previous research, cancer patients who have higher self-efficacy are more likely to use productive coping mechanisms and are more persistent in their efforts to achieve the desired psychosocial outcomes such as better adjustment and QoL and medical outcomes such as fewer and/or less intense symptoms and side effects (Heitzmann et al., 2011). Current study explored self-efficacy extension role is as a moderator between psychosocial determinants and QoL.

3.5 Moderation Analysis

It was hypothesized that self-efficacy is likely to moderate the relationship between psychological distress, body concern, health beliefs, resilience, physical health status and QoL among women with BC.

Figure 1

Moderation Model for Psychological Distress, Body Concern, Health Beliefs, Self-efficacy and Resilience, Physical health status Quality of Life among Women with Breast Cancer.

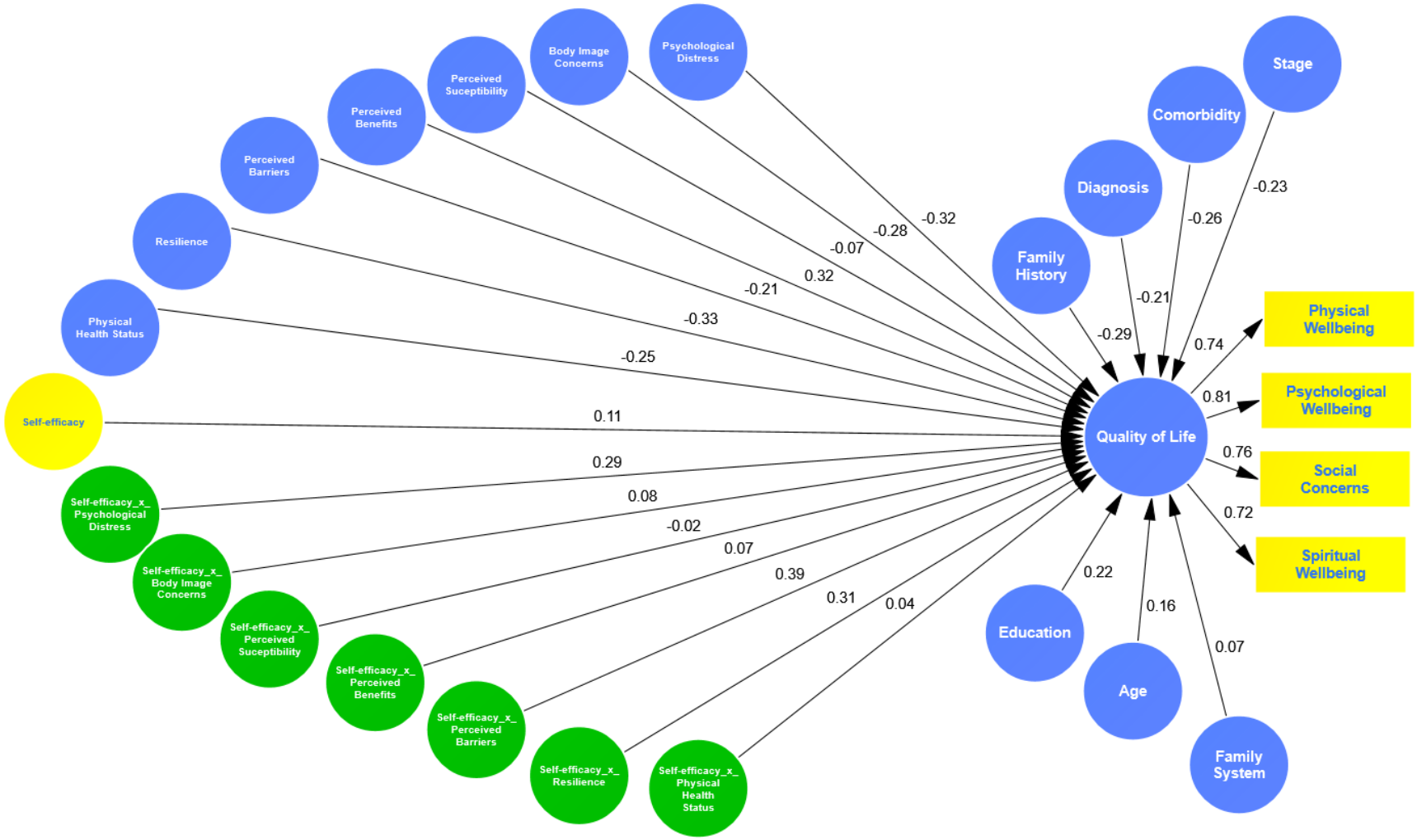


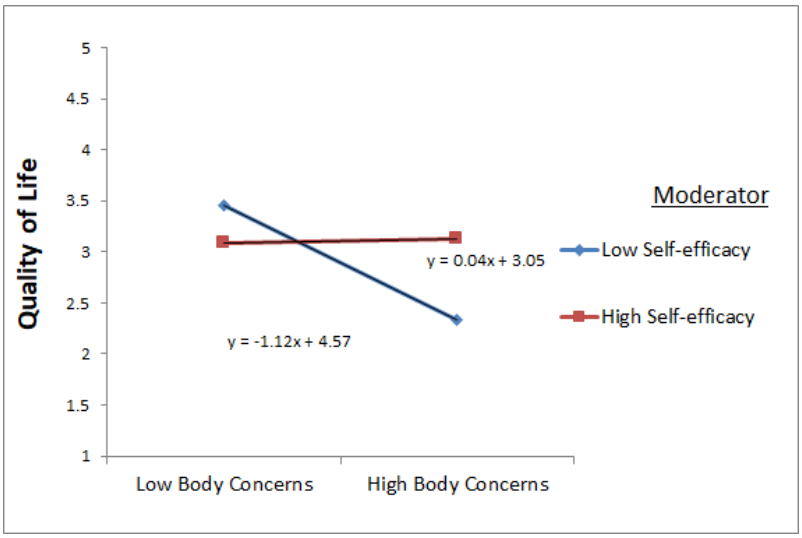
Table 4: *Moderating Effect of Self-efficacy between Psychological Distress, Body Concerns, Health Beliefs, Resilience, Physical Health Status, and Quality of Life (N =150)*

Variables	Quality of Life	
	β	***SE***
Main Effect for Predictors		
Psychological Distress	-.32***	.18
Body Concerns	-.28**	.15
