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Original Article

Psychiatry/Mental Health Section

Psychiatric Morbidity and Assessment of its Severity in Gynaecologic Oncology Patients: A Cross-sectional Study

NM MEENA[1], S JENNIFER SANGEETHA[2], T AMIRTHAMANI GANESH[3]

ABSTRACT

Introduction: Several psychological and social factors influence the incidence, treatment, and outcome of cancer patients. Depressive symptoms are more common in cancer patients, particularly in late stages. Women in Indian settings often exhibit delayed treatment-seeking behaviour.

Aim: To assess the prevalence, type, and severity of psychiatric morbidity as well as the duration, type, and stage of illness in gynaecological oncology patients.

Materials and Methods: This cross-sectional study was conducted among 100 gynaecological oncology patients aged 18 to 65 years, who were attending the gynaecologic Outpatient Department (OPD) and ward at a tertiary care hospital. The study took place at Government Rajaji Hospital, Madurai, between May 2013 and November 2013. Data was collected using a semistructured questionnaire from the patient and a reliable informant, after obtaining informed consent. The data was entered into Microsoft Excel and analysed using Statistical Package for Social Sciences (SPSS) software version 20.0. Central values, dispersion, and Chi-square tests were calculated.

Results: The sample comprised 100 gynaecological oncology patients, with 30 (30%) diagnosed with malignancy, 43 (43%) with a benign condition, and 27 (27%) under investigation. Among the 100 patients assessed, 34 (34%) had psychiatric morbidity. There was a significantly higher prevalence among older patients, those with more than six months' duration of gynaecological morbidity, and those exhibiting non fatal suicidal behaviour.

Conclusion: Psychiatric morbidity is highly prevalent in gynaecological oncology patients. Depression was found to be more frequent and severe in patients with cancer. A previous history of suicidal attempts and a family history of psychiatric illness are important predictors of psychiatric morbidity in this population. Future studies on a larger population should explore the biological relationship between gynaecological oncology and psychiatric illness.

Keywords: Anxiety, Depression, Gynaecological carcinoma, Psychiatric morbidity

INTRODUCTION

Psycho-oncology is an evolving field of research in recent years. The diagnosis of cancer elicits a range of emotional responses. Distress in a patients undergoing cancer evaluation may stem from multiple factors. These patients develop fears of pain, interventions, resulting disabilities, financial burdens, and a fear of death, leading to depression and anxiety. Persistent physical symptoms like pain, fatigue, nausea, and sleep disturbances can further exacerbate distress [1].

Gynaecological carcinomas threaten self-image, femininity, and sexuality. Symptoms such as bleeding, pain, and sexual dysfunction may impact daily activities and livelihood. Various cancer treatment modalities like surgery, radiotherapy, and chemotherapy, along with their adverse effects, can be even more distressing for cancer patients. Patients undergoing investigations for cancer also experience distress and anxiety about their prognosis. Several psychological and social factors influence cancer incidence, treatment-seeking behaviour, and patient outcomes [1]. Depressive symptoms are twice as common in cancer patients [1]. Emotional distress resulting from these diagnoses may predict overall patient outcomes [2,3]. Patients may experience depression in cases of therapeutic failure [4,5]. Approximately 20% of patients attending gynaecological oncology clinics receive at least one psychiatric diagnosis [6-8]. Early diagnosis and appropriate treatment of psychiatric co-morbidities in gynaecological oncology patients can improve patient outcomes [9,10]. Among various oncology studies, psychiatric morbidity in gynaecological oncology patients is less explored [11-14]. Many women, especially in Indian settings, tend to seek treatment only in advanced stages of illness due to various factors, necessitating a study to evaluate psychiatric morbidity in gynaecological oncology patients. Comparative studies between gynaecological and non gynaecological oncology patients demonstrate a higher incidence of depression and anxiety in gynaecological oncology patients [15-17]. It is reported that the majority of these psychiatric co-morbidities go undiagnosed and untreated, potentially increasing the risk of poor treatment compliance and worsening patient prognosis.

