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Prevalence of psychological problems among gynecological cancer survivors

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Abstract
Introduction: Gynecological cancer clients has remarkable amount of Depression, Anxiety and stress which needs to be addressed.
Objectives: To assess the level of depression, anxiety and stress among gynecological cancer survivors.
Methods: A Cross-sectional study of Gynecological cancer survivors (n = 90) conducted. Data were collected by using DASS scale.
Results: The prevalence of depression is more in less than 40 years of patients. Depression and Anxiety is more in less educated patients. Late married patients are having more Anxiety and stress. Depression is more in less income patients.
Conclusions: The prevalence of Depression, Anxiety and stress were common among Gynecological cancer clients. Psychosocial interventions are required to alleviate the symptoms of depression, anxiety, stress and improve the quality of life.

Keywords: cancer survivors, depression, anxiety, stress, cervical cancer

Introduction

Cancer is of an uncontrolled growth of abnormal cells which produces tumors know as neoplasms or malignancy[1].Cancer is one among life threatening disease in present days it has biological, psychological and social impact of individual life especially in women. The incidence and mortality of gynecological cancers varies in different countries[2]. The operative interventions, chemotherapy and radiotherapy and their side effects may increase psychological distress and ultimately affect the quality of life[3]. The Cervical cancer is most common gynecological cancer India. The emotional and psychosocial factors worsen the quality of life of cancer patients and the survivors.

Depression, anxiety and stress were varies from one person to another. The symptoms may include hopelessness, fatigue, physical and mental pain. Depression makes hard to function and cannot enjoy life comfortable as like before. The diagnosis and treatment of Gynecological cancer is unpleasant experience and threat to life accompanied by deformation and body image disturbance. Sexuality is multidimensional phenomenon both biological and psychological aspect. After the diagnosis of cancer patient and partner both will get intense anxiety and depression[4].

Depression is more common in low income women since its affects financial status of women's family. The cancer patients tend to have perceived stress, symptoms depression and anxiety. Advances in cancer diagnosis and treatment, the majority of cancer survivors adjust their life and live for more than five years. Stress and anxiety most commonly seen after the diagnosis and treatment period but Depression is most common during the end life treatment & care.

Methods

Study design and participants

A cross sectional descriptive survey was conducted among selected obstetrical and gynecology hospital in Chennai district. The sample comprised of cancer cervix, Uterus and Endometrium clients who had under treatment and who came for a follow –up visit at the outpatient treatment of a selected obstetrics & Gynecology Hospital at Chennai district.

Eligible participants met the following inclusion criteria were included

1. Those who are willing to participate.
2. Those who can able to read and write Tamil and /or English
3. Those who are under treatment or come for follow up.

Patients were excluded were

1. Those who had history of other cancer treatment.
2. Those who are newly diagnosed and not yet started treatment.

Sample size and sampling technique

A sample size of 90 subjects were selected by Convenient Sampling technique method.

Instruments

a. ***Participants' characteristics:***

Participant's background and clinical characteristics (age, education, occupation, income, residence, marital status, age at marriage, living with husband, number of live children) were collected using a demographic sheet. Clinical variables like family history of cancer, diagnosis, stage of cancer diagnosis, age at diagnosis, method of treatment given, duration of disease, any complications development during treatment and name of the current treatment

DASS-21 Scoring

This standardized tool measures the emotional states such as depression, anxiety and stress of the cancer survivors. Each of the three DASS-21 scales contains 7 items, divided into subscales with similar content. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest / involvement, anhedonia and inertia. The anxiety scale assesses autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The stress scale is sensitive to levels of chronic non-specific arousal. It assesses difficulty relaxing, nervous arousal, and being easily upset / agitated, irritable / over-reactive and impatient. Scores for depression, anxiety and stress are calculated by summing the scores for the relevant items. The study period from September 2018 to November 2018.

Data collection

After following all the required Ethical procedures and permission Data were collected from the participants meeting the eligibility criteria. The researcher approached them, explained the objectives, risk and benefits of the study and obtained written informed consent. The data was collected by interview method, with the tool –Depression, Anxiety and Stress Scale - 21 Items (DASS-21).

Statistical analysis

All data were analyzed by following methods like Descriptive statistics, including the mean, standard deviation (SD), range and frequency of personal and clinical data, were determined. Significant of data analyzed by Chi square and correlation between depression, anxiety and stress using Karl Pearson Correlation Coefficient.

Results

Cancer cervix is more common among cancer survivors. Among the participants, less educated women suffer more than highly educated. 66.7% of women were suffering from cancer cervix. Patients visit hospitals at second stage of disease were 65.6%. Only 9 % of the clients developed complication during the treatment. Majority of patients receiving Radiotherapy. The participants' demographic and clinical characteristics are presented in Table 1.