Perceived Susceptibility	.07	.09
Perceived Benefits	.32**	.18
Perceived Barriers	-.21*	.12
Resilience	.33**	.19
Physical Health Status	-.25*	.13
Main Effect for Moderators		
Self-Efficacy	.11	.09
Interaction Effect		
Psychological Distress_X_ Self-Efficacy	.29*	.13
Body Concerns_X_ Self-Efficacy	.08	.07
Perceived Susceptibility_X_ Self-Efficacy	-.02	.03
Perceived Benefits_X_ Self-Efficacy	.07	.09
Perceived Barriers_X_ Self-Efficacy	.39***	.19
Resilience _X_ Self-Efficacy	.31**	.18
Physical Health Status _X_ Self-Efficacy	.04	.06
Covariates	-	-
Age	.22*	.12
Education	.16	.14
Family System	.07	.03
Family History	-.29**	.16
Diagnosis	-.21*	.12
Stage	-.26*	.16
Co-morbidity	-.23*	.15
Total R^2	.303***	

*Note: *p*<.05, ***p*<.01, ****p*<.001

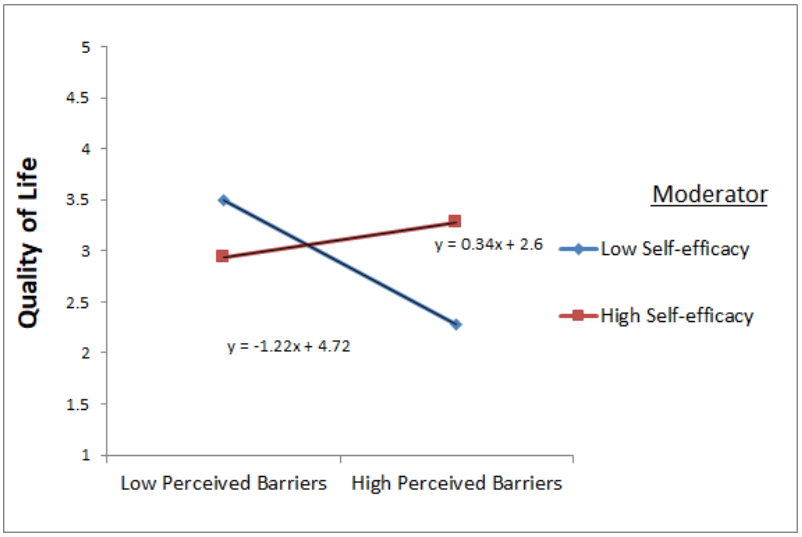
The finding of Main effect showed that psychological distress, body concerns and perceived barriers were found to be significant negative predictors of quality of life. While perceived benefits and resilience were found to be significant positive predictors of QoL. The results of interaction effect for psychological distress and self-efficacy, and perceived barriers and self-efficacy, and resilience and self-efficacy were found to be significant with QoL of women with BC (see figure 2, 3 and 4)

