

Problem Focused Coping and Stress in Cancer Patients: A Mediating Role of Emotion-Focused Coping

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ABSTRACT Cancer is a life-threatening disease that greatly influences the psycho-social health and well-being of affected individuals. The present study looks into the role of emotion-focused coping as a mediator variable in the relationship between problem-focused coping and perceived stress in cancer patients. A purposive sample of 200 (male = 41%, female = 59%) cancer patients was taken from different cancer hospitals in Lahore, Pakistan. Perceived Stress Scale and Brief Cope Inventory were used to investigate the perceived stress and coping strategies of the participants. The findings of correlation analysis indicated the interrelatedness of emotion-focused coping, problem-focused coping, and perceived stress. Findings of mediation analysis revealed that emotion-focused coping significantly plays a mediating role between problem-focused coping and perceived stress in cancer patients. These findings have practical implications for counseling cancer patients to overcome their stress and adopt effective coping strategies to deal with their stress.

INTRODUCTION

Cancer is a medical illness as well as a psycho-social condition that creates uncertainty and undermines a person's life, resulting in serious psychological problems (Benson et al. 2020). A cancer diagnosis causes worry and anxiety in patients. The majority of the stressors related to cancer diagnosis, disease, and treatment are experienced by cancer patients. These stressors have the potential to cause a variety of psychosocial issues (Zimmaro et al. 2019). Cancer has a variety of effects on patients' and their families' lives. Cancer diagnosis and treatment cause significant changes in patients' everyday activities, work, relationships, and family duties, as well as a high level of patient psychological stress (Benson et al. 2020).

The most prevalent psychological condition observed in cancer patients is stress (Basiaska and Soatys 2020). "An array of unpleasant physiological conditions and psychological reactions that arise in a person can be described as stress." When a person is stressed, he or she feels as if his or her well-being is in jeopardy, yet he or she is unable to deal" (Monat et al. 2007).

Coping is a multi-step cognitive method that entails dealing with stress, solving issues, and

making decisions. Coping is defined as a person's reaction and behavior in the face of a difficult situation (Labrague et al. 2017; Okati-Aliabad et al. 2021). Coping strategies can be classified as adaptive such as social coping, positive appraisal, meaning-making, relaxation, meditating or mindfulness, releasing pent-up feelings, distracting oneself, adequate exercise, sleep or appetite, humor or it can be maladaptive like denial, blame, withdrawal, regression, escape and avoidance. It has been claimed that coping has two essential roles: problem-solving (problem-focused techniques) and emotional management (emotion-focused strategies) (Bozo et al. 2018; Lilijana and Mojca 2004; Vassilliere et al. 2016). Various coping mechanisms are used in various types and stages of cancer, according to studies. According to research, there is a link between coping mechanisms used by cancer sufferers and their reported stress levels (Chelsea et al. 2017). Patients who employ emotion-focused coping techniques have high levels of stress, while those who employ problem-focused coping strategies have significant stress reduction.

Additionally, research suggests that emotion-focused coping (EFC) strategies may act as a mediator among problem-focused coping (PFC) methods and stress. The employment of PFC methods reduces the usage of EFC techniques, resulting in a stress reduction. This increases the influence of

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problem-focused coping techniques on perceived stress (Mosher et al. 2015; Vassilliere et al. 2016).

Because there are few pieces of research on stress and coping among cancer patients, a study on the relationship between these factors is significant for numerous reasons. For starters, the findings could enlighten cancer patients about the link between perceived stress and coping. This information will aid cancer sufferers in dealing with stress. Secondly, cancer sufferers can help establish effective stress-reduction techniques by evaluating their perceived stress and coping techniques. Thirdly, educators who provide continuing education in hospitals may find this study useful in determining the relationship between these characteristics and assisting cancer patients in learning PFC skills and reducing stress. Finally, this research will be critical in the context of Pakistan. On the topic of stress and coping among cancer patients, a lot of research has indeed been done in other countries. In Pakistan, less research has been done on cancer patients' coping and stress. As a result, this study will provide extremely valuable information about people with cancer' perceived stress and coping mechanisms.