This study aimed to assess the prevalence, type, and severity of psychiatric morbidity, as well as the duration, type, and stage of gynaecological illness in gynaecological oncology patients. The rationale for conducting this study was the lack of research on female gynaecological oncology patients, particularly in the Indian context. Additionally, this study includes all patient groups, including those with benign conditions, malignancies, and those still under evaluation.

Given this, psychiatric morbidity in each of these groups can be compared. The study aimed to assess the prevalence and severity of psychiatric morbidity in gynaecological oncology patients. The objectives were to evaluate the frequency, type, and severity of psychiatric morbidity in these patients and to assess the relationship between psychiatric morbidity and the socio-demographic variables and clinical profiles of the patients.

MATERIALS AND METHODS

This cross-sectional prevalence-based study was conducted at Government Rajaji Hospital, Madurai, Tamil Nadu, India between May 2013 and November 2013. The study received approval from the Institutional Ethical Committee at Government Rajaji Hospital (Ref No. 9101/E4/3/2013).

A sample of 100 gynaecological oncology patients attending the gynaecologic OPD or admitted to the gynaecology ward at a tertiary care hospital was selected and assessed cross-sectionally.

Inclusion criteria: Women aged between 18 and 65 years attending the gynaecological oncology clinic. The sample included three major diagnostic groups:

- The first group comprised patients diagnosed with gynaecological malignancies undergoing various treatment modalities such as conservative management, surgery, chemotherapy, or radiotherapy.
- The second group included patients diagnosed with benign conditions undergoing treatment.
- The third group consisted of patients under investigation awaiting confirmation of the nature of their lesion. Since the study was conducted in the gynaecology ward or OP, most patients fell into one of these categories, and comparing these groups regarding psychiatric morbidity would provide broader insights. Therefore, all three groups were considered in the study.

Exclusion criteria: Patients with a history of psychiatric illness, those in the immediate postoperative period, and those with other systemic illnesses were excluded from the study.

Due to the study's time constraints, every consecutive patient meeting the inclusion and exclusion criteria was selected, discussed with a senior psychiatrist, and then included in the study. Subjects were briefed on the study's nature, and informed consent was obtained. Socio-demographic details and a detailed medical history were collected from the patient and a reliable informant using a semistructured questionnaire. A complete physical examination, including neurological assessment, detailed mental status examination, and details of biochemical and laboratory investigations, were documented. Socio-economic status was assessed using the Kuppuswamy Socio-economic Status Scale Revised [18].

The subjects underwent the Mini International Neuropsychiatric Interview (MINI) [19], and based on the diagnosis, specific scales like the Hamilton Depression Rating Scale (HDRS or HAM-D) were administered to assess depression [20]. Scores were interpreted as follows: 0-7=normal, 8-13=mild depression, 14-18=moderate depression, 19-22=severe depression, >23=very severe depression. Alternatively, the Hamilton Anxiety Rating Scale (HAM-A) was used to assess anxiety [21], with scores interpreted as mild anxiety=8-14, moderate=15-23, severe ≥24 (scores ≤7 were considered to represent no/minimal anxiety).

STATISTICAL ANALYSIS

A statistical design was formulated using the collected data for each scale and socio-demographic variables. Data were entered into Microsoft Excel and analysed using SPSS software version 20.0. Central values and dispersion were calculated, and for comparisons of categorical variables, the Chi-square/Fisher-exact test was used, with significance considered when the p-value was <0.05.

RESULTS

The sample comprised 100 patients attending the gynaecological oncology clinic. Among them, 30 (30%) were diagnosed with a malignant illness, 43 (43%) had a benign illness, and the remaining 27 (27%) were under investigation. The prevalence of psychiatric morbidity in the sample of 100 was found to be 34 (34%), with 66 (66%) without psychiatric morbidity. These two groups were compared based on their socio-demographic variables. It was found that psychiatric morbidity was significantly higher in the age group of 51-65 years (72%). However, no significant difference in the prevalence of psychiatric morbidity was found concerning other socio-demographic variables, namely domicile, religion, socio-economic status, type of family, and marital status [Table/Fig-1].

