

Analytical study on the factors related to Depression and Anxiety among cancer patients at the Hassan II Oncology Center in Oujda

Essadki Samia¹, Lamsyah Rajae², Hamdaoui Safae¹, Abdellaoui Mohammed¹ et Rajae Mechida¹

¹Higher Institute of Nursing Professions and Health Techniques, Oujda, Morocco

² Higher Institute of Nursing Professions and Health Techniques of Fez, Morocco

*Corresponding author, Email address: s.essadki@ump.ac.ma

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Abstract:

Cancer is often associated with a range of psychological issues, including anxiety and depression, which affect nearly 50% of patients during their illness. This study aims to assess the prevalence of anxiety and depression among cancer patients and identify the sociodemographic, clinical, and social factors influencing these psychological disorders. A descriptive and analytical cross-sectional study was conducted among 85 cancer patients at the Hassan II Oncology Center in Oujda between March 2024 and July 2024. The Hospital Anxiety and Depression Scale (HADS) was used to evaluate the levels of anxiety and depression in participants. Data on sociodemographic factors (age, gender, profession), clinical factors (cancer stage, comorbidities), and social factors were collected and analyzed for their association with anxiety and depression. The prevalence of both depression and anxiety among the study population was 40%. Significant factors associated with depression included gender ($p=0.03$) and personal psychiatric history ($p=0.032$). Early identification and systematic management of these psychological disorders are crucial to improving cancer care and patient prognosis.

Keywords: Cancer; Anxiety; Depression; Oncology; Mental Health.

1. Introduction

Cancer is a significant global health challenge, affecting millions of people each year and often leading to severe physical, emotional, and psychological distress. Beyond the physical toll, cancer patients frequently experience psychological disorders such as anxiety and depression, which can

worsen their overall prognosis and quality of life. Previous studies have shown that approximately 50% of cancer patients suffer from anxiety and depressive symptoms at some point during their illness, significantly affecting their emotional well-being and ability to cope with treatment [1].

In the context of cancer care, it is crucial to understand the sociodemographic, clinical, and social factors that contribute to the development of psychological distress in patients. Factors such as gender, age, social support, cancer stage, and personal or family history of mental illness are known to influence the onset of anxiety and depression. However, there is a need for further research to explore these associations in diverse populations, particularly in low-resource settings where mental health support is often limited.

This study aims to assess the prevalence of anxiety and depression among cancer patients at the Hassan II Oncology Center in Oujda and to identify the sociodemographic, clinical, and social factors associated with these psychological disorders. By improving our understanding of these factors, healthcare professionals can develop targeted interventions to better support the mental health of cancer patients, ultimately improving their quality of life and treatment outcomes.

Methods

Study Design

This is a descriptive and analytical cross-sectional study conducted to assess the prevalence of anxiety and depression among cancer patients and to identify the factors influencing the occurrence of these psychological disorders. The study was carried out at the Hassan II Oncology Center in Oujda over a four-month period, from March 2024 to July 2024.

Study Population

The study population consisted of 85 cancer patients from the Medical Oncology, Radiotherapy, and Chemotherapy departments. The inclusion criteria were : a) patients diagnosed with any type of cancer, irrespective of the stage of disease, b) patients aged 18 years or older and c) patients willing to provide informed consent and participate in the study.

Patients with a previous diagnosis of severe mental illness or cognitive impairment were excluded from the study.

Data Collection Tools

Data was collected using a structured questionnaire that included sociodemographic, clinical, and psychological components. The Hospital Anxiety and Depression Scale (HADS) was used to evaluate anxiety and depression levels in the participants. The HADS is a validated 14-item

questionnaire designed to detect the presence and severity of anxiety and depression in non-psychiatric patients. It contains seven questions assessing anxiety and seven questions assessing depression, with each item scored on a scale from 0 to 3, yielding a maximum score of 21 for each subscale. A score of 0-7 indicates normal levels, 8-10 indicates borderline abnormal, and 11-21 suggests clinically significant anxiety or depression.

Data Analysis

Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 26. Descriptive statistics were employed to summarize the demographic and clinical characteristics of the participants. Chi-square tests and t-tests were used to assess the associations between sociodemographic, clinical, and social variables and the occurrence of anxiety and depression. A p-value of <0.05 was considered statistically significant (IC =95%).

Ethical Considerations

The study was approved by the Ethics Committee of the Hassan II Oncology Center in Oujda. All participants provided written informed consent after being informed about the purpose of the study, the confidentiality of their data, and their right to withdraw at any time without affecting their treatment.

Results

1. Characteristics of the Study Population

62% were female, The majority of patients (48%) were between 40-59 years old, 36% of patients were unemployed, 28% were housewives, 21% had a job, and 15% were retired. 61.2% had social insurance 67% were married (Table1).

