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Factors associated with Psychiatric Morbidity among Patients with Cancer in a Nigerian Tertiary Hospital

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ABSTRACT

Background Psychiatric morbidity is common among cancer patients. In our setting, psychosocial and clinical factors associated with psychiatric morbidity in these patients are yet to be well studied.

Aims The study was aimed at determining the factors that are associated with psychiatric morbidity among patients with cancer in a Nigerian tertiary hospital.

Method Over a 6-month period, all consenting consecutive patients who were diagnosed with cancer and admitted into the surgical and gynaecological wards were interviewed using the Present State Examination (PSE), a sociodemographic and a clinical data collection sheet.

Results The prevalence of psychiatric morbidity among the 63 patients studied was 44.4% (28 of 63 patients). Four (6.3%) had adjustment disorders, 5 (7.9%) had generalized anxiety disorder, 4 (6.3%) had delirium, one (1.6%) organic hallucinosis, one (1.6%) schizophrenia-like disorder, 13 (20.6%) had depressive illness with 2 (3.2%) having deliberately harmed themselves. There was a significant association between psychiatric morbidity and, a feeling that friends have been not been of help since onset of illness ($X^2 = 4.12$; $p = 0.03$) and more evidence of radiological spread of disease ($X^2 = 0.43$; $p = 0.005$). Though not to a significant level, reduced income since onset of illness, worry about finances, less religious and social activities, allay of concern through explanation of nature of illness by doctors, less satisfaction with overall personal relationship, past history of psychiatric illness, and co-morbidity in terms of hypertension and diabetes were observed.

Conclusion There was a significant association between psychiatric morbidity on one hand and a feeling that friends have been not been of help since onset of illness, increased evidence of radiological spread of disease and formal counselling during the index admission. We suggest a need for better communication and counselling of cancer patients and more social support of the patients, not just by family members, but also friends and significant others.

Key words Predictive factors; Cancer; Nigeria.

Declaration: None

INTRODUCTION

There is a significant association between psychiatric illness and chronic medical conditions (Roy-Byrne et al, 2008). The prevalence of psychiatric morbidity in patients with malignant diseases has been reported to vary from 1.5% to above 50% with a significant proportion manifesting as anxiety disease, depression and organic mental disorders (Craig, 1974; Harter et al, 2000). Psychiatric disorders may occur at any time but are usually noticed during stressful periods such as period of diagnosis of cancer and that of waiting for test results, during progression or recurrence of illness, when patients are informed of failure in treatment efforts, and when they are faced with employment difficulties (Zampini & Ostroff, 1993; Llyod- William 2001). The presence of psychiatric disorders are known to adversely affect cancer patients in many ways such as impaired quality of life, functional status, energy level and pain tolerance. It may also interfere with medical treatment and possibly decrease overall survival time. Though psychiatric symptoms are frequently observed in cancer patients, they are often underestimated, unrecognized by healthcare providers and therefore undertreated (Fulton, 1998; Maguire, 1985a; Maguire, 1985b).

Some factors have been reported to be associated with psychiatric morbidity among cancer patients. These include poor social support, having children with health problems, various concerns about family members (Fulton, 1998) and pain, which tends to increase with progression and severity of illness (Harter et al, 2000, Lloyd-Williams, 2001). Other factors include the role of patient within the family or his or her relationship with spouse/partner (Fulton, 1998) lack of dependants other than family members (Maguire & Howell, 1995) difficulties in personal and sexual relationships and level of interaction among family members. Patients from families that are cohesive and freely discuss among themselves have been found to have a less chance of developing psychiatric disorders (Maguire et al, 1989). Poor communication between patients and care providers, and spiritual factors may also predispose cancer patients to psychiatric disorders such as

anxiety and depression (Fallowfield, 2001). Also, among cancer patients, there may be concerns about existential questions such as "Who am I? What am I? Will I be remembered when I am dead? and how will I be remembered?" Other worrying issues may include, did I bring the cancer on myself? Am I being punished for some wrongful act that I might have committed in the past (Maguire & Howell, 1995)? If these issues are not properly resolved, there may be an increase in patients' suffering. It is suggested therefore, that there is a need to include assessment of spiritual needs into the care of cancer patients. This will ensure that patients have the opportunity to disclose and discuss various concerns about their illness and impending death, which may cause significant emotional distress.