Variables	n (%)	Psychiatric morbidity		p-value
		Present n (%)	Absent n (%)	
Age (years)				
18-35	22 (22)	7 (32)	15 (68)	0.001***
36-50	60 (60)	14 (24)	46 (76)	
51-65	18 (18)	13 (72)	5 (28)	
Domicile				
Rural	68 (68)	24 (35)	44 (65)	0.690
Urban	32 (32)	10 (31)	22 (69)	
Religion				
Hindu	82 (82)	28 (34)	54 (66)	0.947
Christian	8 (8)	3 (37)	5 (63)	
Muslim	10 (10)	3 (30)	7 (70)	
Socio-economic status				
Lower middle (III)	10 (10)	1 (10)	9 (90)	0.088
Upper lower (IV)	30 (30)	8 (26)	22 (74)	
Lower (V)	60 (60)	25 (42)	35 (58)	
Type of family				
Joint	20 (20)	5 (25)	15 (75)	0.428
Extended	12 (12)	3 (25)	9 (75)	
Nuclear	68 (68)	26 (38)	42 (62)	
Marital status				
Married	71 (71)	24 (34)	47 (66)	0.948
Unmarried	1 (1)	1 (100)	0	
Separated/widow/divorcee	28 (28)	9 (32)	19 (68)	

[Table/Fig-1]: Socio-demographic profile of patients with and without psychiatric morbidity.
Test applied- Chi-square test, {when more than 20% of cells have expected frequencies <5, we use Fisher's-exact test} level of significance- p-value is less than 0.05

In [Table/Fig-2], when comparing the three diagnostic groups, there was no significant difference in psychiatric morbidity among these groups according to the Chi-square test (p=0.309). Regarding the duration of illness, 37% had an illness for <six months, and 63% had an illness for >six months. There was a significantly higher prevalence of psychiatric morbidity in patients with an illness duration of >six months (p-value=0.015).

Variables	No of cases (n)% Total cases n=100	Psychiatric morbidity		p-value
		Present n (%)	Absent n (%)	
Type of illness				
Cancer	30 (30)	12 (40)	18 (60)	0.309
Benign	43 (43)	16 (37)	27 (63)	
Under investigation	27 (27)	6 (22)	21 (78)	
Duration of illness				
<6 months	37 (37)	6 (16)	31 (84)	0.015*
>6 months	63 (63)	28 (44)	35 (56)	

[Table/Fig-2]: Gynaecological profile of patients with and without psychiatric morbidity.
Test applied- Chi-square test, level of significance- p-value is less than 0.05

[Table/Fig-3] shows that among the 30 patients in the cancer group, the prevalence of psychiatric morbidity was compared between various sites of the lesion. There was no difference (p-value=0.892) in the prevalence of psychiatric morbidity in any specific group. About 56% of patients were in the early stage, and 44% were in later stages of the illness. This was also not significantly related to psychiatric morbidity (p-value=0.805). Regarding the type of treatment modality, there was no significant difference in the prevalence of psychiatric morbidity in any of these groups (p-value=0.526).

[Table/Fig-4] shows that psychiatric morbidity was significantly higher in patients with a positive family history of psychiatric illness

Variables	No. of cases n (%) Total cases n=30	Psychiatric morbidity		p-value
		Present n (%)	Absent n (%)	
Site of carcinoma				
Cervix	18 (60)	8 (44)	10 (56)	0.892
Ovary	7 (24)	2 (29)	5 (71)	
Vulva	3 (10)	1 (34)	2 (66)	
Endometrium	1 (3)	0	1 (100)	
Vault	1 (3)	1 (100)	0	
Stage of carcinoma				
Early	17 (56)	7 (42)	10 (58)	0.805
Late	13 (44)	5 (39)	8 (61)	
Type of treatment given				
Conservative	9 (30)	2 (23)	7 (77)	0.526
Surgery	4 (14)	3 (75)	1 (25)	
Radiotherapy	17 (56)	7 (41)	10 (59)	

[Table/Fig-3]: Gynaecological profile of patients in cancer group.
Test applied-Chi square test, Chi square test, (when more than 20% of cells have expected frequencies <5, we use Fisher's-exact test) level of significance- p-value is less than 0.05

according to the chi-square test (p-value=0.047). Patients with a history of non fatal suicidal behaviour had a higher prevalence of psychiatric morbidity (p-value=0.004).

