RESEARCH ARTICLE

ISSN: 2455-8095
doi: https://doi.org/10.21477/ijapsr.10.1.02

Psychological Distress in Cancer Patients: A Cross-Sectional Study

Poluri Koteswari[1*], Aasimah Kawkab[2], Sameera Sultana[2], Kummari Anusha[2], Mandla Rohini[2], Burramukku Aishwarya[2], Neha Bhavani[2]

[1]Professor and Principal, Department of Pharmaceutics, Smt. Sarojini Ramulamma College of Pharmacy, (Palamuru University), Seshadri Nagar, Mahabubnagar District, Telangana State, India.

[2]Pharm. D Intern, Smt. Sarojini Ramulamma College of Pharmacy, (Palamuru University), Seshadri Nagar, Mahabubnagar District, Telangana State, India.

ABSTRACT

Cancer patients often experience significant psychological distress, which can impact their treatment adherence, quality of life, and overall prognosis. This study aims to assess the prevalence, contributing factors, and severity of psychological distress among cancer patients. A cross-sectional observational study was conducted at SVS Medical College & Hospital and Mahabubnagar Cancer Hospital over six months, involving 100 cancer patients. Psychological distress was assessed using the NCCN Distress Thermometer, and statistical analysis was performed using SPSS version 23 and Graph Pad Prism version 9. The results indicate that females (62.7%) experienced significantly higher distress than males (37.3%). Age-wise distribution showed that the majority of patients were ≥51 years (35%), with a mean age of 42.31 ± 16.46 years. Weight distribution analysis revealed that most patients fell within the 51-70 kg category (63%). Notably, distress levels were highest in stage I (24%) and stage IV (24%) cancer patients, suggesting that initial diagnosis and late-stage disease contribute most to emotional distress. The study highlights the need for psychosocial interventions, routine distress screening, and counseling support to help cancer patients cope with psychological stress. Targeted mental health interventions may improve patient outcomes and enhance their overall well-being. Further research is recommended to explore long-term psychological impacts and the effectiveness of distress management strategies in oncology settings.

Keywords: Psychological distress, cancer patients, NCCN Distress Thermometer, oncology, mental health, quality of life, psychosocial intervention, emotional well-being.

1. INTRODUCTION

Cancer is a life-altering diagnosis that not only affects physical health but also has profound psychological consequences. Psychological distress, including anxiety, depression, and emotional turmoil, is common among cancer patients and can significantly impact treatment adherence, quality of life, and overall prognosis.[1] The experience of receiving a cancer diagnosis, undergoing aggressive treatments, and facing uncertainties about the future can lead to heightened levels of stress, negatively influencing mental well-being.[2] Addressing psychological distress in cancer patients is crucial for holistic patient care, as untreated distress may contribute to poor coping mechanisms, reduced social functioning, and impaired treatment outcomes.[3,4] Several factors, such as disease severity, treatment side effects, social support, and pre-existing mental health conditions, influence the extent of distress experienced by patients.[5-8] This study aims to assess the prevalence, contributing factors, and management strategies for psychological distress in cancer patients, highlighting the need for integrated psychosocial interventions in oncology care.

Psychological distress is a prevalent and critical concern among cancer patients, influencing their emotional well-being, treatment adherence, and overall quality of life. Various studies highlight the impact of cancer diagnosis and progression on mental health, with conditions such as anxiety, depression, and post-traumatic stress disorder being commonly reported.[9,10] For instance, patients diagnosed with Unknown Primary Cancer (CUP) exhibit higher levels of psychological distress, including significant depressive symptoms, compared to those with metastatic cancers of known

Corresponding author
Poluri Koteswari
Email : polurikoteshwari@gmail.com

Received: 16-10-2024 **Accepted:** 20-12-2024 **Available Online:** 01-01-2025

origin. Similarly, physical comorbidities in cancer patients contribute to increased psychological distress, further complicating disease management. Research has also demonstrated that distress varies based on demographic and clinical factors, with higher distress levels observed in patients undergoing recent radiotherapy, those diagnosed with female genital cancers, and those with chronic pain.[11,12] The role of psycho-oncology services has gained prominence, showing significant reductions in distress and depression among patients receiving psychological interventions. Despite the availability of distress screening tools such as the Distress Thermometer, studies indicate gaps in routine screening and mental health referrals, with only a fraction of cancer patients seeking professional psychological support. Moreover, research underscores the importance of acceptance in coping with cancer-related distress, where higher acceptance levels correlate with lower anxiety and depressive symptoms [13]. Additionally, psychosocial distress in cancer patients is linked to various factors, including disease stage, treatment setting, and social support. Studies have also identified a heightened risk of suicide among cancer patients, particularly in the first year post-diagnosis and in individuals with advanced or painful conditions. Given the complexities of psychological distress in cancer patients, integrating mental health care into oncology practice, enhancing distress screening, and providing targeted interventions are crucial for improving patient outcomes and overall well-being.[14-19]

2. MATERIALS AND METHODS

2.1. Study design

This study was designed as a cross-sectional observational study to assess psychological distress in cancer patients.

