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Predicting Quality of Life Among Newly Diagnosed Cervical Cancer Patients

Psychology

KEYWORDS :

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ABSTRACT

Cancer is being diagnosed more and more frequently in the developing world. In this part of world, cervical cancer is the most common cancer in women and is the leading cause of cancer-related mortality among women. The present study sought to establish relationship between psychological variables and quality of life domains. In order to measure anxiety, depression, and quality of life, the tools such as with Hamilton anxiety scale (HAM-A), Hamilton depression scale (HAM-D), The European Organisation for Research and Treatment of Cancer EORTC were used. 80 samples are selected randomly from various hospitals in Chennai area. Correlation was used to find out the relationship between the variables. Results showed that there is significant relationship between psychological variables and quality of life domains.

INTRODUCTION:

The last forty years has witnessed a progressive shift in cancer treatment. As our knowledge about cancer has grown, treatment advances have been made, stigma has declined, and concern for patients' and families' well-being has amplified. There continues to be a mounting acceptance that the value of cancer patients' lives are an essential component of care; survivorship is no longer just about quantity in terms of years, but also quality. Understanding and prioritizing this value has been shown to improve patients' lives while reducing societal costs (Adler & Page, 2008).

There are a number of factors contributing to a poor psychological adjustment to cancer.

One of the most important factors is female gender. This phenomenon is likely related to the treatment of gynecologic cancer that induces a rapid drop in estrogen level. Other factors include diagnosis, poor prognosis, a lack of support systems, previous psychiatric problems,

Compromised physical function, fatigue and pain (Lovejoy, Tabor, Matteis & Llis, 2000). The female gender is a known risk factor for anxiety and depressive disorder. As measured in various studies (Thompson & Shear, 1998), the prevalence of depression in breast cancer patients ranges from 10% to 32%, and the difference in rates is likely due to factors including diagnostic criteria, stage of cancer, treatment type and study design. Gynecological cancer has received less attention than breast cancer.

Cervical cancer survivors experience a complexity of problems – physical, psychological and sexual-related to the consequences of disease and treatment. Quality of life in cervical cancer patients, as in all cancer diagnosed patients as well, depends on multiple variables such as: type of intervention, type of associated treatment, treatment side-effects, type of available support, body image, sexual functioning, financial resources, socioeconomic status, issues regarding taking time off from work, transportation, social support from spouses, family members and friends, as well as support from health care professionals. The WHO's Quality of Life Group (1995) recognized that physical/ health status, psychological status and social functioning are essential components that must be considered when examining quality of life. Recently, it has been accepted that.

Surgeries alone or in combination radiotherapy, constitute the most effective therapeutic modalities for the treatment of patients with cervical cancer. Complications of treatment may occur at variable time interval from primary treatment. Patients undergoing combined treatment modalities appear to have more pronounced side effects than after either surgery or irradiation alone (Flay CD 1995). Surgery side effect may include bladder dysfunction, due to damage of the bladder innervations during the dissection of the cardinal ligament and correlates with the extent of the operation. The condition may result in a chronic disability [Hacker NF 2000]. A chronic hypotonic bladder may necessitate voiding by the clock with the aid of abdominal muscles, or even life-long self catheterization. Klee et al. 2000 studying the side effects of radiation therapy found that most of the patients (61%) initially experienced a high level of diarrhea and frequent or painful voiding. These symptoms significantly declined during the first 3 months post-treatment, but never returned to the level of normal control, leaving a group of patients with chronic problems. Because radiation damage to the bladder, intestines and vagina, which are long-lasting and difficult to correct, many physicians prefers to eradicate the disease surgically. Complications of the urinary tract after radiation treatment tend to appear later than intestinal complications and are seen most frequently 3–4 years post-treatment(stelios.K et al 2001).

Different studies have shown that cancer patients are at a higher risk of developing serious psychological distress than the general population. Cervical cancer patients can acknowledge shock, fear, moderate to severe levels of anxiety, and levels of depressive symptoms suggestive of clinical depression related to the diagnosis, surgery, and treatment.