Table 1. Socio-demographic characteristics

	Frequency	Percentage
Gender		
Female	54	63,5
Male	31	36,5
Age		
[18, 25[	11	12,9
[25 et 39[	25	29,4
[39,60[	33	38,8
More than 60 years	16	18,8
Marital status		
Single	15	17,6
Divorced	6	7,1
Married	59	69,4
Widowed	5	5,9
Origin		
Rural	52	61,2
Urban	33	38,8
Educational level		
Illiterate	53	62,4
Primary	17	20,0
Secondary	11	12,9
University	4	4,7
Professional activity		
Other	24	28,2
Employed	7	8,2
Retired	3	3,5
Unemployed	51	60,0
Monthly income		
[2000-4000[	2	2,4
[4000- 6000[	6	7,1
Less than 2000	47	55,3
More than 6000	8	9,4
Without salary	22	25,9
Medical Coverage		
No	33	38,8
Yes	52	61,2

A notable portion of patients (37.6%) have undergone surgery, while the majority (62.4%) has not. The vast majority (92.9%) of patients have solid tumors, compared to 7.1% with hematological cancers. Nearly half of the patients (48.2%) had locally advanced cancer, while 35.3% had localized cancer and 16.5% had distant metastases. The majority of patients (42.4%) were diagnosed within 6-12 months prior, with a smaller percentage having been diagnosed more than two years ago (10.6%) (Table 2).

Table 2. Characteristics related to the pathology

	Frequency	%
Surgical History		
No	53	62,4
Yes	32	37,6
Psychiatric History		
No	68	80,0
Yes	17	20,0
Substance Use Habits		
No	63	74,1
Yes	22	25,9
Family History		
No	64	75,3
Yes	21	24,7
Type of Cancer		
Hematological	6	7,1
Solid	79	92,9
Cancer Stage		
Locally advanced	41	48,2
Localized	30	35,3
Distant metastases	14	16,5
Discovery of Cancer		
[3 à 6 months[	24	28,2
[6 à 12months[	36	42,4
[12 à 24 mois]	16	18,8
More than 24 months	9	10,6

2. Prevalence of Anxiety-depressive disorders

The results of the HADS (Hospital Anxiety and Depression Scale) revealed a high prevalence of both anxiety and depression in the study population. 70.6% of the patients had clinically significant Anxiety-depressive disorders (HADS-D score ≥ 11) (Table3).

Table 3. Prevalence of Anxiety-depressive disorders

	Anxiety-depressive disorders	
	n	%
Yes	60	70,6
No	25	29,4

3. Factors Associated with Anxiety-depressive disorders

Anxiety-depressive disorders was more prevalent among females (81.5%), single (80%) and married (72.9%) personne (81.5%) ($p < 0.005$). (Table 4)

Table 4. Factors Associated with Anxiety-depressive disorders

	Anxiety-depressive disorders		p
	Yes	No	
Gender			
Female	44 (81,5)	11 (18,5)	0,004
Male	16 (51,)	16 (48,4)	
Marital status			
Single	12 (80)	4 (20)	0,048
Divorced	4 (40)	6 (60)	
Married	43 (72,9)	17 (27,1)	
Widowed	1 (20)	5 (80)	
Educational level			
Illiterate	39 (73,6)	15 (26,4)	0,323
Primary	9 (52,9)	9 (47,1)	
Secondary	9 (81,8)	3 (18,2)	
University	3 (75)	2 (25,0)	
Professional activity			
Yes, employed	5 (71,4)	3 (28,5)	0,154
Retired	1 (33,3)	3 (66,7)	
Unemployed	40 (78,4)	12 (21,6)	
Other	14 (58,3)	11 (41,7)	
Monthly income			
Without salary	16 (72,7)	7 (27,3)	0,799
Less than 1000	27(75)	9 (25)	
[1000 - 2000 DH[	7(63,6)	5 (36,4)	
[2000-4000dh[	1 (50)	1 (50)	
[4000-6000[	3 (50)	3 (50)	
More than 6000 dh	6(75)	2 (25)	
Health insurance			
No	21(63,6)	13 (36,4)	0,262
Yes	39(75)	14 (25)	

Patients with a history of psychiatric disorders were more likely to report Anxiety-depressive disorders. The analysis showed that this disorder was significantly associated with this dimension ($p=0.017$). About the cancer stage, there is no statistically significant association between the stage of cancer and the prevalence of anxiety-depressive disorders (Table 5).

