

IMPACT OF PERCEIVED STRESS ON COPING STYLES AMONG CANCER PATIENT

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Pervisha Javed**Abstract***Objective: Current study aims to explore the relationship between perceived stress and coping among cancer patient.**Methods: The sample of present study consist of two hundred participants. Purposive sampling techniques was used to collect data from participants (N = 200). The respondents were both male and female, male (n = 100) and female (n = 100) having age range 20 to 50 years. Detailed questionnaire is used and it includes Perceived Stress Scale (PSS) by Cohen, Kamarck, and Mermelstein (1983) and Brief Coping Scale (Brief-COPE) developed by Carver (1997).**Results: The study results findings suggest that perceived stress significantly negatively predicts coping styles ($\beta = -.22, p < .01$).**Implications: The findings of this study have important implications for both research and practice. First, the evidence that perceived stress negatively predicts coping highlights the urgent need for targeted psychological interventions among cancer patients. Stress management programs, such as mindfulness-based stress reduction and cognitive-behavioral therapy, could be integrated into cancer care to enhance coping resources.***INTRODUCTION**

Cancer is a potentially fatal disease that can affect a person's physical, functional, psychological, cognitive, social, economic, and spiritual well-being (Molina et al., 2014). The diagnosis, treatment and after effects of cancer are viewed as negative experiences. For many people, they constitute major pressures, and for certain people, the diagnosis of cancer is a terrible event (Koopman et al., 2002). Researchers have increasingly focused on understanding the psychological issues that cancer patients face (Holland & Alici, 2010).

Stress is a universal human experience that affects individual across all stages of life. Perceived stress is the feelings or thoughts a person has about how much stress they are going through at a certain time or through a specified period of time (Lazarus, 1984).

Babore et al. (2020) characterized stress as mental pressure and tension, which can originate from either internal personal perceptions or other factors such as the external environment. Stress can be external, originating from environmental sources or internal causing anxiety and negative emotions like press, pain and sadness. This can lead to serious psychological disorders like post-traumatic stress disorder (PTSD; Tse et al., 2007). People experience stress when they lack necessary resources to cope with challenges such as demanding stimuli, individuals or situations, leading them to perceive these as threats (Lucas et al., 2015).

Perceived stress refers to the overall perceived difficulty of one's life without focusing on specific events or stressors. Since the cancer experience is

integrated into a patients daily life rather than occurring in isolation, accessing their perception of stress is essential (Ravindran et al., 2019). Perceived stress should not be interpreted as an objective measure of stress. At the primary level, two factors, positive and negative stress were identified while perceived stress emerged as a second order construct among breast cancer patients (Golden-Kreutz et al., 2004). As a result, there may be differences between the dynamics of perceived stress and the objective definition of stress. Perceived stress refers to an overwhelming, unpredictable or uncontrollable aspect of life –an unavoidable part of human existence that impact both psychological and physical health (Cohen et al., 1983).

Coping mechanisms refer to the cognitive and behavioral strategies individuals employ to handle the demands of stressful situations, whether those demands arise from within themselves or from external circumstances (Wood 2007). Patients and survivors of cancer face numerous physical and psychological challenges. Ravindran et al. (2019) indicated that cancer patients reported lower quality of life, higher psychological distress and a greater use of maladaptive coping mechanisms compared to survivors. Furthermore, among cancer survivors, a significant negative correlation was found between hopelessness and quality of life.

Patients and survivors of cancer face numerous physical and psychological challenges. Ravindran et al. (2019) a cross sectional study was conducted to evaluate perceived stress, coping strategies, quality of life (QOL) and hopelessness among cancer patients and survivors. The study also examined the relationship between perceived stress and these psychological factors. Using a purposive sampling technique data were collected from February to May 2018 in the oncology department of multispecialty tertiary care teaching hospital. The sample consisted of 30 participants including 15 cancer patients and 15 cancer survivors aged between 30 and 60 years. Participants completed the Beck hopelessness scale, coping checklist, quality of life- cancer questionnaire and the perceived stress scale. Finding indicated that cancer patients reported lower quality of life, higher psychological distress and a greater use of maladaptive coping mechanisms compared to survivors. Furthermore among cancer survivors, a significant

negative correlation was found between hopelessness and quality of life.