2.2. Study setting and source of data

The study was conducted at SVS Medical College & Hospital and Mahabubnagar Cancer Hospital, Mahbubnagar. Data sources included patient case notes, the NCCN Distress Thermometer questionnaire, and patient chemotherapy regimens.

2.3. Duration of study

The study was conducted from 03-01-2023 to 05-06-2023.

2.4. Place of study

The study was done at SVS Medical College & Hospital and Mahabubnagar Cancer Hospital, Mahabubnagar.

2.5. Sample size and determination

A total of 100 patients were included in the study.

2.6. Sample selection criteria

2.6.1. *Inclusion criteria*

- Patients visiting the oncology department.
- Age ≥ 18 years.
- Patients willing to provide informed consent.

2.6.2. *Exclusion criteria*

- Patients with a history of recurrent cancer and severe comorbidities.
- Patients with a history of psychiatric disorders.
- Pregnant and lactating women.

2.7. Methodology

The psychological status of cancer patients was assessed in routine clinical practice. After obtaining informed consent, eligible patients were included in the study. A data collection form was designed to document patient demographics and medication regimens. The NCCN Distress Thermometer was used to assess psychological distress. Data was systematically recorded in Excel sheets, and descriptive statistics were performed.

2.8. Materials, investigations, and data collection instruments

The study utilized validated questionnaires, patient interviews, and clinical observations to measure psychological distress. The NCCN Distress Thermometer was used as a standardized tool for distress assessment.

2.9. Anticipated risks and minimization strategies

No adverse events, or lethal, or sub-lethal injuries were anticipated in this study.

2.10. Statistical methods

Descriptive statistics were performed using mean ± standard deviation (SD), was Recorded.

Statistical Package Used

Data analysis was conducted using SPSS version 23 and Graph Pad Prism version 9.03

2.11. Collaboration details

The study was conducted in collaboration with Mahabubnagar Cancer Hospital.

2.12. Ethical clearance

Ethical approval for this study was granted by the Institutional Ethical Committee of SVS Medical College & Hospital before its initiation. The study adhered to ethical guidelines, ensuring patient confidentiality and informed consent. Reference Number: IEC/DHR-03(03/01)/2023/054.

3. RESULTS AND DISCUSSION

This cross-sectional observational study was conducted at SVS Medical College & Hospital, MCH Hospital. A total of 100 patients were observed.

Figure 1 presents the age-wise distribution of the study population. The majority of patients were aged 51 years and above (35%), followed by those in the 21-30 years (25%) and 31-40 years (20%) age groups. A smaller proportion of patients were ≤20 years (4%). The mean age of the patients was 42.31 ± 16.46 years, indicating a wide age distribution among participants.

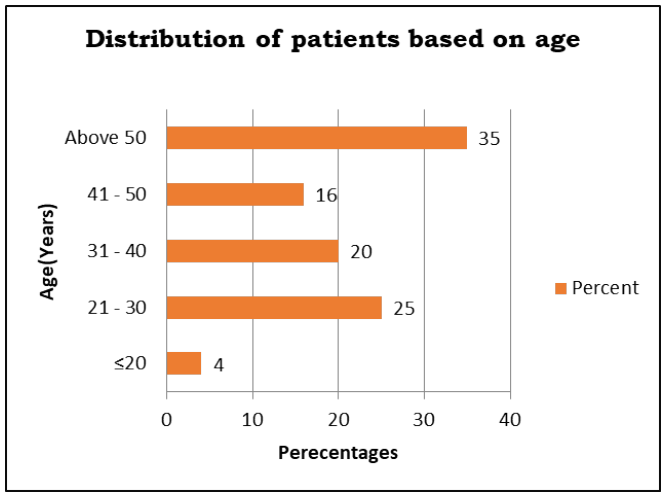

Figure 1: Distribution of patients based on age

Table 1: Distribution of patients based on gender

Gender	*Frequency*	*Percent of distress*
Female	50	62.7 %
Male	50	37.3 %
Total	100	100.0 %