Table 5. Association Between Anxiety-Depressive Disorders and Clinical Factors in Cancer Patients

	Anxiety-depressive disorders		Total	p
	No anxiety-depressive disorder	Established disorders, more or less severe		
Chronic somatic illness				
No	9 (20,9)	34 (79,1)	43 (50,6)	0,082
Yes	16 (38,1)	26 (61,9)	42 (49,4)	
Personal psychiatric history				
No	24 (35,3)	44 (64,7)	68 (80)	0,017
Yes	1 (5,9)	16 (94,1)	17 (20)	
Type of cancer				
Hematologic	1 (16,7)	5 (83,3)	6 (7,1)	0,477
Solid	24 (30,4)	55 (69,6)	79 (92,9)	
Stage of cancer				
Locally advanced	12 (29,3)	29 (70,7)	41 (48,2)	0,828
Localized	8 (26,7)	22 (73,3)	30 (35,3)	
Distant metastases	5 (35,7)	9 (64,3)	14 (16,5)	
Religious practice				
Less practice	9(81,8)	2 (18,2)	11(12,9)	0,665
No change	28(70)	12(30)	40(47.1)	
More practice	23(67,6)	11(32,4)	34(40)	
Estimation du pronostic				
Curable	17(60,7)	11(39,3)	28(32,9)	0,375
I don't know	34(75,6)	11(24,4)	45(52,9)	
Not curable	9(75)	3(25)	12(14,1)	
Attitude of the family/friends				
Indifferent	20(80)	5(20)	25(29,4)	0,284
Negative	15(75)	5 (25)	20(23,5)	
Positive	25(62,5)	15(37,5)	40(47,1)	

Discussion:

The present study aimed to investigate the prevalence of anxiety and depression among cancer patients and identify the factors associated with these psychological disorders. Your study found that 70.6% of cancer patients experienced clinically significant levels of anxiety and depression, a result consistent with studies by Hinz et al. and Mitchell et al., which reported similarly high rates of psychological distress in cancer patients [1,2]. This high prevalence underscores the substantial emotional burden associated with cancer diagnosis and treatment. Additionally, studies from different countries, including Yang et al. in China and Tesfalem Lukas in Ethiopia, showed similar results,

reinforcing the global relevance of this issue. For instance, Yang et al. found a 49.7% prevalence of anxiety among cancer patients in China, comparable to your findings [3,4].

Our findings revealed a significant association between gender and psychological distress, with female patients showing higher levels of anxiety and depression (81.5%). This result is consistent with the literature, as several studies, including those by Pirl et al. and Nikbakhsh et al., have reported that female cancer patients are more vulnerable to psychological disorders[5,6]. This may be attributed to hormonal influences, social roles, and different emotional coping mechanisms compared to male patients. Therefore, gender-specific psychological interventions, such as counseling or support groups tailored for women, may be particularly effective.

Our results demonstrate that there is no association between a patient's perception of their prognosis and their likelihood of developing depression. This finding does not align with the work of Mitchell et al. and Dallaire-Habel et al., who emphasized that a patient's outlook on recovery plays a crucial role in their mental health [1,7]. Effective communication from healthcare providers, focusing on managing patient expectations and offering encouragement, could help mitigate these negative psychological impacts.

The study also found a significant association between psychiatric history and anxiety. Patients with a pre-existing psychiatric condition were more likely to report anxiety symptoms (94.1%). This is supported by Pirl et al., who found that pre-existing mental health conditions often exacerbate psychological distress in cancer patients[5]. These findings highlight the importance of conducting comprehensive mental health evaluations at the time of cancer diagnosis, particularly for patients with a history of psychiatric disorders.

While no statistically significant association between social support and psychological outcomes was found in this study, patients with weaker social networks reported higher levels of psychological distress. This observation is supported by Uchino, who demonstrated the protective role of social support in buffering against anxiety and depression in cancer patients [8]. Interventions aimed at strengthening social support systems could, therefore, have a positive impact on the psychological well-being of these patients.

Conclusion:

In conclusion, the study confirms the high prevalence of anxiety and depression among cancer patients, with significant associations between these psychological disorders and factors such as gender and psychiatric history. These findings align with existing research and underscore the critical need for integrated mental health care in oncology settings to enhance patient well-being and outcomes. This study has certain limitations, including a relatively small sample size (n=85) and a

cross-sectional design, which may limit the generalizability of the findings and prevent causal inferences. Future research should focus on longitudinal studies to better understand the trajectory of psychological distress over time and to assess the long-term effectiveness of mental health interventions in cancer care. Additionally, self-reported data may introduce bias, as patients might underreport or overreport their psychological symptoms.

Future research should explore longitudinal studies to track the progression of anxiety and depression in cancer patients and to assess the long-term effectiveness of mental health interventions. Addressing the psychological aspects of cancer care is crucial for providing holistic care and enhancing the well-being of patients throughout their treatment journey.

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