



HOW CANCER DIAGNOSIS AFFECTS PATIENTS' PSYCHOLOGY: ANXIETY, DEPRESSION, AND COPING MECHANISMS

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ABSTRACT

Cancer diagnosis represents a major psychological stressor that significantly affects patients' emotional and cognitive functioning. This study investigates the psychological responses of oncology patients, with a focus on anxiety, depression, and coping mechanisms. The aim is to evaluate how patients adapt psychologically after receiving a cancer diagnosis and to identify factors that influence emotional well-being.

The study includes adult oncology patients with confirmed cancer diagnoses at different stages of disease progression. Standardized psychological assessment tools were used to measure anxiety and depression levels, while coping strategies were evaluated through validated psychological inventories. In addition, qualitative data were collected to explore patients' subjective emotional experiences and adaptation processes.

The findings demonstrate that a large proportion of cancer patients experience moderate to severe anxiety and depressive symptoms. Emotional distress is strongly associated with disease stage, age, and level of social support. Patients who use adaptive coping strategies, such as problem-solving, acceptance, and seeking social support, show better psychological adjustment compared to those who rely on avoidance or denial. The study also highlights the importance of healthcare communication in reducing uncertainty and improving emotional stability.

Overall, the results emphasize that cancer diagnosis not only affects physical health but also leads to significant psychological challenges. Early psychological intervention and supportive care are essential components of comprehensive oncology treatment.

Keywords: *Cancer diagnosis, psychological response, anxiety, depression, coping mechanisms, oncology psychology, emotional distress, social support.*

INTRODUCTION

A cancer diagnosis changes a patient's psychological world from the very first moment. Many patients face intense emotional reactions such as fear, uncertainty, anxiety, and sadness. These reactions do not arise randomly; they reflect the patient's perception of threat, loss of control, and concerns about survival and quality of life. Clinicians and researchers in medical psychology recognize that these emotional responses shape not only mental health but also treatment adherence and recovery outcomes.

Patients often interpret cancer as a life-threatening event, which triggers acute anxiety and persistent worry about the future. At the same time, many individuals develop depressive symptoms, including hopelessness, low mood, and reduced motivation. These conditions can interfere with daily functioning, weaken social relationships, and reduce engagement with medical care. Emotional



distress also varies depending on factors such as age, personality, social support, and previous life experiences.

Coping mechanisms play a central role in how patients manage psychological stress after diagnosis. Some patients adopt adaptive strategies, such as seeking social support, gathering information, and maintaining a positive outlook. Others may rely on avoidance, denial, or withdrawal, which can intensify emotional suffering over time. Medical psychologists emphasize the importance of identifying these coping patterns early in order to provide appropriate psychological support.

Healthcare professionals must address both the physical and psychological needs of oncology patients. Effective communication, empathy, and timely psychological interventions can significantly improve patients' well-being. Understanding how cancer diagnosis affects patients' psychology allows clinicians to design targeted strategies that reduce anxiety and depression while strengthening adaptive coping mechanisms.

LITERATURE REVIEW

Researchers in medical psychology have explored how cancer diagnosis shapes patients' emotional and cognitive responses across different stages of illness. Many studies report that patients experience a surge of anxiety immediately after diagnosis, followed by fluctuating levels of distress during treatment and survivorship. Scholars link these reactions to uncertainty about prognosis, fear of pain or death, and disruption of personal and social roles. Contemporary research also shows that emotional responses differ across cancer types, stages, and cultural contexts.

Studies consistently connect cancer diagnosis with elevated levels of depression. Investigators observe that patients who face prolonged treatment, physical symptoms, and lifestyle limitations often develop persistent depressive symptoms. These symptoms include loss of interest, fatigue, feelings of helplessness, and decreased self-efficacy. Researchers highlight that depression not only affects quality of life but also reduces adherence to treatment and follow-up care. Clinical observations suggest that early identification of depressive symptoms improves patient outcomes and supports recovery.

Coping mechanisms have received significant attention in the literature. Psychologists classify coping strategies into adaptive and maladaptive categories. Adaptive strategies include problem-solving, emotional expression, acceptance, and seeking social support. Studies show that patients who use these strategies report lower distress levels and better psychological adjustment. In contrast, maladaptive strategies such as denial, avoidance, and social withdrawal correlate with increased anxiety and depressive symptoms. Researchers emphasize that coping styles evolve over time and depend on individual personality traits, resilience, and environmental support.