Table 1: Demographic and clinical variables

Demographic information		**N**	**% of patients**
Age	< 40 years	11	12.22%
	41 -50 years	33	36.67%
	51 -60 years	33	36.67%
	> 60 years	13	14.44%
Education	No formal education	32	35.56%
	Primary	36	40.00%
	Secondary	13	14.44%
	Higher secondary	7	7.78%
	Graduation	2	2.22%
Occupation	Not employed	48	53.33%
	Employed	42	46.67%
Income	< Rs.3000	6	6.67%
	Rs.3000 -5000	38	42.22%
	Rs.5001 -10000	40	44.44%
	> Rs.10000	6	6.67%
Residence	Rural	46	51.11%
	Urban	11	12.22%
	Semi urban	33	36.67%
Marital status	Married	90	100.00%
	Unmarried	0	0.00%
Age at marriage	< 15 years	26	28.88%
	1 6 -20 years	59	65.56%
	21 -30 years	5	5.56%
Living with husband Number of live children	Yes	57	63.33%
	No	33	36.67%
	No children	2	2.22%
	One	8	8.89%
	Two	31	34.44%
	Three	22	24.45%
	Four	27	30.00%
Clinical variables		N	% of patients
Family history of Cervical cancer	No	87	96.7%
	Yes	3	3.3%
Diagnosis	Uterus	20	22.2%
	Cervix	60	66.7%
	Endometrium	10	11.1%
Stage of cancer at diagnosis	Stage I	7	7.8%
	Stage II	59	65.6%
	Stage III	20	22.2%
	Stage IV	4	4.4%

Age at diagnosis	< 35 years	13	14.4%
	35 -40 years	18	20.0%
	41 -50 years	29	32.2%
	> 50 years	30	33.4%
Method of treatment given	Radiotherapy	43	47.8%
	Chemotherapy	3	3.3%
	Surgery	3	3.3%
	Combined(A+B)	41	45.6%
Duration of disease	6 month – 1 year	48	53.3%
	1- 5 year	32	35.6%
	6-10 year	7	7.8%
	> 10 year	3	3.3%
Any complications developed during treatment?	No	82	91.1%
	Yes	8	8.8%
Name of current treatment	Chemotherapy	6	6.7%
	Palliative care	6	6.7%
	Follow up	41	45.6%
	Radiotherapy	30	33.3%
	Others	7	7.8%

Table 2: The level of depression, anxiety and stress among gynaecological cancer Survivors

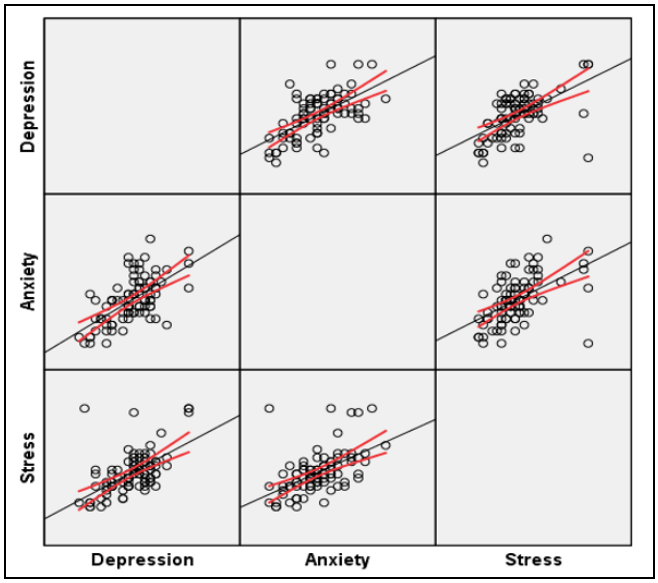
	Depression		Anxiety		Stress	
	N	%	N	%	n	%
Normal	28	31.1%	52	57.8%	53	58.9%
Mild	41	45.6%	17	18.9%	20	22.2%
Moderate	17	18.9%	17	18.9%	12	13.3%
Severe	4	4.4%	4	4.4%	5	5.6%
Very severe	0	0.0%	0	0.0%	0	0.0%

Among gynaecological cancer survivors maximum 45.6% fall on mild depression, 18.9 % fall on moderate and severe anxiety and 22.2 % fall on mild stress. The level of depression, anxiety and stress among gynaecological cancer survivors showed in Table 2. The mean and SD of level of depression, anxiety and stress among gynaecological cancer survivors showed in Table 3.

Table 3: The Mean &Standard deviation of depression, anxiety and stress among gynaecological cancer Survivors.

	Mean	SD
Depression	10.66	4.15
Anxiety	7.09	3.64
Stress	13.16	6.85

Correlation between depression and Anxiety revealed that there was a significant, moderate positive correlation between Depression (mean 10.66±4.15) and Anxiety(mean 7.09±3.64). When Anxiety increases, their Depression also increases moderately and statistically significant at P=0.001. Similarly, Correlation between Depression and Stress revealed that there was a significant, moderate positive correlation between Depression (mean 10.66±4.15) and Stress (mean 13.16±6.85). When Stress increases, their Depression level also increases moderately and statistically significant at P=0.001. Correlation between anxiety and stress revealed that there was a significant, moderate positive correlation between Stress (mean 13.16±6.85) and Anxiety(7.09±3.64). When Anxiety increases their Stress increases moderately and statistically significant at P=0.001. Scatter Matrix Figure 1 showing Correlation between Depression, Anxiety and Stress score.