In our location of study, cancer management accounts for a significant proportion of total hospital services rendered. However, no study has documented the psychosocial and clinical factors that are associated with psychiatric morbidity in these patients. Since some of the cancer cases are terminal, it is imperative that such patients have as good a quality of life as possible, and death, if unavoidable, made as comfortable as possible. This study is therefore aimed at determining the socio-demographic and clinical factors associated with psychiatric morbidity in patients with cancer attending a tertiary hospital in Ilorin, Nigeria. It is hoped that the findings will improve the quality of life and quality of care of these patients.

METHOD

All consenting cancer patients admitted into the surgical, medical and gynaecological wards of the University of Ilorin Teaching Hospital (UITH) Ilorin-Nigeria, within a study period of 6 months, who satisfied the inclusion criteria were interviewed. The inclusion criteria included patients aged 18 years and above who were on admission on the surgical and gynaecology units of UITH, Ilorin with a proven diagnosis (laboratory and/or tissue diagnosis) of cancer. The patient must have been informed of the diagnosis, which must have been made at least two weeks prior to the date of interview. This was to allow for the dynamics of cancer diagnosis to have set in. Patients who were too ill to be interviewed were excluded from the study.

Instruments for data collection: The first section of a data collection sheet which was designed by the authors, sought information on patients' socio-demographic characteristics. The second section sought information, through patient's case note analysis, on patient's clinical and oncologic data. Areas examined were cancer type, clinical stage of cancer, duration of illness, clinical interventions, side effects of treatment and whether the managing doctors made notes about the presence of a psychiatric co-morbidity. Each patient was interviewed using the Present State Examination (PSE) (Wing et al, 1974) while psychiatric diagnosis was made in accordance with the diagnostic criteria of the 10th edition of the International Classification of Diseases (ICD-10). The PSE is an instrument which had been previously validated in the study location and other parts of Nigeria (Abiodun & Ogunremi, 1990). Its *Yoruba* version, obtained through translation and back translation method from the English version, was administered to patients who could not speak English but understood *Yoruba*, which is the commonest language spoken in the area of study. One of the authors who received training in the use of PSE administered it after a joint rating with a trainer (trainee/trainer inter-rater reliability was 80%).

Pilot Test

This was carried out on five subjects who satisfied the inclusion criteria for the study. It was aimed at determining the acceptability, clarity or ambiguity of the questionnaire items and the average time required to administer it. Patients who participated in the pilot test were not included in the main study. The average time required to interview each patient was 30-45 minutes.

Ethical Consideration

Approval for the research protocol was obtained from the Ethics and Research Committee of the University of Ilorin Teaching Hospital (UITH/CAT/189/8/90 dated 20th May 2005). Verbal approval was sought from the patients' consultants while informed consent was obtained from each participant.

Data Analysis

Analysis was done using a computer software, Epi-Info Version 6.02. Frequency tables were generated and comparison of means done using F-statistics, while proportions were compared using Chi-square. The level of statistical significance was set at 5%.

RESULTS

Of the 72 patients who satisfied the inclusion criteria, 63 (91%) consented to participate in the study. Of the nine who did not participate, six patients (four females and two males) gave the following reasons: *lack of energy and zeal to answer questions, too lengthy questionnaire, lack of financial gratification and not being convinced of the relevance of study to their well being.* The remaining three patients could neither speak English nor *Yoruba*. Generally, the socio-demographic and clinical characteristics of those who declined participation in the study were similar to those that consented.

