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Research article

A descriptive study to assess the quality of life of reproductive system cancer patients during their follow up period

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Abstract

Background: Reproductive system cancer is a group of cancers which occurs when abnormal cells grow in an uncontrolled way. The comprehensive global cancer statistics from the International Agency for Research on Cancer indicate that gynecologic cancers accounted for 19% of the 5.1 million estimated new cancer cases, 2.9 million cancer deaths and 13 million 5-year prevalent cancer cases among women in the world in 2002. In India 3, 70,000 suffer annually and 2, 00,000 die every year. The diagnosis of cancer and the exhaustive treatment regime have a major impact on various aspects of life of patients which in turn affect their quality of life. Thus we planned to assess the quality of life among the survivors of reproductive system cancer during their follow up period. **Objectives:** To determine the quality of life among the reproductive system cancer patients during follow up period and find the association between the quality of reproductive system cancer patients with their selected demographic variables. **Methods:** A Descriptive study design was used for the present study. The sample consisted of 60 subjects suffering from reproductive system cancers. The subjects were mainly selected from the oncology OPD (Out Patient department) of the Father Muller Medical College Hospital. The tools used were baseline data and the quality of life questionnaire. The data was analyzed using descriptive and inferential statistics.
Results: Majority (56.66%) of them had good quality of life during their follow up period. The overall mean quality of life was found to be 85.883 (SD 12.151) Fisher's exact test reveals that there is no significant association between quality of life and selected demographic variables such as age, religion, education, occupation, marital status and family income.
Conclusion: After conducting the study the result was found that, majority of the patient are having good quality of life. It was found that none of the patients are having poor quality of life.

Key words: Reproductive system cancer, Gynecologic cancer, Quality of life, demographic variables.

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1. Introduction

The most admirable creation of God is woman. Not just a symbol of beauty, they are mentors of the young ones, helping hands of needy and pillars of beautiful home [1]. Women are the inherent part of our society and cannot be neglected due to their less power and authority. The basic of society is woman. A good healthy society doesn't automatically emerge on its own and stands firm but it needs to emerged and for its emergence women play a pivotal role. From behavioral to health education women have their hands in [2]. Women health is a unique specialty of health care. They are becoming more and more aware of the

health problems and treatment as a result of modern education, mass media and health care agencies. Even though women have made a tremendous progress in most of the fields, but she tends inexplicably to neglect her own health [1].

Cancer is becoming a more challenging problem in industrially developed countries. It is the second leading cause of death in ageing population. This may be due to increasing numbers of carcinogens, skilled diagnosis and more people seeking medical care. The incidence of cancer in India is about 70/1,00,000 population as against 289/1,00,000 population in developed countries [3]. Breast cancer is second only to lung cancer in its rate of occurrence in women. There are about 150,000 to 175,000 cases yearly and about 45,000 deaths. The rate increases with age; a woman who lives to age 85 has about a 1 in 9 chance of developing breast cancer. Overall the cumulative risk of developing breast cancer is 10.2%; the risk of dying from the disease is about 3.6%. Much of the risk is after age 75. Cervical cancer is the second most common malignancy of the female reproductive tract. The Pap test can detect 90% or more of early cervical neoplasia (pre-invasive changes in cervical cells) and its use have reduced deaths from cervical cancer by more than 50%. Cervical cancer could be eliminated as a cause of death in all women if they had annual Pap tests (beginning no later than age 20); however, fewer than 40% of women do. More than 99% of the cancers of the uterus are endometrial. Endometrial cancer is most common in postmenopausal women with peak incidence between 50 and 60. Ovarian cancer is relatively rare, most commonly occurring in women in their fifties. Ovarian cancer is relatively rare, most commonly occurring in women in their fifties. The comprehensive global cancer statistics from the International Agency for Research on Cancer indicate that gynecologic cancers accounted for 19% of the 5.1 million estimated new cancer cases, 2.9 million cancer deaths and 13 million

5-year prevalent cancer cases among women in the world in 2002 [4]. In India 3, 70,000 suffer annually and 2, 00,000 die every year [3].