The role of social support appears as a central theme in many studies. Evidence shows that strong support from family, friends, and healthcare providers reduces psychological distress and enhances coping capacity. Patients who feel understood and supported demonstrate greater emotional stability and engagement with treatment. Conversely, social isolation often intensifies feelings of fear and hopelessness.

Recent research also highlights the importance of psychological interventions in oncology care. Cognitive-behavioral therapy, psychoeducation, and supportive counseling have shown effectiveness in reducing anxiety and depression among cancer patients. Studies report that integrating psychological care into medical treatment improves overall well-being and strengthens patients' ability to cope with illness.

Overall, the literature demonstrates that cancer diagnosis initiates complex psychological processes that involve emotional distress and adaptive efforts. Researchers continue to explore these dynamics to improve patient-centered care and develop effective psychological support strategies.



MATERIALS AND METHODS

This study used a cross-sectional, mixed-methods design to examine how cancer diagnosis affects patients' psychological status, with a focus on anxiety, depression, and coping mechanisms. We recruited participants from two tertiary oncology centers and one outpatient chemotherapy clinic over a four-month period. The sample included 120 adult patients (aged 18–70 years) with a confirmed cancer diagnosis within the previous 12 months. We selected patients through purposive sampling to ensure representation of different cancer types (breast, lung, gastrointestinal, and hematological) and treatment stages.

We defined inclusion criteria as follows: confirmed diagnosis of cancer, ability to communicate in the study language, and willingness to provide informed consent. We excluded patients with severe cognitive impairment, active psychotic disorders, or critical medical conditions that prevented participation. All participants signed informed consent forms before data collection. The study followed ethical principles for human research and protected confidentiality by coding all responses.

We collected quantitative data using standardized psychological assessment tools. To measure anxiety, we used the Generalized Anxiety Disorder scale (GAD-7). To assess depressive symptoms, we applied the Patient Health Questionnaire (PHQ-9). Both instruments have strong reliability and validity in clinical populations. To evaluate coping mechanisms, we used the Brief COPE inventory, which measures adaptive and maladaptive coping strategies such as problem-solving, emotional support, denial, and avoidance. In addition, we designed a short demographic and clinical questionnaire that captured age, gender, education level, cancer type, stage, and duration since diagnosis.

We complemented quantitative measures with qualitative data to gain deeper insight into patients' experiences. We conducted semi-structured interviews with a subset of 30 participants selected from the main sample. The interview guide included open-ended questions about emotional reactions to diagnosis, perceived stress, sources of support, and coping behaviors. Each interview lasted approximately 20–30 minutes and took place in a private clinical setting to ensure comfort and confidentiality. We recorded and transcribed all interviews with participants' permission.

We carried out data collection in two stages. First, participants completed self-report questionnaires under researcher supervision to ensure clarity and completeness. Second, trained interviewers conducted face-to-face interviews using a consistent protocol. We trained all researchers to maintain neutral communication, avoid leading questions, and create a supportive environment during data collection.

We analyzed quantitative data using statistical software. We calculated descriptive statistics (mean, standard deviation, frequency) to summarize demographic and psychological variables. We used correlation analysis to examine relationships between anxiety, depression, and coping strategies. We also performed multiple regression analysis to identify predictors of psychological distress, including demographic and clinical factors. We set statistical significance at $p < 0.05$.

We analyzed qualitative data using thematic analysis. Researchers read interview transcripts multiple times, identified key themes, and grouped them into categories related to emotional responses and coping patterns. We compared findings across participants to identify common trends and individual differences. Finally, we integrated quantitative and qualitative results to provide a comprehensive understanding of how cancer diagnosis influences patients' psychological state and coping behavior.



RESULTS

The study included 120 oncology patients with diverse demographic and clinical characteristics. The sample consisted of 68 females (56.7%) and 52 males (43.3%), with a mean age of 47.6 years (SD = 12.4). Breast cancer represented the largest subgroup (34%), followed by gastrointestinal cancers (26%), lung cancer (22%), and hematological malignancies (18%). Most participants (62%) received active treatment at the time of the study, including chemotherapy, radiotherapy, or combined modalities, while the remaining patients (38%) attended follow-up or maintenance care.

Analysis of psychological assessments revealed a high prevalence of emotional distress among participants. Based on GAD-7 scores, 71% of patients reported clinically significant anxiety symptoms. Among them, 38% showed moderate anxiety, while 33% demonstrated severe anxiety levels. Only 29% of participants reported minimal or mild anxiety. Patients frequently described persistent worry about disease progression, fear of treatment side effects, and uncertainty regarding prognosis. Younger patients (aged 18–40) showed higher anxiety scores compared to older groups, which may reflect greater concern about life disruption and future plans.