Variables	Category	Psychiatric morbidity total cases n=100		p-value
		Present n (%)	Absent n (%)	
Family history of psychiatric illness	Present	2 (2)	0	0.047
	Absent	32 (32)	66 (66)	
H/o non fatal suicidal behaviour	Present	4 (4)	0	0.004*
	Absent	30 (30)	66 (66)	

[Table/Fig-4]: Relation between family history of psychiatric illness and non-fatal suicidal behaviour psychiatric morbidity in the patient.
Test applied- Chi square test, level of significance- p-value is less than 0.05

Chi-square was applied [Table/Fig-5]. It shows that among the 40% of patients with psychiatric morbidity in the cancer group, 92% had depression, and 8% had anxiety. In the benign group, among the 37% of patients with psychiatric morbidity, 44% had depression, and 56% had anxiety. In patients under investigation, out of 23% of patients with psychiatric morbidity, 83% had depression, and 17% had anxiety. It was found that depression was significantly higher in patients with cancer (p-value=0.018). In the cancer group, 82% of cases had severe depression, which was significantly higher than in other groups (p-value=0.007). No significant difference was found between the three groups concerning the severity of anxiety (p-value=0.729).

Variable	No. of cases	No. of psychiatric morbidity n (%) n=34	Type of morbidity		p-value
	n (%) Total cases n=100		Depression	Anxiety	
Cancer	30 (30)	12 (40)	11 (92)	1 (8)	0.018*
Benign	43 (43)	16 (37)	7 (44)	9 (56)	
Under investigations	27 (27)	6 (23)	5 (83)	1 (17)	
Depression cases					
Variable	No of cases of depression	Severity of depression			
	n (%) n=23	Mild	Moderate	Severe	
Cancer	11 (47)	0	2 (18)	9 (82)	
Benign	7 (30)	4 (57)	2 (28)	1 (15)	0.007**
Under investigation	5 (23)	2 (40)	3 (60)	0	
Anxiety cases					
Variables	No of cases of anxiety n () n=11	Severity of anxiety			
		Mild	Moderate	Severe	
Cancer	1 (9)	0	1 (100)	0	
Benign	9 (82)	3 (33)	4 (44)	2 (23)	0.729
Under investigation	1 (9)	0	1 (100)	0	

[Table/Fig-5]: Type of psychiatric morbidity in three diagnostic groups.
Test applied- Chi-square test, Chi-square test, (when more than 20% of cells have expected frequencies <5, we use Fisher's-exact test) level of significance-p-value is less than 0.05

DISCUSSION

The study shows that psychiatric morbidity was significantly higher in the age group of 51-65 years. However, no significant difference in the prevalence of psychiatric morbidity was found concerning other socio-demographic variables, namely domicile, religion, socio-economic status, type of family, and marital status. There was no significant difference in psychiatric morbidity among the three diagnostic groups, namely benign, malignant, and those under investigation, but concerning the duration of illness, there was a significantly higher prevalence of psychiatric morbidity in patients with an illness duration of >six months. There was no significant difference in the prevalence of psychiatric morbidity concerning the site of the lesion, stage of the disease, and mode of treatment. Psychiatric morbidity was significantly higher in patients with a positive family history of psychiatric illness and those with non fatal suicidal behaviour. The prevalence of depression and the severity of depression were high among patients diagnosed with cancer.