Figure 1: Different types of reproductive system cancers

Gynecological cancers are cancers of the female reproductive system and occur when abnormal cells grow in an uncontrolled way [3]. According to Galan, cervical cancer was the most frequent cancer in women aged 20-39 years in 1990-2003.In 2012 ,cervical cancer was the most frequent cause of deaths in women aged 20-39 years and breast cancer was the most frequent cause of cancer deaths in women aged 40-59 years [4]. NCI estimates that endometrial, or uterine, cancer will be diagnosed in an estimated 39,080 American women this year, more than twice the number of women who will be diagnosed with cervical (lower part of the uterus) and ovarian (female reproductive glands) cancers combined. However, in terms of 2007 deaths, ovarian cancer is forecast to kill 15,280 women, while deaths caused by uterine (7,400) and cervical (3,670) cancers are fewer than half that number. That is a combined 26,350 deaths in this country this year from cancers of the female reproductive system [5]. Patients treated for cancer not only face physical changes but also psychological and social effects. They also have to go through psychological and social adaptation when the disease affects their everyday life. Patients cured of their cancer may experience

Psychological and social changes, for example, the risk of recurrence may induce a constant level of worry and they may not be

able to return to work [6].

Sexual functioning has been described as the most enduringly compromised quality of life issue that women with gynecological cancers face. Problems may be due to physiologic, anatomic, or psychological factors - often in combination. Anxiety or depression may combine with the stress and fatigue associated with the diagnosis and treatment of cancer to reduce women's libido and capacity for arousal. Issues relating to sexuality such as self-esteem and sexual self-view may also are psychological ingredients in reduced sexual functioning; for example, liking the appearance of one's body and reporting the capacity to "feel like a woman" have been correlated with greater sexual activity among survivors of ovarian cancer. Reproductive concerns in cancer survivors are associated with lower HRQoL across several dimensions. Dealing with infertility on top of a cancer diagnosis may be seen as a "double trauma", increasing patients' vulnerability to psychological distress. Loss of fertility may result in feelings of grief or sadness that persist long after treatment has finished; indeed, these feelings may grow worse unexpectedly after initial primary concerns about survival have abated. For those women who are able to conceive after cancer, issues may include physical, emotional and financial burden of fertility treatments, the health risks associated with pregnancy, and triple concerns for resulting children - their wellbeing during pregnancy, the potential for mothering to be interrupted by cancer recurrence, and the risk that children will inherit the disease [7].A reproductive organ cancer is a group of cancers that affects the tissues and organs of the female reproductive system. The most commonly diagnosed reproductive cancers in 2010 was uterine cancer, with an incidence rate of 30.3 new cases per 1,00,000 women [8]. Cancers of the reproductive system account for 9.2% of all female cancer deaths during the year 2010. Cervical cancer is the second most common malignancy of the female reproductive tract, whereas ovarian cancer stands the fifth in the malignancy of the female reproductive tract. Cervical cancer has an incidence rate of 8. 1 new case per 1, 00,000 in the year 2010.It is said that the pap test can detect 90% or more of early cervical neoplasia [9]. Women diagnosed with cancer during their childbearing years are often treated with surgery, chemotherapy, and/or radiation therapy. Reproductive and sexual organs are frequently either directly or indirectly involved in cancer treatment, thereby having the potential to negatively affect psychosocial and sexual functioning, as well as fertility. Despite this, few empirical investigations have addressed the co-occurring reproductive and quality of life concerns which might result from a cancer diagnosis during childbearing years . Prior cancer survivorship research illustrates the complexity of this association, and the premise that despite good quality of life years after the initial cancer treatment, women diagnosed with cancer during childbearing age can experience persistent sexual problems, fertility concerns, and adverse psychosocial sequelae (1, 3–7). To date, however, the relationship between infertility and overall quality of life into long-term cancer survivorship is unknown [10]. Cancer frequently leaves patients with residual disability and/or nonreversible pathological alteration, and requires long periods of supervision, observation or care. The fear of recurrence may cause psychological problems [11]. Regardless of cancer-type; relationships seem to play an especially large part in the HRQoL of women survivors. Ersek et al. (1997) have suggested that women may tend to view dealing with cancer as a family matter as well as an individual one. Women may feel guilty or angry at the distress their cancer causes their family, worry about perceived or potential changes in social roles, emphasis the importance of relationships in determining HR QoL following treatment, and worry about their children inheriting the disease [11].