Scatter Matrix shows the positive moderate correlation between Depression, Anxiety and Stress score.

Fig 1: Scatter Matrix showing correlation between depression, anxiety and stress among Gynaecological cancer Survivors

Association between Level of Depression, Anxiety and Stress score and Patient's age

Depression is more among less than 40 years of age patients (χ2=17.46, P=0.05*). Depression and Anxiety is more common among less educated patients (χ2=16.85,P=0.05*), Late married patients were having more Anxiety (χ2=43.96, P=0.01**) and Stress (χ2=21.40,P=0.01**). Depression was more among increased stage of patients (χ2= 17.17P=0.01**). Depression was more among less income patients (χ2=21.54P=0.01**).

Discussion

The present study showed that mean score of depression consists of 10.66 and SD 4.15, mean and SD score of anxiety were 7.09 and 3.64, whereas Stress level mean and SD score were 13.16 and 6.85 respectively. The present study supported by another study conducted by Nimisha Mishra (2015) [5] and found that the Major depressive disorder was present in 16.7% of breast cancer and 23.3% of cervical cancer patients. Depression score was found high in

cervical cancer cases compare to breast cancer cases. They also suggested that prevalence rate of depression more in cervical cancer patients[5]. According to Wenzel L, *et al*. (2005) [6] suggested that the patients with cervical cancer women population have among the most profound disruption of QOL and chronic stress seen in cancer patients; both merits interventions to improve QOL and reduce this stress[6].

There are another similar study by Donghao Lu *et al*, (2019) [7] who conducted in Sweden and examined the potential influence of Stress on the cancer-specific mortality of patients with cervical cancer. They examined records of 4,245 patients diagnosed with cervical cancer in Sweden between Jan. 1, 2002, and Dec. 31, 2011. Data from this register were used to identify patients who had been clinically diagnosed with any of three psychiatric disorders: stress-reaction and adjustment disorders, depression, and anxiety. Lu said there were several possible explanations for the link between psychological stress and cervical cancer-specific mortality[7].

The present study showed that cervical cancer is most common gynaecological cancer. And less educated people more prone to develop cervical cancer than highly educated patients[8]. Educated women had awareness about early identification of cancer cervix. Women often visit hospital at second stage of disease after experiencing some problem. Women who got married less than 20 years of age were having more risk of getting cancer cervix[9].

Gynaecological cancer is more common in low income group women than high income. Diet, personal hygiene and sexual hygiene plays major role in prevention of cancer among women in the reproductive age group.

Similarly the study results were also in accordance with the studies done on cervical cancer patients. Evans DL *et al* (1986) [10] reported that 23% had major depressive disorder in cervical cancer patients[10]. Ajay Ahamed Bhuroo (2016) found that Cancer patients have higher level of anxiety than non-cancerous patients. Anxiety is a normal reaction to the cancer, but if it is untreated, may lead to aggravated physical symptoms. Miller (2006) [12] viewed tha**t** the concept of stress, depression and anxiety is an unpleasant state and its reacted over what's about to happen and what could happen in the future. Some studies reviewed about self-efficacy promoting program could increase cancer patients' self-efficacy, but did not decrease anxiety[11]. Cervical cancer is most common gynecological cancer in reproductive age group. It is not only damages the physical, psychological and emotional effect but also affect the quality of life and prognosis[12]. Dr. Paul Ravi *et al* (2016) [3] reported that Diagnosis of cancer cervix is met with period of emotional instability identified by anxiety, stress and depression and reduce the day to day activities[13]

Limitation

The study was based on cross-sectional design, which prevented the development of causal relationship between positive psychological variables and anxiety/depression[14]. Further longitudinal studies are needed to validate the current findings. Limited the generalizability of the findings to other cervical cancer patients due to convenience sample. The study was conducted only among cancer survivors from selected tertiary hospital settings.

Recommendation

Awareness about screening of all women after the age of 30 years to detect pre-cancerous lesions which, if not treated may lead to cancer. Partner, family members, friends and social network should provide emotional support to prevent the psychological distress such as stress, anxiety and depression. Multidisciplinary interventions are mandatory to promote the quality of life of cancer survivors.

Conclusion

This study indicated the high prevalence of Depression (68.9 %), Stress (41.1 %) and Anxiety (42.2 %) among Gynecological cancer patients. The counseling and Psychotherapy may reduce the psychological symptoms like stress, anxiety and depression and there by improve the quality of life among cancer survivors. Early identification and treatment is most essential to improve the survivorship. A gynecological cancer patient needs strong family, friends, partner and social network support during and after treatment in order to reduce the psychological distress and to improve the quality of life. Regular screening of all women after the age of 30 years is most important role in early identification of cases. Psychosocial interventions may alleviate the symptoms of depression, anxiety, stress and improve the quality of life. The partner of patient is also plays major role in understand the ways of reaction after diagnosis of cancer. The study recommended need of screening programme of all women after the age of 30 years and Multidisciplinary interventions are mandatory to promote the quality of life of Gynaecological cancer survivors.

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Conflict of Interest

There are no conflicts of interest

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