The sample consisted of 100 patients attending gynaecological oncology patients, 34% were found to have psychiatric morbidity. Previous studies by Fowler JM et al., reported a prevalence of 20%, which is lower than the result of this study [9]. A study by Kathleen Ell et al., reported a prevalence rate of 24%, which was also lower than that reported in this study [10]. Mendonsa RD and Appaya P, who conducted a similar study in India, reported a prevalence rate of 44%, which was higher than the finding of this study. This points towards the fact that the prevalence of psychiatric morbidity in the Indian population is high. When comparing the prevalence of psychiatric morbidity based on the age group to which they belong, it is found that patients in the older age group (51-65 years) had a significantly higher prevalence of psychiatric morbidity compared to the other two age groups. Similar results were reported in the study conducted by Fowler JM et al., [9]. However, this study did not replicate the results of a few other studies by Simonelli LE and Fowler J, and Gonclave V, who reported a higher prevalence of psychiatric morbidity in the younger age group [12,13]. Kathleen Ell et al., reported a higher prevalence of psychiatric morbidity in the middle age group [10]. In this study, the relation of other socio-demographic variables, namely domicile, religion, and socio-economic status of the gynaecological oncology patients, and the prevalence of psychiatric morbidity was analysed, and no significant relation was reported. This finding replicates the previous studies by Fowler JM et al., and Kathleen Ell et al., [9,10]. However, the results are contrary to the results of Mendonsa RD and Appaya P, Simonelli LE and Fowler J and Agarwal P et al., studies [11,12,14]. These studies argued that psychiatric morbidity was common in the rural population, illiterates, housewives, and those in low socio-economic groups. The social support system of the sample population was analysed in terms of their marital status and the type of family to which they belong, and no significant relation was reported between the marital status, type of family, and psychiatric morbidity. This was in agreement with previous studies by Harrison J and Maguire P, and Zabora J et al., [15,16], but Mendonsa RD and Appaya P argue that psychiatric morbidity was common in widows and those with poor social support [11]. It was found that patients with a longer duration of gynaecological illness (>6 months) had a significantly higher prevalence of psychiatric morbidity.

The results of this study were in agreement with the previous study by Mendonsa RD and Appaya P [11], but it was controversial in studies by Simonelli LE and Fowler J and Farooqi YN and Chaudhry M [12,17]. They argued that there was no relation between psychiatric morbidity and the duration of illness. There was no significant difference observed among the three groups, namely cancer, benign, and under investigation group, in terms of psychiatric morbidity in the present study. This was in agreement with previous studies by Fowler JM et al., Andersen BL et al., Lalinec-Michaud M, and Engelsmann F; Kincey J and McFarlane T [9,22-24]. However, few authors argue that psychiatric morbidity was common in cancer patients in studies by Mendonsa RD and Appaya P; Matsushita T et al., [11,25]. There was no significant difference observed in the prevalence of psychiatric morbidity with respect to the site of the lesion. This reciprocates the results of the previous study by Simonelli LE and Fowler J [12], but Mendonsa RD and Appaya P argue that patients with ovarian cancer and those with undifferentiated cancers had a higher prevalence of psychiatric morbidity [11].

The cancer sample was assessed based on the stage of illness. It was found that 41% of patients in the early stage of illness and 38% in the later stage of illness had psychiatric morbidity. There was no significant relation between the stage of cancer and the prevalence of psychiatric morbidity. This result replicates the results of Simonelli LE and Fowler J study [12], but Matsushita T et al., argue that the anger-hostility score was found to be lowest in the patients in the advanced stage of illness and the highest in those with benign illness [25]. In the current study, 13% of the cancer group patients were under conservative line of management, i.e., were either planned for surgery, radiotherapy, or chemotherapy. About 13% of patients had undergone surgery, and the remaining 56% were on radiotherapy. There was no representation of patients on chemotherapy in this sample. There was no significant difference found with respect to the mode of treatment. These results were in agreement with previous studies by Simonelli LE and Fowler J and Gonçalves V [12,13], but Matsushitha T et al., study states the prevalence of psychiatric morbidity is high in patients on chemotherapy [25]. Andersen BL et al., study favours radiotherapy to be associated with higher psychiatric morbidity [22].

In terms of psychiatric morbidity among the three groups, namely cancer, benign, and under investigation groups, the current study found that in the cancer group, about 92% of patients with psychiatric morbidity had depression, and only 8% had anxiety. These results were in agreement with previous studies that also show that depression is the most common psychiatric morbidity followed by anxiety [9,11,12,26]. Similarly, depression was significantly higher in patients with cancer [10,11,22]. Comparing the severity of depression among the three groups, it was found that 82% of depressives in the cancer group had severe depression, which was statistically significant. There was no significant difference between the three groups based on the severity of anxiety.