Many studies have been done on reproductive organ cancer regarding the clinical and pathological pattern of the disease, to examine these important relationships; we assessed key concepts related to reproductive concerns in female cancer patients including quality of life, of stress and its coping strategies among

reproductive cancer patients in 200 patients, according to the results 73% had profound level of stress and 90% had poor coping strategies so keeping the impact of reproductive organ cancers and treatment on patients life and functioning in mind, we planned to study the quality of life in the reproductive organ cancer patients during their follow-up period [12].

The research objectives are the specific accomplishments the researcher hopes to achieve by conducting the study. The objectives include obtaining answers to research questions or testing research hypothesis to achieve and develop recommendations by conducting the study. It helps to focus the study and avoid unnecessary collection of the data which is not strictly necessary for understanding and solving the problems identified [13].

2. Subjects and methods

This study deals with methodology adopted for the study which includes research approach and research design, the design of the study includes the setting sample, sampling technique, data collection technique, tools used, reliability of tools, procedure of data collection, and plan for data collection.

The research methodology is the prescription of the acceptable ways of doing research.

It defines

1. How to proceed
2. How to measure progress
3. What constitutes a success?

It is the section of a research proposal in which the methods to be used are described. The research design, the population to be studied, and research instruments or tools, to be used are discussed in methodology. This study deals with methodology of the study to assess the quality of life in females' patients with cancer of reproductive organs during their follow up period at selected hospitals in Mangalore.

Research approach:

Descriptive survey approach was used to assess the quality of life in reproductive tract cancer patients. This approach was considered most suitable for the study as the purpose was to assess the quality of life in female patients with cancer of reproductive organs during their follow up period.

Source of data:

Data will be collected from patients with cancer of reproductive organs, who will be visiting the oncology OPD for the follow up treatment after 3 months of their chemotherapy or radiation therapy.

Research design

The research design is the master plan specifying the methods and procedures for collecting and analyzing the needed information in a research study. It can be defined as a blue print to conduct a research study, which involves the description of research approach, study setting, sampling size, sampling technique, tools and methods of data collection and analysis to answer in specific research questions or testing the research hypotheses. A non experimental descriptive design will be used for the present study since the purpose of the study is to assess the quality of life in female patients with cancer of reproductive organs.

Variables under study:

Variables are qualities, quantities, properties, or characteristics of people things, or situations that change or vary.

Key variable:

Quality of life among females with cancer of reproductive organs

Attributing variable:

Demographic data of females include age, religion, education, occupation, family income.