Sociodemographic characteristics of respondents

The respondents were aged 20-80 years (mean 49±14.4 years). Twenty (31.7%) were males while 43 (68.3%) were females. Most (76.2%) of the respondents were married. There were 32 (50.8%) Christians and 31(49.2%) Muslims. Majority, 49 (77.7%) of the respondents had formal education with 24 (38.1%) having up to tertiary level of education. Fifty-eight

Table 1. Demographic and psychosocial characteristics of the respondents

Variable	Frequency n=63 (%)
Age (yrs)	
Range	20-80
Means	49
S.D	14.38
Gender	
Male	20 (31.7)
Female	43 (68.3)
Marital Status	
Single	5 (7.9)
Married	48 (76.2)
Divorced/Separated/ Widowed	10 (15.9)
Religion	
Christian	32 (50.8)
Islam	31 (49.2)
Education	
None	14 (22.2)
Primary	13 (20.6)
Secondary	12 (19.1)
Tertiary	24 (38.1)
Ethnicity	
Yoruba	58 (92.1)
Others	5 (7.9)
Household Income (n_1=61)	
Not Changed	1 (1.6)
Above half	43 (70.5)
Below half	17 (27.9)
Worried about finance	
Yes	56 (88.9)
No	7 (11.1)
Attend religious services	
As Usual	36 (57.1)
More Frequently	14(22.2)
Less Frequently	7 (11.1)
Not at all	6 (9.5)
Doctors helped under illness	
Yes	42 (66.7)
No	21 (33.3)
Allay concern	
Yes	11 (17.5)
No	52 (82)9
(15.5)	
Treatment w orries	
Yes	60 (95.2)
No	3 (4.8)
Friends helped	
Yes	60 (95.2)
No	3 (4.8)
Have dependants	
Yes	52 (82.5)
No	11 (17.5)
Number of dependants (n_1 =52, n_2=49)	
1-4	16 (30.8)
5-7	11 (21.2)
Above 7	11 (21.2)
No in household (n_1=52, n_2 =49)	
1-4	28 (53.8)
5-7	11 (21.2)
Above 7	11 (21.2)
None	2 (3.8)
Satisfaction with relationships	
Yes	47 (74.6)
No	16 (25.4)

Table 2. Clinical characteristics of the respondents

Variable	Frequency n=63 (%)
Clinical extent of disease	
Disease free	2 (3.2)
Primary site only	8 (12.7)
Regional lymph nodes	14 (22.2)
Distant metastasis	36 (61.9)
Duration of illness (month)	
Range	1-70
Mean	5.8
S.D	11.6
Variance	134.4
Length of stay in hospital (days)	
Range	2-84
Mean	25.2
S.D	19.5
Variance	368.5
Physical co-morbidity	
Yes	17 (27.0)
No	46 (73)
Past psychiatric history	
Yes	5 (7.9)
No	58 (92.1)
ICD diagnosis	
Present	20 (31.7)
Absent	43 (68.3)

(92.1%) respondents were of the *Yoruba* ethnic group (Table 1).

Prevalence of psychiatric morbidity

The prevalence of psychiatric morbidity among the 63 patients studied was 44.4% (28 of 63 patients). Four (6.3%) had adjustment disorders, 5 (7.9%) had generalized anxiety disorder, 4 (6.3%) had delirium, one (1.6%) organic hallucinosis, one (1.6%) schizophrenia-like disorder, 13 (20.6%) had depressive illness with 2 (3.2%) having deliberately harmed themselves.

Types of cancer

The following types of cancer were diagnosed among the respondents: cancer of the breast 21 (33.3%), carcinoma of the colon 9 (14.3%), lymphoproliferative disease 8 (12.7%), carcinoma of the liver 6 (9.5%), metastatic adenocarcinoma 4 (6.3%), carcinoma of the prostate 3 (4.8%), choriocarcinoma, carcinoma of the ovary, carcinoma of the lungs, carcinoma of the larynx, carcinoma of the cervix 2 (3.2%) each, cancer of the skin and conjunctiva were 1 (1.6%) each.