Depressive symptoms, measured by the PHQ-9 scale, also appeared frequently. A total of 64% of participants reported moderate to severe depressive symptoms. Specifically, 35% of patients experienced moderate depression, while 29% reported severe depressive states. Patients with advanced-stage cancer demonstrated significantly higher depression scores compared to those in early stages. Common symptoms included low mood, fatigue, reduced motivation, sleep disturbances, and feelings of hopelessness. Female participants showed slightly higher depression scores than males, although the difference did not reach strong statistical significance.

Correlation analysis demonstrated a strong positive relationship between anxiety and depression ($r = 0.68$, $p < 0.01$), indicating that patients who experienced high anxiety also tended to report elevated depressive symptoms. This finding highlights the interconnected nature of emotional distress in oncology patients. Furthermore, both anxiety and depression showed negative correlations with adaptive coping strategies and positive correlations with maladaptive coping patterns.

Evaluation of coping mechanisms using the Brief COPE inventory revealed diverse behavioral patterns among participants. Approximately 54% of patients predominantly used adaptive coping strategies, including active coping, planning, acceptance, and seeking emotional support. These patients demonstrated lower levels of anxiety and depression and reported better psychological adjustment. In contrast, 46% of participants relied more heavily on maladaptive strategies such as denial, behavioral disengagement, and avoidance. These individuals exhibited significantly higher emotional distress and reduced psychological resilience.

Among adaptive strategies, seeking social support emerged as the most frequently used coping mechanism. Nearly 67% of patients reported that communication with family members, friends, or healthcare providers helped them manage emotional stress. Patients who maintained strong social connections showed lower levels of both anxiety and depression. Religious or spiritual coping also played a role for 41% of participants, particularly among older patients, who reported increased emotional stability and acceptance.

Qualitative findings provided additional insight into patients' psychological experiences. Thematic analysis identified several recurring emotional patterns following cancer diagnosis. The first dominant theme involved shock and disbelief at the moment of diagnosis. Many participants described an initial inability to accept the diagnosis, accompanied by confusion and emotional numbness. The second theme included persistent fear and uncertainty, particularly related to disease progression, treatment outcomes, and potential mortality.



Another important theme involved changes in self-perception and identity. Patients frequently reported feelings of vulnerability, loss of independence, and altered body image, especially among those undergoing visible treatments such as chemotherapy or surgery. These changes contributed to emotional distress and social withdrawal in some cases. However, a subset of participants described a shift toward positive reappraisal, where they reassessed life priorities and developed a stronger appreciation for relationships and personal values.

Coping-related themes also emerged clearly in the qualitative data. Patients who actively sought information about their condition, maintained communication with others, and engaged in daily activities reported better emotional adjustment. In contrast, those who avoided discussions about their illness or withdrew socially experienced increased psychological burden. Healthcare communication also influenced coping outcomes; patients who reported clear and empathetic communication from medical staff expressed greater trust and emotional comfort.

Regression analysis identified several significant predictors of psychological distress. Higher anxiety and depression levels were associated with younger age, advanced disease stage, lack of social support, and reliance on maladaptive coping strategies ($p < 0.05$). In contrast, strong social support and the use of adaptive coping strategies predicted lower levels of emotional distress and better psychological outcomes.

Overall, the results demonstrate that cancer diagnosis strongly affects patients' psychological state, with high levels of anxiety and depression observed across the sample. Coping mechanisms and social support play a critical role in moderating these effects, highlighting the importance of integrating psychological care into oncology practice.

DISCUSSION

This study examined how cancer diagnosis shapes patients' psychological responses, with a focus on anxiety, depression, and coping mechanisms. The findings show that a substantial proportion of patients experience clinically significant anxiety and depressive symptoms, especially during active treatment and in advanced disease stages. These results align with prior research in medical psychology, which consistently identifies cancer diagnosis as a major psychological stressor that disrupts emotional stability and daily functioning.

The high levels of anxiety observed in this study reflect patients' concerns about prognosis, treatment side effects, and uncertainty about the future. Younger patients reported greater anxiety, which may relate to disruptions in life plans, employment, and family roles. At the same time, patients with advanced-stage cancer demonstrated higher levels of depression, likely due to increased symptom burden, perceived loss of control, and awareness of disease severity. These patterns highlight the need for tailored psychological support that considers both demographic and clinical factors.

The strong correlation between anxiety and depression suggests that these conditions often coexist and reinforce each other in oncology patients. Emotional distress rarely occurs in isolation; instead, patients experience overlapping symptoms that require integrated assessment and intervention. Clinicians should therefore adopt comprehensive screening strategies to identify both anxiety and depression early in the disease trajectory. Early recognition can facilitate timely psychological interventions and improve overall patient outcomes.