Objectives of the Study

The current study addressed the following objectives:

- ♦ To investigate the association of problem-focused coping, emotion-focused coping, and stress in cancer patients.
- ♦ To find out the mediating role of emotion-focused coping in the association of problem-focused coping and stress in cancer patients.

METHODOLOGY

Participants

A sample of 200 cancer patients (male = 41%, female = 59%) from different cancer hospitals of Lahore, Pakistan was collected. Data for this study were collected from January 2021 to March 2021. Participants were recruited by using a purposive sampling strategy. The sample size was determined by using Harris's (1985) criteria which suggested recruiting at least 30 participants against each predictor. As there are 2 predictors of stress in the

current study, so the minimum sample size for the existing study was 60. Most of the participants were between the ages of 36 to 50 years (41%). Furthermore, research participants were predominantly married (91%). Participants having any physical disease comorbid with cancer were excluded from the study.

Measures

Perceived Stress Scale (PSS)

Cohen et al. (1994) developed the 'PSS' to assess people's perceptions of everyday stress. The PSS is a ten-item self-report questionnaire. Each item on the scale should be rated on a 5-point scale ranging from "never = 0" to "very often = 4." Items 4, 5, 7, and 8 are all positively written and thus reverse coded. The computed Cronbach Alpha value for this investigation was similarly determined to be satisfactory ($\alpha = 0.89$).

Brief Cope Inventory (BCI)

Carver et al. (1989) used the Brief Cope Inventory (BCI) to assess coping techniques. Problem-focused coping and emotion-focused coping are the two primary groups assessed through this scale. Answers should be given on a four-point scale ranging from 1 (not at all), 2 (a little), 3 (a medium amount), and 4 (a lot) (a lot). The reliability coefficient for the Brief Cope Inventory was excellent in this study ($\alpha = 0.71$).

Procedure

After receiving approval from the Institutional Review Board (IRB), the researchers approached the five hospitals and obtained consent to participate in the current study by explaining the study's main goals and objectives to the administration. Two hospitals, in particular, expressed a readiness to obtain data on patients. After getting consent from the administration, participants were approached in their respective hospital wards where they were briefed by the researchers on the key aims and objectives of the study. Every respondent signed an informed consent form, and the hospitals' relevant authorities, as well as the participants, gave their approval for data gathering.

The respondents were notified about the study’s confidentiality of information. The directions on the questionnaire booklets were presented to participants, and they were encouraged to ask any questions they had about the questionnaire. The questionnaire took between 15 and 25 minutes to complete.

Statistical Analysis

Statistical Package for Social Sciences (SPSS version 25.0) was used for statistical analysis. Pearson Product Moment Correlation was conducted to find out the association between coping strategies and perceived stress. Hayes (2018) bootstrapping approach was used to find out the mediating role of EFC strategies in the relationship between PFC strategies and perceived stress among cancer patients.

RESULTS

Correlation Analysis

Correlation analysis indicated the significant negative association of PFC with EFC and stress (Table 1). Furthermore, findings also suggested the significant positive association of EFC with stress. These findings suggested that having a higher level of PFC is associated with a lower level of EFC and stress. Moreover, a greater level of EFC is significantly associated with a greater level of stress in cancer patients. Hence, it can be concluded that problem-focused coping helps in buffering the maladaptive coping strategies labeled as emotion-focused coping and the stress level of cancer

patients. On the other hand, emotion-focused coping boosts the level of stress in cancer patients.

Table 1: Inter-correlations among coping strategies and stress (N = 200)

Variables	M	SD	PFC	EFC	S
PFC	37.70	4.85	-	-.30***	-.38***
EFC	24.90	7.39	-	-	.85***
S	17.69	9.04	-	-	-

Note. PFC = problem-focused coping; EFC = emotion-focused coping; S = stress
****p* < .001.