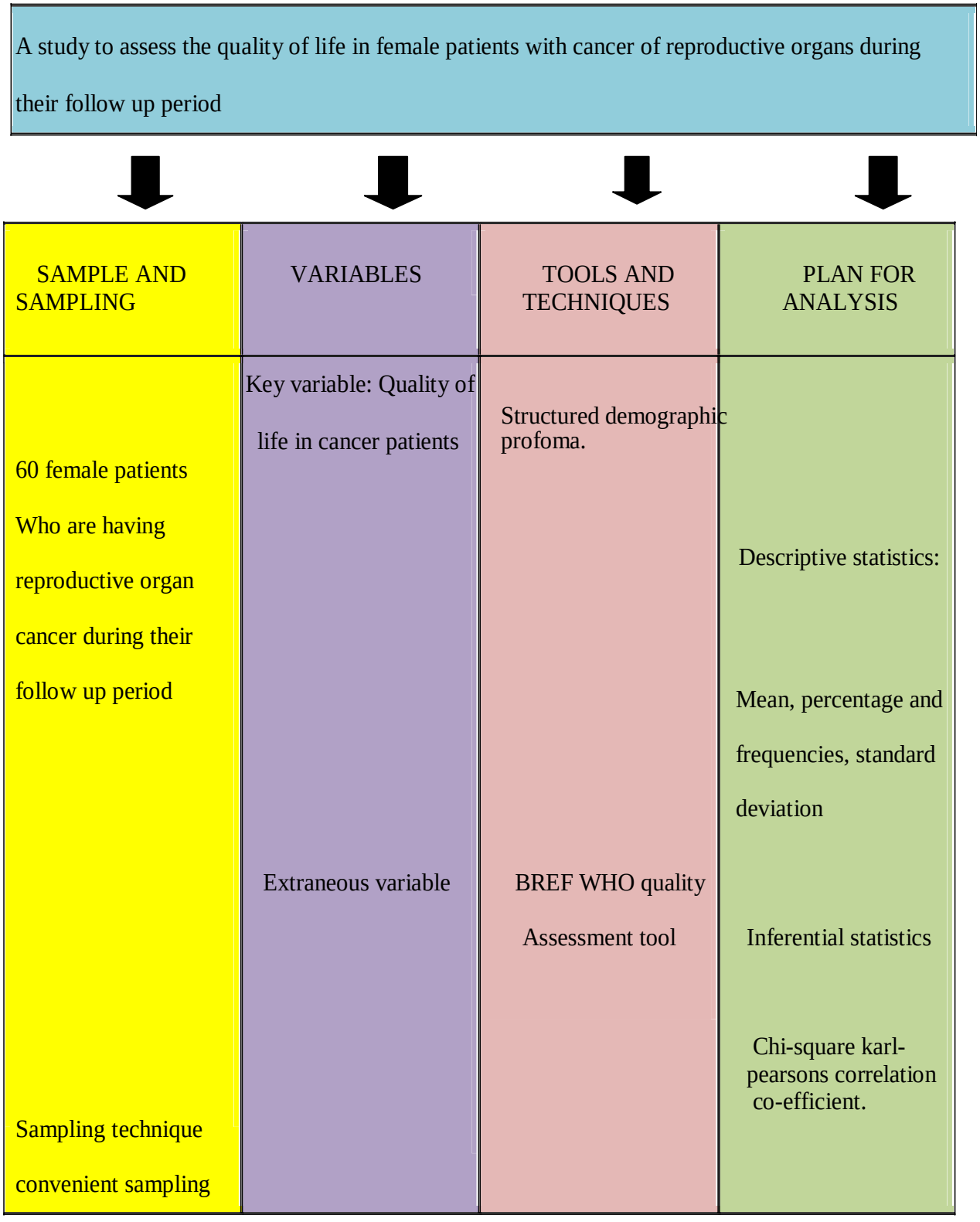

Figure 2: Descriptive design adopted for the study

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Attributing variable:
Demographic data of females include age, religion, education, occupation, family income.

Setting of the stuidy:
It is the location for conducting research can be natural, partially control or highly controlled.
This study will be conducted in the out-patient cancer units of Father Muller Hospital, Mangalore. It is a charitable institute in heart of Mangalore with bed strength of 1500. It is also a teaching institution comprising of post-graduate, graduate and diploma education programmes in medical, nursing and various other para-medical courses. The hospital has a well established cancer department including in-patient and out-patient unit. In general the out-patient unit caters its services to all cancer patients irrespective of the specialization. The total number of reproductive tract cancer patients visiting outpatient department vary from 15-20 per day.

Population under study:
According to Polit and Hungler 'population is the entire nest of individual or objects having some common characteristics selected for a research study, sometimes referred to ask the universe of the research study [14].
In the present study population will be female patients who are visiting in OPD of Father Muller Hospital Mangalore in their follow up period during the defined period of data collection.