Rationale

The current study addresses a significant gap in understanding the culturally specific psychological processes underlying stress and coping in cancer patients. In a country where social support networks, religious beliefs and strong family ties play a crucial role in coping with illness, this study aims to examine how Pakistani cancer patients' assessments influence their stress and coping outcomes.

Objectives

Current study focuses on the below mentioned objectives

1. To explore the relationship of perceived stress and coping among cancer patients.
2. To explore demographic differences among study variables (perceived stress, coping, social support, and resilience).

Hypotheses

Current study has following hypotheses

1. Perceived stress would be significant negative predictor of coping among cancer patients.
2. There will be significant gender differences among the variables of study

Method

Detailed questionnaire is in the supplement and it includes Perceived Stress Scale (PSS) by Cohen et al. (1983) and Brief Coping Scale (Brief-COPE) developed by Carver (1997),

2.1 Participants

The sample of present study consist of two hundred participants. Purposive sampling techniques was used to collect data from participants (N = 200). The respondents were both male and female, male (n = 100) and female (n = 100) having age range 20 to 50 years. To make sure that the study sample provides a fairly good sample representation of the target population, certain inclusion factors were considered. All cancer patients were the part of study with age 20 to 50 years.

2.2 Instruments

The survey was divided into three main parts: the first part gathered demographic information from participants; the second part measured perceived stress using the Perceived Stress Scale (PSS); and the third part examined coping using the Brief Coping Scale (Brief-COPE).

Perceived stress scale (PSS-10)

The Perceived Stress Scale (PSS-10), developed by Cohen et al. (1983), was used to quantify the stress level variable. The scale was designed to assess a person's potential response to a stressful situation. The scale consists of ten self-reported elements. Each question has a value between 0 (never) and 4 (very often), with a possible score range of 0 to 40. The scores for items 4, 5, 7, and 8 are reversed score items.

Multidimensional scale of perceived social support (MSPSS)

A brief tool called the Multidimensional Scale of Perceived Social Support ("MSPSS") was created by Zimet et al. (1990) to measure perceived social support. It consists of three subscales family support, friends support and significant others support. There are twelve items on this instrument. This scale measures perceived social support on 12 point likert type response format ranging from 1 (strongly disagree) to 7 (strongly agree). The range of total scores is 12 to 84.

2.3 Procedure

The current study was conducted in accordance with the ethical principles established by the American Psychological Association. The University of Sargodha's institutional review board officially approved the study's conduct. After getting permission to use the scales from respective authors the procedure of data collection was started. Subjects of the study were contacted immediately upon consenting. Once it was established that they satisfied the inclusion criteria, they were made aware of the

current study's objectives. They were informed about the selection process and asked to take part. Additionally, they were ensured regarding the privacy and confidentiality of their responses and survey via Google forms were sent through Whatsapp and social media sites. The participants were also given an explanation of the study's objectives and asked to ask any questions they might have had. The Google forms were now given to the participants through Whatsapp and other social media sites, after they granted their consent. Online survey contained the core study instruments, informed consent, and the demographic sheet. In the end, profound appreciation was given to each and every participant for their tolerance, time, and sharing of expertise. In order to clean them up, the collected data were also carefully reviewed. Surveys with haphazard or insufficient replies were removed.

2.4 Statistical Analysis

Statistical Product and Services Solution (SPSS) 26 V was used to analyze the current study results. Several analyses, as correlational and regression analyses, were carried out to study the relationship among the variables.