Table 2: Distribution of patients based on weight

Weight(Kg)	*Frequency*	*Percent*
≤ 30	2	2.0 %
31 - 50	29	29.0 %
51 - 70	63	63.0 %
Above 70	6	6.0 %
Total	100	100.0 %

Table 3: Distribution of patients based on stage of cancer

Stages	*Frequency*	*Distress in no.of patients*	*Percent*
stage-1	25	24	24.0 %
stage-2	25	1	01.0 %
stage-3	25	2	02.0 %
stage-4	25	24	24.0 %
Total	100	51	51.0 %

Table 1 illustrates the distribution of psychological distress among patients based on gender. Females (62.7%) experienced higher distress levels compared to males (37.3%), despite an equal number of participants in both groups. This finding suggests a potential gender disparity in psychological distress among cancer patients, emphasizing the need for targeted mental health support.

Table 2 presents the distribution of patients based on weight. The majority of patients (63%) had a weight range of 51-70 kg, followed by 29% in the 31-50 kg category. A smaller proportion of patients weighed above 70 kg (6%), while only 2% weighed ≤30 kg, indicating that most patients fell within the normal to moderate weight range.

The study included an equal number of patients in each stage i.e., 25 patients respectively, where the stages of cancer were confirmed by the appropriate diagnostic criteria. Our study's results showed that stage-1 and stage-4 are having likely chances to develop psychological distress but the level of distress may vary with the stage of cancer. (Table 3).

By level of distress i.e., 2.4 only 1 patient(stage-3), 2.8; 20 patients (stage 1 is 1 patient, stage 2 is 9 patients, stage 3 is 10 patients), 3.2; 17 patients (stage 2 is 9 patients, stage 3 is 8 patients), 3.6; 11 patients (stage 2 is 6 patients, stage 3 is 4 patients, stage 4- is 1 patient), 4.0; 21 patients (stage1 is 8 patients, stage 2 is 1 patient, stage 3 is 1 patient, stage 4 is 11 patients), 4.4; 14 patients (stage 1 is 8 patients, stage 4 is 6 patients), 4.8; 16 patients (stage 1 is 8 patients, stage 4 is 8 patients). Mostly Stage – I & Stage – IV are affected by psychological distress because in Stage – I the patients

Table 4: Level of distress based on Stage of cancer

Level of distress	*Frequency*		*Percentage*
	Stage	*No. of patients*	
2.4 (very mild)	Stage - 3	1	1.0 %
2.8 (very mild)	Stage - 1 Stage - 2 Stage - 3	1 9 10	20.0 %
3.2 (mild)	Stage - 2 Stage - 3	9 8	17.0 %
3.6 (mild)	Stage - 2 Stage - 3 Stage - 4	6 4 1	11.0 %
4.0 (moderate)	Stage - 1 Stage - 2 Stage - 3 Stage - 4	8 1 2 10	21.0 %
4.4 (moderate – severe))	Stage - 1 Stage - 4	8 6	14.0 %
4.8 (moderate -severe)	Stage - 1 Stage - 4	8 8	16.0 %
Total		100	100.0 %

are afraid of the diagnosis of cancer whereas in Stage – IV the patients are in the last stage they are worried about their life span. (Table 4).

4. CONCLUSION

This study provides valuable insights into the prevalence and severity of psychological distress among cancer patients. Findings indicate that distress levels vary based on gender, age, weight, and cancer stage, with females, older patients, and those in stages I and IV experiencing higher levels of psychological distress. The use of the NCCN Distress Thermometer facilitated a structured assessment, emphasizing the importance of incorporating routine distress screening in oncology care. The results underscore the critical need for integrating mental health services into cancer treatment protocols. Psycho-oncology interventions, including counseling, cognitive-behavioral therapy (CBT), and peer support programs, could help in reducing distress and improving patient quality of life. Additionally, oncologists and healthcare professionals should receive adequate training to identify, assess, and manage psychological distress effectively. While this study provides a comprehensive overview of distress among cancer patients, further longitudinal research is required to assess the long-term psychological impact and effectiveness of intervention strategies. Future studies should also explore the role of social support networks and coping mechanisms in reducing distress levels. By addressing the psychological well-being of cancer patients, healthcare providers can enhance treatment adherence, recovery outcomes, and overall patient satisfaction.

