

Psychological Distress, Coping Styles, and Resilience Among Adult Cancer Patients: A Cross-Sectional Study from Jagannath Charitable Cancer Hospital

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ABSTRACT

Background: Psychological distress, coping styles, and resiliency play a significant role in patients' adaptation to the cancer diagnosis, but few studies have rigorously investigated the three constructs simultaneously in Indian oncology patients with validated instruments.

Aim: were to evaluate the prevalence of psychological distress and resilience in adult cancer patients and to explore the correlation between psychological distress, coping styles and resilience and its association with age and cancer stage.

Method: The present study employed cross sectional correlational study design with purposive sampling of 80 adult cancer patients (18 years age and above) of Jagannath Charitable Cancer Hospital, Ghaziabad. Psychological stress (depression, anxiety, stress) was assessed with DASS-21, coping styles were measured with Brief COPE Inventory, and resilience was assessed with Connor–Davidson Resilience Scale (CD-RISC-25). Spearman's Rank Correlation was used to analyse data and significance was taken at $p < 0.05$.

Results: Stress was the most prominent distress dimension ($M = 14.60$, $SD = 4.43$), followed by depression ($M = 12.80$, $SD = 5.40$) and anxiety ($M = 9.66$, $SD = 4.70$). Coping and resilience were significantly and negatively correlated with stress ($\rho = -.304$, $p < .01$; and $\rho = -.235$, $p < .05$, respectively) while neither was significantly correlated with anxiety or depression. Coping and resilience were not significantly correlated with each other ($r = .144$). There were no significant relationships between any of the study variables and cancer stage or age.

Conclusion: Coping and resilience were found to be protective factors for stress but not for anxiety or depression in this sample, suggesting that psychological distress amongst cancer patients is not a monolithic entity. Interventions that focus on stress, anxiety and depression may require specific development and delivery within the context of psycho-oncology services.

Keywords: psychological distress, coping, resilience, cancer, DASS-21, Brief COPE, CD-RISC, psycho-oncology, India

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INTRODUCTION

Cancer is a process not a state of being, and coping and resilience is a process against the disturbance brought about by the diagnosis of cancer it not only affects a person's physical condition, it also affects their thinking about security, identity, and future.³

While it is a biological phenomenon, cancer is also a human experience characterised by a disruption of identity, roles, and future expectations, and a multidimensional suffering, as captured in the palliative-care concept of “total pain” physical, emotional, social and spiritual pain that reinforce one another.^{7, 13}

The lack of appropriate psychological interventions and psychosocial support due to stigma, inadequate services and a more biological-oriented treatment approach are

often reasons for neglected psychological needs, which is further compounded by the psychosocial and systemic stressors present in the Indian context.^{5,6}

Coping and resilience are two psychological resources that consistently have been linked to post-cancer adjustment. Coping is the continuous thinking and doing used to adapt to demands that are appraised as stressful, and is broadly adaptive (e.g., acceptance, positive reframing, planning, seeking support) or maladaptive (e.g., denial, behavioural disengagement, self-blame).² Evidence broadly links adaptive coping and higher resilience with lower distress and better adjustment while maladaptive coping is linked with poorer adjustment, but relationships start with the emotional impact of the illness itself, which sets the terms on which coping works and resilience is fostered or eroded.

Though increasing focus in psychological care for cancer has been a subject of study, few studies have looked at the psychological distress, coping, and resilience in a single oncology sample all using standardized instruments, and none of these studies have been conducted in India where psycho-oncology services are not well developed. In the Indian context, the available literature indicates that there is considerable psychological turbulence in cancer patients associated with both emotion-focused and avoidant coping styles, which have been studied separately and researchers have not explored the interplay between them in affecting the cancer patients' outcomes.^{15,16} The present study therefore examined psychological distress, emotion focused coping, avoidant coping and resilience in an integrated manner among adult cancer patients being treated at a hospital in India.