Result

The sample included 200 participants. Gender was evenly split with 100 males (50%) and 100 females (50%). Age distribution showed 86 participants (43.0%) aged 20-35 and 114 (57.0%) aged 36-50. Education levels were 45 (22.5%) matric, 47 (23.5%) intermediate, and 106 (53.0%) graduation. Residence was 130 (65.0%) urban and 70 (35.0%) rural. Family system included 91 (45.5%) extended and 109 (54.5%) nuclear. Marital status was 114 (57.0%) married and 86 (43.0%) unmarried. Cancer types were 41 (20.5%) breast, 15 (7.5%) lungs, and 58 (29.0%) blood, with additional types: 2 (1.0%) thyroid, 28 (14.0%) stomach, 28 (14.0%) liver, 12 (6.0%) bone, 5 (2.5%) uterus, and 11 (5.5%) kidney. Family history of cancer was 86 (43.0%) yes and 114 (57.0%) no. All the results are reported in Table 1.

Table 1: Frequency and Percentage of Participants (N = 200)

Variables	f	(%)
Gender		
Male	100	50
Female	100	50
Age		
20-35	86	43.0
36-50	114	57.0
Education		
Matric	45	22.5
Intermediate	47	23.5
Graduation	106	53.0
Higher	2	1.0
Residence		
Urban	130	65.0
Rural	70	35.0
Family System		
Extended	91	45.5
Nuclear	109	54.5
Marital Status		
Married	114	57.0
Unmarried	86	43.0
Type of Cancer		
Breast	41	20.5
Lungs	15	7.5
Blood	58	29.0
Thyroid	2	1.0
Stomach	28	14.0
Liver	28	14.0
Bone	12	6.0
Uterus	5	2.5
Kidney	11	5.5
Family History of Cancer		
Yes	86	43.0
No	114	57.0

Alpha reliabilities demonstrates a considerably high alpha reliability, mean, standard deviation, minimum, and maximum values. Coefficient for perceived stress was ($\alpha = .75$) and for coping ($\alpha = .84$).

Table 2: Descriptive Statistics and Alpha Reliabilities for All the Variables of the Study (N = 200)

Scales	Item	M	SD	α	Range
PSS	10	14.55	6.87	.75	12-35
COPE	28	72.64	24.51	.79	62-100

Note. PSS = Perceived Stress Scale, COPE = Brief Coping Scale, MSPSS = Multidimensional Perceived Social Support Scale

The pearson correlation suggested that perceived stress significantly negatively correlated with coping ($r = -.22^{**}$, $p < .01$).

Table 3

Correlation Matrix of Study Variables (N = 200)

Variables		1	2
1	Perceived Stress	1	
2	Coping	-.22**	1

Note. ** $p < .01$

Regression analysis revealed that perceived stress was a significant negative predictor of coping among cancer patients. As above table depicts perceived stress ($\beta = -.22$, $p < .01$) explaining 4% variance with R^2 value of .04 in the outcome variable (coping) with $\{F(1, 198) = 10.04$, $p < .01\}$. Thus, demonstrates that perceived stress significantly negatively predicted coping. It demonstrates the impact of social support and resilience on coping among cancer patients. Findings depicts that social support ($\beta = .34$, $p < .001$) and resilience ($\beta = .24$, $p < .001$) significantly positively predicted coping with R^2 value of .21 revealed that predictors explained 21% variance in the outcome variable (coping) with $\{F(2, 197) = 25.83$, $p < .001\}$ among cancer patients. Findings further depicts that social support ($\beta = .11$) doesn't significantly predicted perceived stress and resilience ($\beta = -.33$, $p < .001$) significantly negatively predicted perceived stress with R^2 value of .14 revealed that predictors explained 14% variance in the outcome variable (perceived stress) with $\{F(2, 197) = 15.43$, $p < .001\}$ among cancer patients.

Table 4

Regression Coefficient for the Perceived Stress as Predictor of Coping (N = 200)

Predictors	Outcome: Coping					
	B	SE	β	t	p	95% CI LL, UL
Constant	84.02	1.32		63.51	.000	[81.41, 86.63]
Perceived Stress	-.26	.08	-.22	-3.17	.002	[-.42, -.09]

Note. ** $p < .01$

Gender And Age Mean Differences

T test analysis was done to indicate the mean, standard deviation, and t-values based on age groups among cancer patients on study variables. Results indicate non-significant mean differences based on age groups on all study variables.