5. REFERENCES

1. Brown JS, Amend SR, Austin RH, Gatenby RA, Hammarlund EU, Pienta KJ. Updating the definition of cancer. Mol Cancer Res. 2023;21(11):1142-1147.
2. Barzaman K, Karami J, Zarei Z, Hosseinzadeh A, Kazemi MH, Moradi-Kalbolandi S, Safari E, Farahmand L. Breast cancer: Biology, biomarkers, and treatments. Int Immunopharmacol. 2020;84:106535
3. Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin. 2018;68(6):394-424.
4. Miller KD, Siegel RL, Lin CC, Mariotto AB, Kramer JL, Rowland JH, Stein KD, Alteri R, Jemal A. Cancer treatment and survivorship statistics, 2016. CA Cancer J Clin. 2016;66(4):271-89.
5. Shah JP, Cendon RA, Farr HW, Strong EW. Carcinoma of the oral cavity. factors affecting treatment failure at the primary site and neck. Am J Surg. 1976;132(4):504-507.
6. Parker PA, Baile WF, de Moor C, Cohen L, . Psychosocial and demographic predictors of quality of life in a large sample of cancer patients. Psychooncology. 2003;12:183-93.
7. Mönig S, Chevallay M, Niclauss N, Zilli T, Fang W, Bansal A, Hoeppner J. Early esophageal cancer: the significance of surgery, endoscopy, and chemoradiation. Ann N Y Acad Sci. 2018;1434(1):115-123.
8. Sah BR, Owczarczyk K, Siddique M, Cook GJR, Goh V. Radiomics in esophageal and gastric cancer. Abdom Radiol (NY). 2019;44(6):2048-2058.
9. Lakka NS, Kuppan C, Vadagam N, Ravinathan P, Chepuri K, Chinnakadoori SR. Molecular docking, in-vitro anticancer evaluation and ADME profiling of 7-Oxo Midostaurin. J Mol Struct. 2023;1293:136159-9.
10. Gunnes MW, Lie RT, Bjørge T, Ghaderi S, Syse A, Ruud E, Wesenberg F, Moster D. Suicide and violent deaths in survivors of cancer in childhood, adolescence and young adulthood-A national cohort study. Int J Cancer. 2017;140(3):575-580.
11. Nikbakhsh N, Moudi S, Abbasian S, Khafri S. Prevalence of depression and anxiety among cancer patients Caspian. J Intern Med. 2014;5:167-70.
12. Granek L, Nakash O, Ariad S, Chen W, Birenstock-Cohen S, Shapira S, Ben-David M. From will to live to will to die: oncologists, nurses, and social workers identification of suicidality in cancer patients. Support Care Cancer. 2017;25(12):3691-3702.
13. Blenkiron P, Brooks A, Dearden R, McVey J. Use of the distress thermometer to evaluate symptoms, outcome and satisfaction in a specialist psycho-oncology service. Gen Hosp Psychiatry. 2014;36(6):607-12.
14. Chan CMH, Wan Ahmad WA, Md Yusof M, Ho GF, & Krupat E. Prevalence and characteristics associated with default of treatment and follow-up in patients with cancer. Eur J Cancer Care. 2015;24(6), 938-944.
15. O'Donnell E. The distress thermometer: a rapid and effective tool for the oncology social worker. Int J Health Care Qual Assur. 2013;26(4):353-9.
16. Anguiano L, Mayer DK, Piven ML, Rosenstein D. A literature review of suicide in cancer patients. Cancer Nurs 2012;35(4):E14-26.
17. Bonacchi A, Rossi A, Bellotti L, Franco S, Toccafondi A, Miccinesi G, Rosselli M. Assessment of psychological distress in cancer patients: a pivotal role for clinical interview. Psychooncology. 2010;19(12):1294-302.
18. Muriel AC, Hwang VS, Kornblith A, Greer J, Greenberg DB, Temel J, Schapira L, Pirl W. Management of psychosocial distress by oncologists. Psychiatr Serv. 2009;60(8):1132-4.
19. Alagizy HA, Soltan MR, Soliman SS, Hegazy NN, & Gohar S F. Anxiety, depression and perceived stress among breast cancer patients: Single institute experience. Middle East Current Psychiatry. 2020;27(1):1-10.

How to cite this article: Koteswari P, Kawkab A, Sultana S, Anusha K, Rohini M, Aishwarya B, et al.. Psychological distress in cancer patients: a cross-sectional study. Int J Appl Pharm Sci Res. (2025);10(1): 8-11. doi: https://doi.org/10.21477/ijapsr.10.1.02

Source of Support: Nil.

Conflict of Support: None declared.