Aim and Objectives

The purpose of this study was to explore psychological distress, coping style and resilience in adult cancer patients. Specific aims were as follows: (1) determine levels of psychological distress and psychological resilience among adult cancer patients, and (2) identify the relationship between psychological distress, coping strategies and psychological resilience among adult cancer patients.

Research Question and Hypotheses

Research question: How psychologically distressed, how coping and how resilient are adult cancer patients?

The psychological distress, coping styles and resilience of adult cancer patients are significantly interrelated.

H1: There are at least one significant relationship/s between psychological distress, coping styles and resilience among adult cancer patients.

H0: There are no significant relationship/s between psychological distress, coping styles and resilience among adult cancer patients.

Methods

Describe the study design and setting. Explain study design and setting.

The design was cross sectional correlational design. The participants were adult cancer patients attending Jagannath Charitable Cancer Hospital, Ghaziabad for treatment.

Sample

Finally, 80 adult cancer patients (ages 18 years and older) were selected using purposive sampling. The sample size was determined based on a cross-sectional study of psychological distress and resilience among cancer patients that followed a similar methodology and generated a set of effect estimates and parameters that informed the minimum required sample size, which was determined to be $n=69$ for the study to have adequate statistical power to detect meaningful relationships between the study variables.⁴⁵

Inclusion criteria: adults aged 18 years and above with a confirmed diagnosis of cancer; currently undergoing treatment at the study setting; able to comprehend and

respond to the assessment instruments in Hindi or English; and willing to provide informed consent.

Exclusion criteria: severe cognitive impairment or critical illness limiting communication or task completion; a diagnosed psychiatric or psychological illness; and not having completed at least primary-level education, given the literacy demands of the self-report instruments.

Measures

The Hindi translated and validated version was used along with the English version, and the scale has been found to have good internal consistency (Cronbach's α between 0.70 and 0.93 on subscales and >0.88 on the total score) and cross-cultural applicability.⁴⁸

It draws on Lazarus and Folkman's stress and coping model, and on Carver and Scheier's model of behavioural self-regulation, and has been shown to have a four factor structure (active coping, passive coping either avoidance or positive reappraisal, social support, problem solving) with active coping being positively, and passive coping (either avoidance or positive reappraisal) negatively associated with quality of life among cancer patients and their caregivers.⁴⁹

Connor–Davidson Resilience Scale (CD-RISC-25): a 25-item scale rated on a 5-point scale (0–4), yielding a total score of 0–100, with higher scores indicating greater resilience.⁵¹ A reliability generalisation meta-analysis of 27 studies found a pooled Cronbach's α of approximately 0.89 (95% CI 0.87–0.91), robust across linguistic and cultural adaptations.⁵² The Hindi-translated version was used given the language profile of the sample.

Statistical Analysis

The sample and the study variables were characterised using descriptive statistics (frequency, percentage, mean and standard deviation). Because the distress variables were not normally distributed, non-parametric statistics were conducted throughout: Spearman's Rank Correlation Coefficient was used to explore relationships between coping, resilience, psychological distress (stress, anxiety, depression), age and cancer stage. Graphs used were bar charts. For significance the value of p was set at less than 0.05 and less than 0.01 was highly significant. The analysis was done in MS Excel and SPSS.

RESULTS

Sample Characteristics

Of the 80 participants, more than half (57.5%) were aged 50–69 years (35.0% aged 50–59; 22.5% aged 60–69), with smaller proportions aged 40–49 (17.5%), 70 and above (6.3%), and 18–29 (3.8%). Females comprised 57.5% ($n = 46$) of the sample and males 42.5% ($n = 34$). The most common cancer types were gastrointestinal (21.3%) and breast (18.8%), followed by gynaecological (15.0%), head and neck (13.8%), other/unspecified (11.3%), prostate (7.5%), lung (5.0%), haematological (3.8%), genitourinary (2.5%), and thyroid (1.3%) cancers. By stage, 42.5% of patients were Stage 2, 26.3% Stage 4, 20.0% Stage 3, and 11.3% Stage 1.