Discussion

The current study is intended to investigate how appraisal theory is applied in mitigating the impact of perceived stress and increases coping among cancer patients and also explores the mediating role of social support and resilience between perceived stress and coping among cancer patients. According to this idea, a person's reaction to stress is determined by their perception of the circumstances and the availability of both internal and external coping mechanisms. The

present study sample consisted of cancer patients ($N = 200$), including males ($n = 100$) and females ($n = 100$), and the respondents are approached from hospitals in Lahore, Islamabad, Faisalabad, and Sargodha. Initially, reliability analyses is conducted to verify the psychometric properties of measures and determine whether they are valid and reliable for use. Through reliability analysis, all the scales yielded satisfactory reliability values. Subsequently, correlational analysis revealed a significant correlation among the study variables. The study results reveal a substantial negative correlation between perceived stress, social support, and coping. Social support is significantly positively correlated with coping. Social support is significantly negatively correlated with perceived stress. Results demonstrated consistent findings as hypothesized confirming the first hypothesis of the

current study. According to Cohen et al. (1983), perceived stress is a person's subjective assessment of stressors that affects their emotional and behavioral reactions. It arises from several factors in cancer, including physical symptoms, diagnosis, adverse effects of treatment, financial strains, and mortality fears (Stanton et al., 2015). Patients who are under a lot of stress find it difficult to engage in healthy coping mechanisms like problem-solving and emotional control because their cognitive and emotional resources are overloaded (Luszczynska et al., 2007). Study results are in line with a study by Fadhel and Adawi, (2020) from Qatar University, consisting 223 undergraduate reporting moderate to high levels of stress, and many of them turned to unhealthy coping techniques such as behavioral disengagement and denial. This suggests that higher perceived stress is associated with less successful coping mechanisms and vice versa (Fadhel & Adawi, 2020). The Appraisal Theory of Stress and Coping Lazarus and Folkman (1984) suggests that stress affects coping ability based on how individuals interpret stressors. Cancer patients who perceive their illness as a threat may experience higher stress and distress, weakening their ability to engage in constructive coping behaviors. High perceived stress results in maladaptive coping, decreasing problem-focused coping and increasing emotion-focused and avoidant coping (Garnefski et al., 2001).

The study examined coping styles among male female hospital workers, finding no significant gender differences in and overall coping styles when controlling for resilience and psychological distress (Mosheva et al., 2021). In a study on cancer patients, Kelly et al. (2008) discovered that men and women employed comparable coping mechanisms for problem-solving and seeking assistance, indicating that traditional gender stereotypes might not be as evident during significant life events. The evaluation of a review concluded that, especially when taking into account variables like job experience, psychological resilience, or occupational stress, the majority of research. Individuals with a family history of cancer patients showed perceived stress has significant mean differences with higher levels among those with a family history of cancer than those without.

Limitations

This study is limited by its cross-sectional design,

which prevents the establishment of causal relationships between perceived stress, coping, and social support. In addition, the use of purposive sampling and self-report measures may have introduced bias and reduced the generalizability of the findings to wider populations. Furthermore, the study focused only on cancer patients within a specific cultural context, which may limit the applicability of results to other demographic or clinical groups.

Suggestions

Future research should adopt longitudinal or experimental designs to explore the causal linkages between stress, coping, and resilience. Expanding the sample to include diverse age groups, clinical conditions, and cultural backgrounds would provide a more comprehensive understanding of coping mechanisms. It is also recommended that researchers integrate qualitative approaches alongside quantitative measures to capture the nuanced personal experiences of cancer patients and examine the role of cultural and spiritual resources in coping.

Conclusion

The findings demonstrate that perceived stress significantly and negatively predicts coping, while social support plays an important mediating role in strengthening adaptive coping strategies. These results emphasize the value of incorporating psychological interventions such as stress management and resilience training into oncology care. Overall, the study contributes to the growing evidence that enhancing social support networks can buffer the negative effects of stress and improve the psychological well-being of cancer patients.

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