Impairment of sexual function is a frequent consequence of treatment, due to organic (shortness of the vagina, inelasticity and absence of lubrication or swelling who can lead to pain or bleeding) as well as to psychological causes (anxiety, depression) influencing the quality of life. The reported incidence ranges between 6 and 100% (Weijmar Schultz 1991) . Sexual dysfunctions appear after both surgery and radiotherapy, considered to be more common after radiotherapy than after radical surgery.

Regarding differences by treatment modality, those treated with chemotherapy had poorer role and cognitive functioning and more problems with fatigue, nausea and vomiting, dyspnoea, and constipation with more long-term physical side effects.

Objectives of the study:
To examine the relationship between psychological variables and quality of life domains among cervical cancer patients.

Hypothesis:
There is significant relationship between psychological variables and quality of life domains among cervical cancer patients.

Methodology:
Procedure:
This study implemented survey method the self reported questionnaires were used to collected the data for two variables of the study along with the personal data sheet. The selected cancer patients of (N=80) were given the standardized questionnaire under personal supervision. The sample consists of women with cervical cancer from various hospital in Chennai. Convenient sample technique was been employed. The sample was classified in terms of age (30-40), (41-50) and (51 & above) education, type of family, occupation, marital status as socio demographic factors and age at marriage, age at first pregnancy, total number of abortion, total number of pregnancy and age at menopause as clinical factors.

Inclusion and exclusion criteria: female age group between 30yrs to 50yrs above, they were diagnosed cancer stage 1, 2, and 3 and widower, and individual underwent radiotherapy these are inclusion criteria. Below 30, and stage 4,, chemotherapy and except cervical cancer others cancer type are come under exclusion criteria. According to geographical extend selection of sampling refer researcher where limited only in Chennai.

Tools: EORTC:
The European Organisation for Research and Treatment of Cancer (EORTC) was founded in 1962. The interviewer guided the patients to avoid misunderstanding. The EORTC- QLQ-C-30 is three components which are global health status (GHS)/global QOL, functional score (FC) and symptom score (SC) from QLQ-30. Under the FC component, there are physical functioning, role functioning, emotional functioning, cognitive functioning and social functioning scale whereas the SC include fatigue, nausea and vomiting, pain, dyspnoea, constipation, insomnia, appetite loss, diarrhoea and financial difficulties.

A high score for a functional scale represents a high / healthy level of functioning, a

A high score for the global health status / QoL represents a high QoL,

A high score for a symptom scale / item represents a high level of symptomatology / problems.

Linear transformation
Apply the linear transformation to 0-100 to obtain the score *S*,

Functional scales: S= (1- RS-1 % Range) *100
Symptom scales : S=(RS-1%Range)*100
Global health status: S=(RS-1%Range)*100

Range is the difference between the maximum possible value of RS and the minimum possible value. The QLQ-C30 has been designed so that all items in any scale take the same range of values. Therefore, the range of RS equals the range of the item values. Most items are scored 1 to 4, giving range = 3. The exceptions are the items contributing to the global health status / QoL, which are 7-point questions with range = 6.

HAM-D:
Hamilton depression rating scale abbreviated HAM-D. It is multiple item question used to provide an indication of depression. Max Hamilton originally published the scale in 1960 later it was revised in the year 1980. It consist of 21 item generally takes 15-20 minutes eight item are scored on a 5 points scale ranging from 0-not present , 4- severe. Nine items score from 0-2. 0-7 normal, 8-13 mild, 14-18 moderate, 19 above severe. Correlation coefficient for Ham-D was 0.61 and 0.63.

HAM- A:
HAM-A
The Hamilton Anxiety Rating Scale (HAM-A) is a widely used and well-validated tool for measuring the severity of a patient's anxiety. It was developed by Dr. M. Hamilton in 1959.