Kathleen Ell et al., study suggests that moderate to severe depression was predominant in the cancer group [10]. In this study, four patients were found to have a history of non fatal suicidal behaviour in the past. All these four patients were found to have psychiatric morbidity at present. Levenson JL states that personality and coping skills are predictors of depression in gynaecological cancer patients [6]. Similarly, a past history of suicide is a predictor of depression and suicidal attempts in patients with cancer [1]. Based on the family history of psychiatric illness, it was found that two patients had a positive family history. Both of them had psychiatric morbidity at present. Kaplan and Sadock study report that a family history of psychiatric illness is a predictor of depression in patients [1].

The most significant finding in this study was that, though there was no difference in the prevalence of psychiatric morbidity among benign, cancer, and under investigation groups, depression was the predominant co-morbidity in cancer patients. There were 11 depressive patients in the cancer group. When their socio-demographic profile was analysed, it was found that 72% were in the age group of 51-65 years, emphasising the fact that depression is common in older patients with cancer. It was found that 90% of these patients were either living alone or were in a nuclear family system. Similarly, 32% of these patients were either widows or separated from their spouse. These findings suggest that poor social support is an important predisposing factor for the onset of depression. This reciprocates the findings of previous studies by Fowler JM et al., Mendonsa RD and Appaya P, Nordin K et al., Hipkins J et al., Norton TR et al., [9,11,27-29]. This study assessed the gynaecological profile of cancer patients with depression. It was found that the incidence of depression was high in patients with cervical cancer. But Simonelli LE and Fowler J argue that there was no relation between the site of carcinoma and the incidence of depression [12].

Present study contradicts the findings of Mendonsa RD and Appaya P, who argue that depression was higher in patients with ovarian cancer [11]. Regarding the type of treatment modality, it was found that about 73% of patients with depression in the cancer group were on radiotherapy. This aligns with the findings of Andersen BL et al., Future studies may be conducted on a larger sample size of the general population [22].

This study shows that psychiatric morbidity, particularly depression, is highly prevalent among gynaecological oncology patients. Screening of all these patients will ensure early diagnosis and treatment of co-existing psychiatric conditions, which, in turn, assures treatment adherence and overall quality of life of these patients. Future studies analysing the biological relationship between cancer and psychiatric illness may be explored. Prospective studies analysing the effect of early diagnosis and treatment of psychiatric morbidities on the quality of life and the overall life expectancy of these gynaecological oncology patients are imperative.

Limitation(s)

This study being a cross-sectional study does not assess the effects of psychiatric morbidity on the long-term outcome of gynaecological oncology patients. Due to the small sample size, this study may not reflect the universal population.

CONCLUSION(S)

Based on the detailed analysis of gynaecological oncology patients, it is concluded that psychiatric morbidity is highly prevalent in gynaecological oncology patients and is higher in patients belonging to an older age group. Patients with a longer duration of gynaecological illness have higher psychiatric morbidity. Depression was found to be higher in frequency and severity in patients with cancer. Previous history of suicidal attempts and a family history of psychiatric illness are important predictors of psychiatric morbidity in gynaecological oncology patients.

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PARTICULARS OF CONTRIBUTORS:
1. Assistant Professor, Department of Psychiatry, Institute of Mental Health, Madras Medical College, Chennai, Tamil Nadu, India.
2. Assistant Professor, Department of Psychiatry, Institute of Mental Health, Madras Medical College, Chennai, Tamil Nadu, India.
3. Assistant Professor, Department of Psychiatry, Government Medical College, The Nilgiris, Ooty, Tamil Nadu, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:
Dr. NM Meena,
B-1206, Radiance Icon, 1167, Poonamallee High Road, Koyambedu,
Chennai-600107, Tamil Nadu, India.
E-mail: drmeenaragu@gmail.com

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