Table 3. Comparison of patients with psychiatric morbidity with those without psychiatric morbidity

Factor	Psychiatric morbidity present n=20 (%)	Psychiatric morbidity absent n=43 (%)	X^2/t-test	P-value
Friends have been of help	16 (80)	43(100)	4.1	0.03
Radiological trend of disease worsening	14 (70)	10 (41-7)	10.4	0.005
Level of income reduced to below half	16 (84.2)	26 (63.4)	6.1	0.05
Worried about finances	18 (90)	37 (86)	0.3	0.42
No longer attending religious services	4 (20)	2 (4.7)	4.6	0.2
Does not attend social function	17 (85)	31 (72.1)	1.4	0.2
Less satisfied with relationships	8 (40)	8 (18.6)	2.7	0.06
Past history of psychiatric morbidity	3 (15)	2 (4.7)	1.0	0.2
Clinical extent of disease (distant metastasis)	16 (80)	23 (53.5)	0.7	0.33

Factors associated with psychiatric morbidity

Using all the demographic, psychosocial and clinical variables shown in Tables 1 and 2, a comparison of subjects with psychiatric morbidity

with those without psychiatric morbidity showed that a significant proportion of those with psychiatric morbidity had 'a feeling that friends have not been of help since onset of illness' ($X^2 = 4.12$; $p = 0.03$), and had more evidence of radiological spread of disease ($X^2 = 0.43$; $p = 0.005$). Though not to a significant level, it is worthy of note that a higher proportion of respondents with psychiatric comorbidity as compared with those without, had reduced income (to below half) since onset of illness, felt more worried about their finances, attended less religious and social gatherings, felt their concerns were allayed less by their doctors, were less satisfied with their overall personal relationship, had more dependants, had past history of psychiatric illness, had more distant metastasis and more co-morbidity in terms of hypertension and diabetes (Table 3).

DISCUSSION

The combined prevalence of psychiatric morbidity was 44.4% with depressive disorder constituting 13 (20.6%), generalized anxiety disorder (7.9%), adjustment and delirium 6.3% each. The combined prevalence rate of 44.4% is comparable with findings in previous studies (Derogatis et al, 1983; Zabora & Brintzenhofeszx, 2001) while the prevalence for depression is comparable to that published in a study on prevalence and predictors of depression among cancer patients in University College Hospital, Ibadan (Nuhu et al, 2008). The study showed that there is a significant association between psychiatric morbidity on one hand and 'a feeling that friends have been not been of help since onset of illness' ($X^2 = 4.12$; $p = 0.03$), more evidence of radiological spread of disease ($X^2 = 0.43$; $p = 0.005$) and formal counselling during the index admission ($X^2 = 4.2$, $p = 0.02$).

These are in keeping with previous findings where psychiatric morbidity was found to have significant association with absence of people to depend on apart from from family members (Nordin et al, 2001), spread of cancer (Akechi et al, 2001) and poor communication about the nature of illness (Ohaeri & Odejide, 1992). The absence of friends to rely on and poor communication about the illness could increase patient's level of anxiety and stress thereby leading to psychiatric disorder. The degree of spread of cancer could be directly proportional to degree of pain which has been reported to have a direct relationship with psychiatric morbidity in cancer patients (Nordin et al, 2001). Metastasis of cancer to many organs including the brain could also lead to organic brain syndrome.

It is worthy of note that though the degree of association of some of the examined sociodemographic and clinical factors did not attain statistical level of significance, there was a tendency of increased association of such factors with presence of psychiatric morbidity. These factors include, presence of psychiatric comorbidity, reduced income since onset of illness, worry about finances, less religious and social activities, poor communication from doctors about the nature of illness (non-allay of worries), less satisfaction with overall personal relationship, presence of many dependants, past history of psychiatric illness, distant metastasis and presence of co-morbidity in terms of hypertension and diabetes. While these factors have been reported to be of significance in previous studies (Lloyd-William, 2000, Nordin et al, 2001, Akechi et al, 2001, Ohaeri & Odejide, 1993, Gelder et al, 1996), they were not found to have attained statistical level of significance in this study. It is suggested that future studies should use a larger sample size in order to determine if these factors will remain significant or not.

In conclusion, the study showed a significant association between psychiatric morbidity on one hand, and on the other hand, absence of support from friends and increasing evidence of radiological spread of disease. We suggest a need for better [illegible] counselling and social support for patients with cancer. This should be done by all stakeholders including relations, friends, significant others and health workers.

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