Mediation Analysis

Mediation analysis is described as a statistical method used to quantify the causal sequence by which an antecedent variable causes a mediating variable that causes a dependent variable. In the current study, the antecedent variable is problem-focused coping, mediating variable is emotion-focused coping, and stress is the dependent variable. The mediating role of emotion-focused coping in the association of problem-focused coping and stress in cancer patients was explored by using Hayes (2018) bootstrapping approach. Findings of mediation analysis are reported in Table 2.

Figure 1 indicated the results of mediation analysis. Results reported in Figure 1 indicated the significant total effect of PFC on stress ($\beta = -.74, SE = .15, p < .001$). Furthermore, the direct effects of PFC on EFC ($\beta = -.48, SE = .13, p < .001$) and EFC on stress were also significant ($\beta = .99, SE = .05, p < .001$). After controlling the EFC as mediator, the direct effect of PFC on stress is significant but the strength of association is reduced ($\beta = -.27, SE =$

Table 2: Mediation analysis the problem-focused coping, emotion-focused coping, and stress (N=200)

Antecedent	Consequent							
	EFC (M)			S (Y)				
	β	SE	<i>p</i>	<i>B</i>	SE	<i>p</i>		
PFC (X)	<i>a</i>	-.48	.13	.001***	<i>c'</i>	-.27	.08	.001***
EFC (M)		-	-	-	<i>b</i>	.99	.05	.001***
	$R^2 = .09$ $F(1, 198) = 14.69, p = .001***$			$R^2 = .75$ $F(2, 197) = 217.11, p = .001***$				

Note: PFC = problem-focused coping; EFC = emotion-focused coping; S = stress.
****p* < .001.

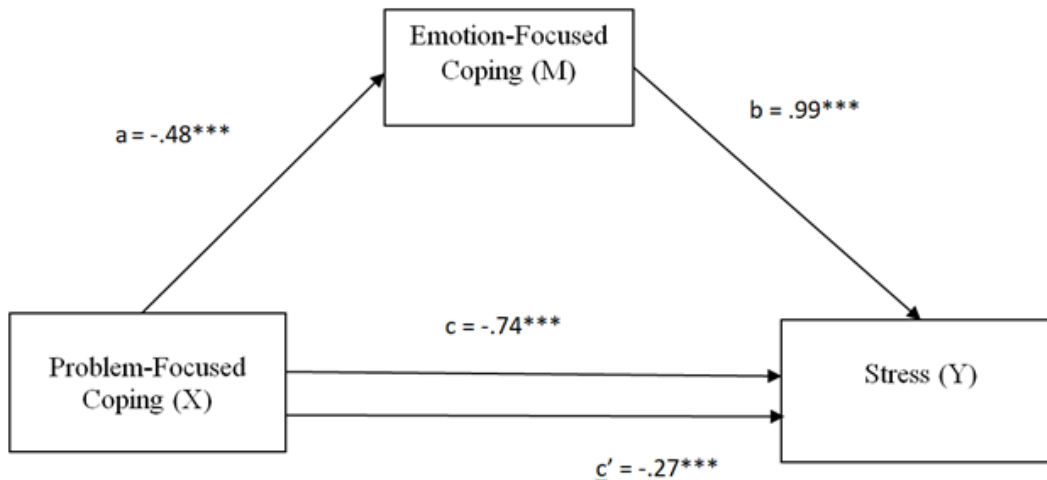


Fig. 1. Mediation analysis of EFC (M) in the relationship of PFC (X) and stress (Y)

.08, $p < .001$). Furthermore, findings also indicated the significant indirect effect of PFC on stress through EFC is also significant ($\beta = -.47$, $SE = .13$, $CI[LL = -.74$; $UL = -.22$). Therefore, it is concluded that EFC significantly mediates the association of PFC and stress in cancer patients. Using problem-focused coping helps cancer patients in reducing their maladaptive coping strategies and controlling their emotions which in turn lower their stress level.