Figure 2: Psychological Distress and Self-efficacy on Quality of Life



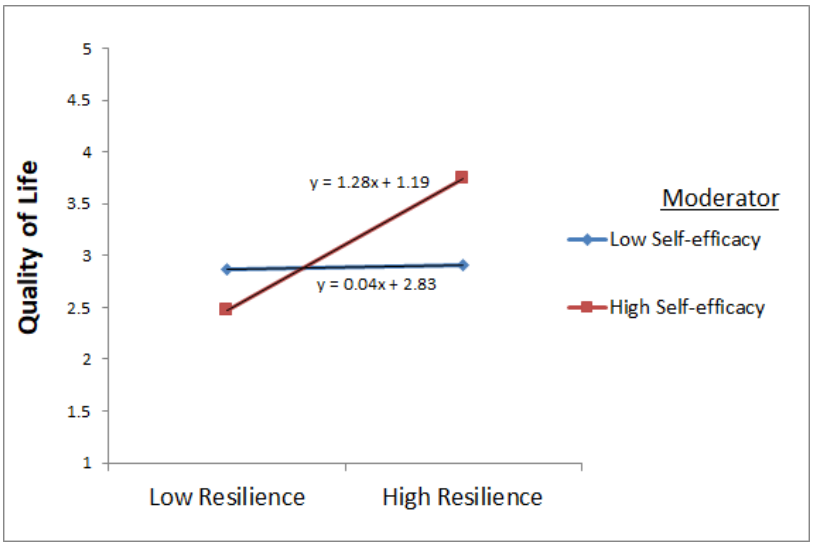
The above plot showed that the nature of relationship between body concerns and QoL become negative at the low level of self-efficacy of BCS.

Figure 3: Perceived Barriers and Self-efficacy on Quality of Life



The above plot showed that the nature of relationship between perceived barriers and QoL become positive at the high level of self-efficacy of BCS.

Figure 4: Resilience and Self-efficacy on Quality of Life



The above plot showed that the nature of relationship between resilience and QoL become positive at the high level of self-efficacy of BCS.

3.6 Doctor-Patient Relationship & QoL

One of the key contextual elements influencing the health outcomes of persons living with chronic illnesses such as BC is the doctor-patient interaction (Farin & Nagl, 2013). Current study explored doctor-patient relationship extension role as a mediator between psychosocial determinants and QoL as previous researches indicated that satisfactory or dissatisfactory doctor patient relationship tend to influence the other psychosocial factors and perceptions of QoL.

3.7 Mediation Analysis

It was hypothesized that doctor patient relationship is likely to mediate the relationship between psychological distress, body concern, resilience, health beliefs and quality of life among women with breast cancer**.**

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Figure 5:

Statistical Model of Mediation Analysis

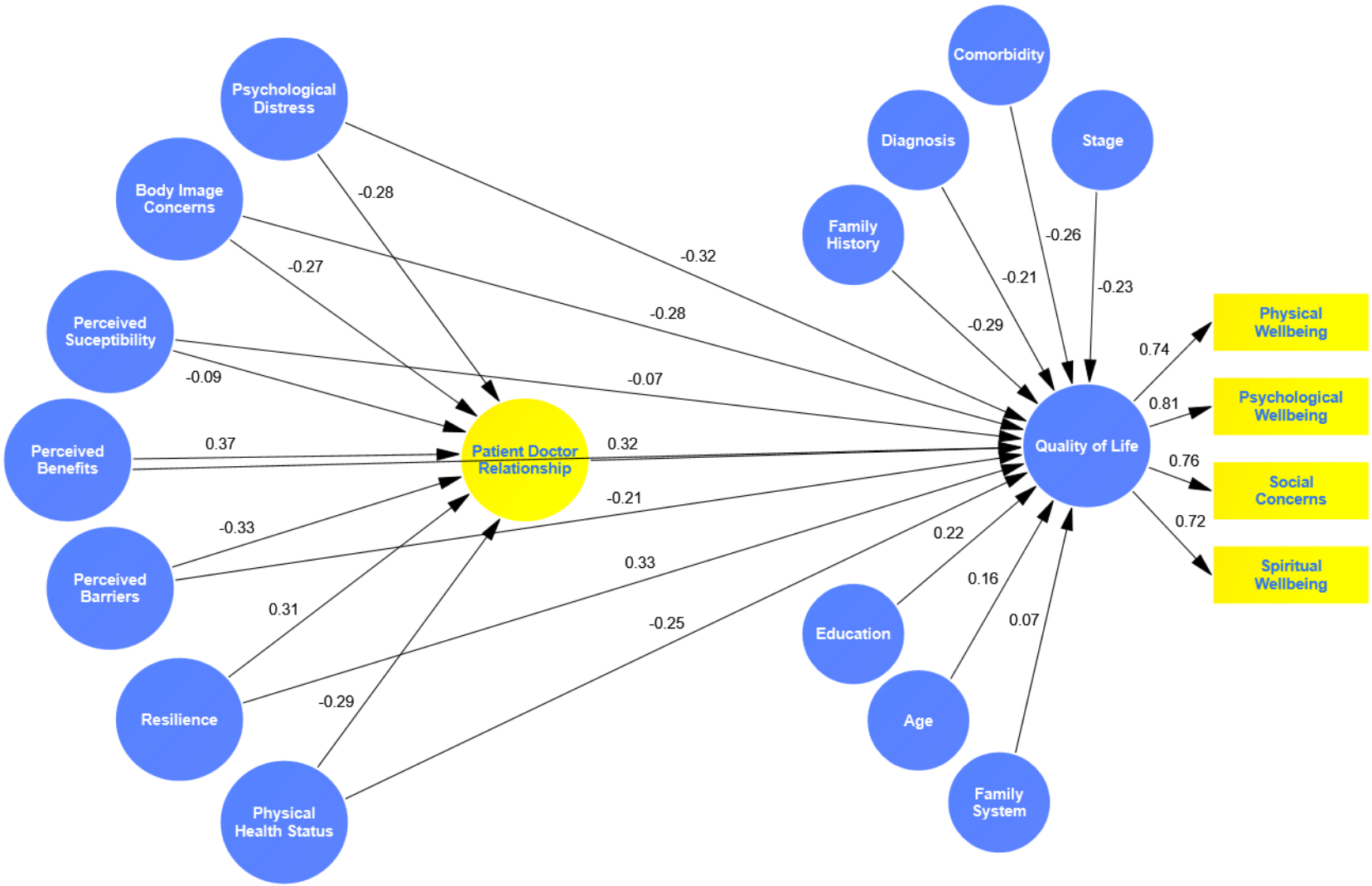

Table 5: *Direct Effect for Psychological Distress, Body Concerns, Health Beliefs and Patient Doctor Relationship, Demographic and Clinical Factors and Quality of Life (N - 150)*

Predictors	**Mediators**		**Outcome Variables**	
	Patient Doctor Relationship		**Quality of Life**	
	B	***SE***	**β**	***SE***
Psychological Distress	-.28**	.16	-.32***	.18
Body Concerns	-.27**	.14	-.28**	.15
Perceived Susceptibility	-.09	.10	.07	.09
Perceived Benefits	.37***	.20	.32**	.18
Perceived Barriers	-.33***	.17	-.21*	.12
Resilience	.31**	.21	.33**	.19
Physical Health Status	-.29**	.17	-.25*	.13
Patient Doctor Relationship	-	-	.34***	.19
Covariates	-	-	-	-
Age	-	-	.22*	.12
Education			.16	.14
Family System	-	-	.07	.03
Family History	-	-	-.29**	.16
Diagnosis	-	-	-.21*	.12
Stage	-	-	-.26*	.16
Co-morbidity			-.23*	.15
Total R^2	.297***		.308***	

*p<.05, **p<.01, ***p<.001

3.8 Direct Effect

The finding of direct effect showed that psychological distress, body concerns, perceived barriers, and physical health status were found to be significant negative predictor of patient doctor relationship and QoL. While perceived benefits, patient doctor relationship, and resilience were found to be significant positive predictors of QoL.