The HAM-A probes 14 parameters and takes 15-20 minutes to complete the interview and score the results. Each item is scored on a 5-point scale, ranging from 0=not present to 4=severe. The major value of HAM-A is to assess the patient's response to a course of treatment, rather than as a diagnostic or screening tool. By administering the scale serially, a clinician can document the results of drug treatment or psychotherapy. Sum the scores from all 14 parameters.14-17 = Mild Anxiety, 18-24 = Moderate Anxiety 25-30 = Severe Anxiety

Table 1 shows the correlation between psychological variables and quality of life domains. N=80

Psychological variables	physical function	Role function	Emotional Functional	Cognitive Function	Social Function	Global Health status
Anxiety	0.276*	0.287*	0.230*	-.062	0.304**	.026
Depression	0.243*	0.189	-.089	0.039	-.210	0.245*

*. Correlation is significant at the 0.05 level
**. Correlation is significant at the 0.01 level

It is observed from the table 1 that there is significant relationship between Anxiety and physical function (0.276*, $p<0.05$), role function (r=0.287*, $p<0.05$), emotional function (r=0.230*, $p<0.01$), and social function (r=0.304**, $p<0.01$).therefore anxiety will affect the physical function, role function, emotional function and social function. Similarly there is significant relationship between depression and physical function(r=0.243*, $p<0.05$) global health status (r=0.245*, $p<0.05$).Whereas the relationship between depression and role function (0.189), emotional (.089),cognitive function(0.039)and social function(-210) are weak relationship. Further there is negative correlation between depression and role function, emotional function, cognitive function and social function. Therefore depression will affect the physical function and global health status. Hence alternate hypothesis accepted.

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Table 2 shows the correlation between psychological variables and quality of life domains N=80

Psychological Variables	Fatigue	Nausea Vomiting	Pain	Dyspnoea	Insomnia	Appetite loss	Constipation	Diarrhoea	Finacial difficulities
Anxiety	-.090	.089	-.125	0.322**	0 .079	0.138 -	-016	0.165	0.305*
Depression	0.306**	0.015	0.297*	0.321**	0.004	0.126	0.172	0.302**	0.257*

*. Correlation is significant at the 0.05 level

**. Correlation is significant at the 0.01 level

Table 2 shows that there is significant relationship between anxiety and dyspnoea(r=0.322*, p<0.01) and financial difficulties(r=305**, p, 0.01). Therefore anxiety affected the dyspnoea and financial difficulties. Whereas the relationship between anxiety and fatigue (r=090), Nauseaandvomiting (0.089) pain(r=-.125), constipation (-016), diarrhoea (r=0.165) are weak relationship. Further there is a negative correlation among anxiety and fatigue, nausea& vomiting, pain, constipation and diarrhoea. Likewise there is significant relationship between depression and fatigue(r=306**,p< 0.01),pain(r=0.297*,p<0.05),dyspnoea(r=321**,p<0.05), and diarrhoea (r=0.302**, p<0.01)and financial difficulties(r=0.257*, p<0.05). Therefore depression affects the fatigue, pain, dyspnoea, diarrhoea and financial difficulties. Whereas the relationship between depression and nausea and vomiting (0.015), insomnia (0.004), appetiteloss(0.126) and constipation(0.172) are weak relationship. Further there is negative correlation among nausea and vomiting, insomnia, appetite and constipation. Hence the hypothesis is accepted.

Discussion:

Psychological variables play a role in quality of life and its domain. There is strong inverse association with depression, anxiety between physical function, emotional function and also associated with pain, fatigue, and diarrhoea. Due to the diagnosis of cervical cancer is a traumatic experience and may cause various emotional reactions such as uncertainty, hopeless, anxiety (Pound et al 2012). Researcher (Pound et al 2012) finds out that global health status, functional status, symptom status and psychological factors were related to the quality of life. In fact cancer considers one of the most feared illness and causing several emotional reactions (Santos 2003). Anxiety and depression was significant predictor of quality of life. It affects the physical and emotional disturbances which influence quality of life. (Holland et al, Hapille 2000). Therefore anxiety and depression predict the symptom function like fatigue, pain, dyspnoea and bowl pattern due to the psychological symptoms. This result have significant relationship with pain which is directly related to the less quality of life, since pain impacts the patients daily activities due to the traumatic symptoms. (Couvreur 2001).

Conclusion:

Quality of life in cervical cancer patients, as in all cancer diagnosed patients as well, depends on multiple variables. Women, regardless of rural or urban residence, diagnosed with cervical cancer, experience significant relationship among anxiety and distress regarding diagnosis and treatment. Addressability to specialist support is still very low compared to other countries.

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