Correlational Findings

Coping ($\rho = -.304$, $p < .01$) and resilience ($\rho = -.235$, $p < .05$) were both significantly and negatively correlated with stress. Neither coping ($\rho = .003$) nor resilience ($\rho = .179$) was significantly correlated with anxiety, and neither

Table: Spearman Rank Correlation Matrix Among Coping, Resilience, and Psychological Distress

Variable	Spearman's rho	p-value
Coping	.060	.599

* $p < .05$, ** $p < .01$

No study variable was significantly associated with cancer stage (coping $p = .599$; resilience $p = .307$; stress $p = .732$;

Table: Relationship Between Age and Psychological Variables Among Adult Cancer Patient

Variable	Spearman's rho	p-value
Coping	.184	.114
Resilience	-.086	.463

Hypothesis Testing

Only part of H1 was accepted. For coping stress and resilience stress relationships: H1 was accepted, H0 was rejected. The three remaining hypotheses were supported: (1) coping–anxiety; (2) coping–depression; (3) resilience–anxiety; (4) resilience–depression; and (5) the relationship between coping and resilience, as well as associations with cancer stage and age. The coping and resilience factors were found to be protective factors of stress in this sample, while other factors relating to stress (dimensions of distress) and demographic/disease factors were not.

DISCUSSION

This study explored psychological distress, coping patterns, resilience and their interrelationships with age and cancer stage in 80 adult cancer patients in a hospital in India.

Coping, resilience and stress

The most robust result across this study was the significant relationship between coping and stress, and resilience and stress; both of which were negative in nature which aligns with the broader literature. The relationship between stress and coping has also been well established, with similar studies showing that higher coping and resilience are buffers even in late-stage cancer, where the demands of the situation may be less complex and more 'here and now' than for anxiety and depression.⁵⁹ Avoidant coping is not a stress-reduction strategy.

Interaction of coping and resilience, anxiety, depression.

There was no protection between coping and/or resilience with anxiety or depression. Unlike some other studies that have focused more specifically on the various types of

coping ($\rho = -.097$) nor resilience ($\rho = -.051$) was significantly correlated with depression. The correlation between coping and resilience was weak and non-significant ($r = .144$).

Resilience	.116	.307
Stress	.039	.732
Anxiety	.095	.402
Depression	-.001	.996

anxiety $p = .402$; depression $p = .996$) or with age (coping $p = .114$; resilience $p = .463$; stress $p = .924$; anxiety $p = .688$; depression $p = .279$).

Stress	.011	.924
Anxiety	-.047	.688
Depression	-.127	.279
Cancer Stage	.160	.171

maladaptive styles associated with depression, such as denial and self-blame, the Brief COPE does not single these out. Additionally, cancer-related factors such as fear of recurrence, treatment side effects, existential issues, and identity change may be more closely related to anxiety and depression in cancer patients than to their coping and resilience resources: family and social support were not directly examined here, but may be more salient in buffering cancer-specific symptoms.

The Coping–Resilience Relationship

There is no significant coping–resilience correlation, which is indeed quite different from much of the medical-population literature, and should be expressed in no uncertain terms, not in understated fashion. Differences in population (oncology versus chronic surgical/hepatobiliary illness), in coping norms, or in the definition and measurement of coping and resilience may explain these differences.⁶⁰ In this sample, coping and resilience seem to work somewhat independently, suggesting that interventions may need to target coping and resilience separately, rather than assuming one is a prerequisite for the other.

Cancer Stage and Age

Similar to other cross-sectional studies, no association between age and any of the study variables was observed, although this finding is not universal, as some comparable studies did find age to be significantly associated with psychological adaptation.^{61,62} This could be due to sample size, single centre recruitment or the age distribution of the present sample.