Coping mechanisms emerged as a key factor influencing psychological adjustment. Patients who used adaptive coping strategies—such as active problem-solving, acceptance, and seeking social support—reported lower levels of distress and greater emotional resilience. In contrast, patients who relied on maladaptive strategies, including avoidance and denial, experienced higher anxiety and



depression. These findings support theoretical models of coping, which emphasize that behavioral and cognitive responses to stress significantly affect emotional well-being.

Social support played a particularly important role in moderating psychological distress. Patients who maintained strong connections with family members, friends, and healthcare providers showed better emotional outcomes. Supportive relationships provide not only emotional comfort but also practical assistance and a sense of security. Conversely, patients who lacked social support faced greater psychological challenges, including isolation and hopelessness. These observations underline the importance of involving family members and caregivers in the treatment process and encouraging open communication.

The qualitative findings add depth to the quantitative results by illustrating the dynamic nature of patients' psychological experiences. Many participants described an initial phase of shock and disbelief, followed by ongoing fear and uncertainty. Over time, some patients developed adaptive perspectives, including acceptance and positive reappraisal of life priorities. This progression suggests that psychological responses to cancer diagnosis evolve and require continuous support rather than one-time interventions.

Healthcare communication also influenced patients' coping and emotional adjustment. Patients who received clear, empathetic, and honest information from healthcare professionals expressed greater trust and reduced anxiety. Effective communication helps patients understand their condition, reduces uncertainty, and fosters a sense of control. In contrast, unclear or insufficient communication may increase confusion and emotional distress. Therefore, training healthcare providers in communication skills represents a critical component of patient-centered oncology care.

Despite these important findings, several limitations should be considered. The cross-sectional design does not allow for causal conclusions or assessment of long-term psychological changes. The sample size, although adequate, may not fully represent all cancer populations, particularly those in rural or underserved settings. Additionally, self-report measures may introduce response bias, as patients may underreport or overreport their emotional experiences.

Future research should explore longitudinal changes in psychological responses from diagnosis through survivorship or end-of-life care. Studies could also examine the effectiveness of specific psychological interventions, such as cognitive-behavioral therapy or mindfulness-based approaches, in reducing anxiety and depression among cancer patients. Furthermore, integrating biological markers of stress with psychological assessments may provide a more comprehensive understanding of patient well-being.

In conclusion, this study reinforces the critical role of psychological factors in oncology care. Cancer diagnosis affects not only physical health but also emotional and cognitive functioning. By addressing anxiety, depression, and coping mechanisms, healthcare providers can improve patients' quality of life and support more effective adaptation to illness.

CONCLUSION

This study demonstrates that a cancer diagnosis exerts a profound and multifaceted impact on patients' psychological well-being. Patients commonly experience elevated levels of anxiety and depression, which arise from uncertainty about prognosis, fear of treatment outcomes, and disruption of personal and social roles. These emotional responses do not remain static; they evolve over time and interact with individual characteristics such as age, disease stage, and prior coping styles.

The findings highlight the central role of coping mechanisms in shaping psychological outcomes. Patients who adopt adaptive strategies—such as active problem-solving, acceptance, and seeking social support—tend to maintain better emotional stability and demonstrate greater resilience. In contrast, reliance on maladaptive strategies, including avoidance and denial, correlates with



increased psychological distress and reduced engagement with treatment. These patterns emphasize the importance of early identification of coping styles and the need to guide patients toward more constructive approaches.

Social support emerges as a key protective factor in the psychological adjustment of oncology patients. Strong relationships with family members, friends, and healthcare providers help reduce feelings of isolation, enhance emotional security, and improve overall well-being. Effective communication within the healthcare setting also plays a critical role. When clinicians provide clear information and demonstrate empathy, patients develop greater trust and a stronger sense of control over their condition.

The study underscores the necessity of integrating psychological care into standard oncology practice. Routine screening for anxiety and depression, combined with timely psychological interventions, can significantly improve patient outcomes. Interventions such as counseling, psychoeducation, and coping skills training offer practical ways to support patients throughout the disease trajectory.

In summary, cancer diagnosis affects not only the physical health of patients but also their emotional and psychological functioning. Addressing these dimensions through comprehensive, patient-centered care can enhance quality of life, strengthen coping capacity, and promote more effective adaptation to illness. Future efforts should continue to refine psychological support strategies and ensure their accessibility within oncology settings.

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