DISCUSSION

The relationship between PFC methods and perceived stress was partially mediated by EFC strategies. The relationship between PFC and perceived stress was reduced by using EFC.

The current research findings are consistent with previous research findings reported that the use of EFC strategies can decrease the effects of PFC strategies on perceived stress (Chelsea et al. 2017; Huda et al. 2021). Similarly, Liu et al. (2010) discovered that nurses in 227 emergency rooms who were under a lot of stress employed emotion-focused coping strategies.

EFC methods also influence the association between PFC strategies and perceived stress, according to the researchers. Another finding of the current study is that EFC has a positive significant link with stress, while PFC has a negative signifi-

cant relationship with stress. Furthermore, the link between EFC and PFC is statistically significant in the negative direction. These results are in line with earlier research, which suggests that the PFC is an adaptive coping strategy and the EFC is a maladaptive coping strategy (Elanur et al. 2010; Huda et al. 2021; Maleknia and Kahrazei 2015). PFC directs the individual toward problem-solving, whereas EFC focuses on emotional expression. It's possible to deduce that higher use of PFC leads to lower utilization of EFC.

These results suggest that teaching cancer sufferers how to reduce various EFC techniques could help them feel less stressed (Ahmad and Nazly 2015; Benson et al. 2020; Maleknia and Kahrazei 2015). It also suggests that improving their PFC techniques will help people manage stress more effectively (Kim et al. 2010; Kiyana et al. 2016; Okati-Aliabad et al. 2021). Moreover, the current findings suggest that counseling cancer sufferers to acquaint them with the nature and drawbacks of using EFC techniques regularly is necessary to reduce their stress levels (Basiaska and Soatys 2020; Mosher et al. 2015; Vassilliere et al. 2016).

The relevance of EFC strategies as a mediator of the relationship between PFC methods and perceived stress was highlighted in a previous study. Overall, the current study has a wide range of ramifications. For starters, it contributed to the body of knowledge about cancer patients' coping mech-

anisms and perceived stress. Second, concentrating on problem-solving coping skills can help cancer sufferers cope with their stress and improve their psychological well-being. Finally, this research has ramifications for counselors. It would be beneficial in cancer sufferer counseling. Lastly, studies suggest that adopting PFC mechanisms can boost resistance to cancer-causing disorders. As a result, this research could help cancer sufferers in becoming more resilient and optimistic despite this life-threatening disease as this study provided the framework to overcome the stress level of cancer patients (Bozo et al. 2018; Carver et al. 1989; Okati-Aliabad et al. 2021).

CONCLUSION

Cancer is a life-threatening and devastating disease associated with numerous stressors and adverse consequences. However, adapting effective coping strategies can help sufferers in overcoming their psycho-social and mental health issues. The current study highlighted problem-focused coping as adaptive coping strategies and emotion-focused coping as maladaptive coping strategies to overcome the stress level of cancer patients.

LIMITATIONS OF THE STUDY

Before generalizing the research outcome, it's important to understand the study's shortcomings. This study, like others, has several flaws. The present study's key flaw is that it uses a co - relational research design that only looks at the association between stress and coping mechanisms. As a result, the researchers were unable to establish a cause-and-effect relationship between the factors. Secondly, the present findings are limited in their generalizability because the research sample was limited to cancer patients from hospitals in Lahore, Pakistan. Moreover, the present study's sample size was tiny, limiting its generalizability. Finally, the forced-choice questions used in this study may allow the inadequate possibility for option variety.

RECOMMENDATIONS FOR FUTURE STUDIES

Based on the limitations of the current research, few recommendations are suggested. First, a lon-

gitudinal research design should be used to explore coping strategies and stress at various stages of cancer. Furthermore, a representative sample of cancer patients from all over Pakistan is recommended to ensure the greatest external validity. Moreover, it is recommended for future studies to get the data from a large number of participants to maximize the generalizability of the findings.

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