Theoretical Integration

The stress-reduction finding is consistent with the wide variation in resilience scores that was observed ($SD = 11.76$), regardless of disease stage, and with Cognitive Appraisal Theory, in which the appraisal of the immediate demand may be more relevant for the links with coping than with depression and anxiety, which may be more strongly related to underlying negative appraisals.

Comparisons with the Indian and International studies:

In India, a study conducted among breast cancer patients reported that most patients used positive coping styles even prior to the first cycle of chemotherapy, with religious coping being the unique coping style in the Indian context, and a second study showed that cancer coping, symptom severity, and understanding of illness all had an impact on the distress of patients receiving oncology treatment, supporting the idea that distress is not solely due to the illness itself.

Unexpected Findings

The perplexing results of the non-significant coping/resilience and anxiety/depression relationships and the weak correlation between coping and resiliency were the most unexpected. The latter, in particular, runs against the tide of most published work in this field and should be regarded as a real negative departure from the norm and not a null result to explain away. These results indicate that psychological distress in cancer patients is not a one-dimensional phenomenon; and that what works in one dimension (stress) does not necessarily work in others (anxiety and depression).

Practical Implications

Stress, anxiety and depression are all independent targets to be treated. Stress, anxiety and depression should be considered as separate targets for which coping/recovery interventions in clinical psychology/psycho-oncology services may be different. Short coping skill modules can be an effective and inexpensive component of initial stress-reduction interventions in cancer hospitals, and more intensive psychological/psychiatric intervention can be reserved for anxiety and depression. Family-inclusive support and social connectedness are important areas for caregivers and services to address as they are not fully represented in coping and resilience. Rehabilitation and intervention design should be stage and age inclusive, not limited to advanced stage or older patients.

Strengths and Limitations

The strengths of the study are the use of standardised and validated questionnaires (DASS-21, Brief COPE, CD-RISC), Hindi language versions of these instruments, appropriate to the literacy of the sample, a sufficient sample size ($N = 80$) for a single centre study, cancer types that are more representative of a larger sample, and all four stages of the disease were included, thus providing a broader sample of these aspects to be examined together. The cross-sectional design prohibits causal inferences, convenience sampling limits generalisability, and the

single centre design restricts the findings to this hospital's socio-demographic structure and patients' coping and resilience experiences within the context of spiritual, art and music therapy support programme, which may have inflated patients' scores of coping and resilience relative to hospitals without such programmes; the instrument being a researcher-administered questionnaire may introduce a social desirability bias; the Brief COPE is a broad measure of coping, failing to distinguish between adaptive and maladaptive subdomains; and the active spiritual, art and music therapy programme in this hospital may have boosted the scores of coping and resilience among participants compared to those in hospitals where such programmes are not implemented.

Future Research Recommendation

Future work needs to examine longitudinal designs linking distress, coping, and resilience across treatment; multi-centre study across hospitals with different psychosocial support infrastructure; larger, more diverse stratified samples of children and adolescents by cancer type and stage; qualitative or mixed methods studies to elucidate why coping and resilience are related to distress but not to anxiety or depression, and why only a weak relationship is observed in this population between coping and resilience; and parallel examination of coping and resilience subtypes that are adaptive versus maladaptive rather than a single composite coping score.

CONCLUSION

Coping styles and resilience were also identified as potential psychological resources in cancer adaptation with a significant association with less distress, but not with anxiety or depression, suggesting that other psychological, social, treatment-related and/or biological factors may be involved in these distress dimensions. Although there were not any significant relationships between the psychological variables and the demographic or disease related variables, it is suggested that psychological adjustment to cancer is related more to coping resources and resilience than to demographic and disease factors. The findings lend weight to a holistic and personalized care strategy for psychosocial oncology: interventions fostering adaptive coping and resilience can help manage stress and adaptation; and the assessment and intervention of anxiety and depression should be targeted.

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