Table 6: *Indirect Effect for Patient Doctor Relationship between Psychological Distress, Body Concerns, Health Beliefs and Quality of Life (N = 150)*

Predictors	**Quality of Life**	
	β	***SE***
Psychological Distress	-.24*	.13
Body Concerns	-.21*	.11
Perceived Susceptibility	.04	.03
Perceived Benefits	.26**	.14
Perceived Barriers	-.21*	.12
Resilience	.22*	.15
Physical Health Status	-.18	.16

*p<.05, **p<.01, ***p<.001

3.9 Indirect Effect

Indirect effect showed that Patient Doctor relationship significantly mediate the relationship between psychological distress, body concerns, perceived barriers, perceived benefits, resilience and QoL.

4. DISCUSSION

Psychosocial variables are reliably linked to both improving and declining physical/functional, psychological, emotional, social, and spiritual well-being trajectories (Goyal et al., 2018). It was also revealed that BCS gone through substantially greater levels of psychological suffering than the average population (Kang et al., 2018). In current study Psychological distress, body image concerns, perceived susceptibility, perceived barriers and physical health status were found to be significant negative predictors of QoL. Psychological distress is a broader construct encompasses both depression and anxiety, higher psychological distress leads to poor QoL among BCS (Khattak et al., 2012). These findings are also validated by recent indigenous research (Azam et al., 2022).

BCS experienced various forms of body image issues as a consequence of BC treatment (Barthakur et al., 2017). In current study women with poor body image reported poor QoL. Body dissatisfaction was observed as strongest predictor of QoL by Ettridge et al. (2022), they also reported that both negative and positive constituents of body image are relevant to QoL. Lopes et al. (2018) also reported that Body changes and negative self-evaluation have their effect upon QoL. Apart from negative factors resilience, self-efficacy and doctor patient relationship found to be significant positive predictor of QoL in current study.

Resilience is the factor that most correlated with health outcomes (Macia et al., 2021). Resilience was observed as significant independent predictor of HRQoL as it had significant direct effects on HRQoL (Zhou et al., 2022). It significantly predicted greater levels of perceived growth and HRQoL (Tu et al., 2020). Some researchers discovered that the amount of resilience was positively connected with HRQoL in BC women, and that a higher level of resilience will improve patients' QoL and help them recover from the disease more rapidly (Dimitrovska et al., 2015).

Self-efficacy seemed to have a positive effect on different health behaviors and building in compliance with cancer treatment along with good QoL. Self-efficacy may act as a buffer between stressful events like breast cancer diagnosis and health outcomes like QoL (Henry 2011). It is linked to mental well-being in patients with cancer (Rogers et al., 2018). In current study self-efficacy moderated the relationship between psychological distress, body concern, health beliefs, resilience, physical health status and QoL among women with BC. Self-efficacy affected QoL by reducing perceived stress and increasing QoL (Kırca & Kutlutürkan, 2021). When BCS has a high level of self-efficacy, the nature of the relationship between resilience and QoL becomes favourable. Karademas et al. (2022) conducted a study which revealed that self-efficacy moderated the relationship between resilience and QoL among BCS.

Doctor patient relationship mediated the relationship between psychological distress, body concern, resilience, health beliefs and QoL among women with breast cancer. Different aspects of the physician-patient relationship were statistically and clinically relevant predictors of HRQoL (Farin & Nagl, 2013). The quality of the doctor-patient connection is related to functional health (Olasien et al., 2020). The study's findings revealed that doctor-patient communication has a substantial relationship with BCS QoL, which is primarily determined by the doctors' attitude (Zhou et al., 2014). Results from another study by Yeom and Heidrich (2013) showed that perceived communication with healthcare providers about symptoms played a mediating role, indicating that patient-provider communication is crucial to BCS QoL.

5. CONCLUSION

Psychosocial determinants such as psychological distress, body image, health beliefs and physical health status were negatively associated with quality of life while resilience, self-efficacy and doctor patient relationship had positive associations with QoL. Psychological distress was found to be significantly positively associated with body concerns perceived susceptibility and health status, as BCS with high psychological distress observed to had poor body image. BCS with higher level of resilience found to have better QoL as resilience provide buffer in managing difficulties of treatment and therapy effects. In

this chapter the effect of demographic and clinical variables are controlled to explore unique contribution of psychosocial constructs and role of adding psychosocial constructs as moderator and mediator were also analysed which revealed self-efficacy moderated between psychosocial constructs and QoL of BCS while doctor patient relationship mediated between psychosocial constructs and QoL among BCS.

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Conflict of Interest

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