Sample:
A sample is a part or subset of population selected to participate in research study. The sample selected for the study is 60 female patients of in-patient and out-patients who are having reproductive organ cancer.

Sampling techniques:
Sampling is a process of selecting a representative segment of population under study. The sample of female patients with cancer of reproductive organs will be selected by using convenient sampling technique.

Criteria for the sample selection:

The following criteria were decided upon for selecting subjects in the sample.

Inclusion criteria:
1. Female patients who are having malignant reproductive organ cancer, who have finished active phase treatment in Father Muller Hospital Mangalore.
2. Age group of 20-60 years.
3. Patients those who are able to read Kannada, Malayalam and English.

Exclusion criteria:

1. Patients who are in active phase treatment like surgery, chemotherapy.

Instrument or tool:

A research instrument is a devise used to measure the concept of interest in a research project that a researcher uses to collect data .a structured questionnaire will be prepared for data collection.
In this study the tool will have 2 parts.

Part1. Performa for collecting demographic data

Part2. BREF WHO quality assessment tool to assess the quality of life in female patients who are having reproductive organ cancer during their follow up period

Tool-1
Section-a: baseline proforma:
The baseline proforma consisted of the following items: age, sex, religion, education, occupation, marital status, family income, past medical history, present diagnosis, time of diagnosis, treatment modality, in-patient or out-patient number etc. The respondents were requested to place a tick mark ( ) against the appropriate answer in the space provided.

Section-b: BREF WHO quality assessment tool to assess the quality of life in female patients with cancer of reproductive organ.
This tool consists of 26 questions to assess the quality of life of female patients who are having reproductive organ cancer during their follow up period. The marks varies from 1-5. The maximum score is 5 and minimum score is 1. Category of marks is given as; very poor (<40), poor (40-59), neither poor nor good (59-78), good (78-97), very good (>97)

Data collection process:
The final data collection was done for a week. Institutional Ethical Committee gave approval for conducting the study. Formal written permission was obtained from the authorities to conduct the research study in Father Muller Hospital. The nature of the study was explained to them with an assurance that the process of data collection in no way affects the routine work of the unit.
In order to get a typical sample of the population attending the hospital, the investigators involved themselves in the activities of the hospital in the morning and selected the sample by convenient sampling technique. The best time of data collection was the morning in the out-patient department. The purpose of the study, method of data collection and time required were explained to the subjects. They were also assured of confidentiality of the information. Informed consent was obtained from the respondents indicating their willingness to participate in the study. After the initial introduction to the schedule, the questionnaire related to assess the quality of life in reproductive organ cancer patients were schedule involving their responses.
The correct responses as in the schedule were tick marked whenever the patients expressed them. Finally the patients were thanked for their sincere answers and willingness to participate in this study. The questionnaire process for each participant took 20-30 minutes.

Plan for data analysis:
Analysis and interpretation of data is the most important phase of the research process, which involves the computation of the certain measures along with searching for patterns and relationships that exists among the groups. Analysis and interpretation of data includes compilation, editing, classification, and presentation of data. Analysis is the process of organizing and synthesizing the data so as to answer research questions and hypothesis. A master sheet has been prepared by the investigators to analyze the data.
The data obtained would be analyzed using both the descriptive and inferential statistics based on the objectives and the hypothesis of the study under the following heading.

A. Descriptive statistics:
Section 1: demographic data containing sample characteristics would be analyzed using frequency and percentage.
Section2: distribution of sample according to various domains would be analyzed by computing the frequency, mean, mean percentage and standard deviation.
B. Inferential statistics:
Section 3: Assess the quality of life of female patients with reproductive tract cancer would be analyzed by fisher exact

correlation coefficient.
Section 4: Association between demographic variables and quality of life would analyzed by using chi-square.

3. Results

This research study deals with analysis and interpretation of data the data has been analyzed and interpreted in the light of the objectives and the hypothesis of the study
In this study the data obtained from 60 reproductive system cancer patients during their follow up period at Father Muller medical college hospital, to assess the quality of life among reproductive organ cancer patients during their follow up period. The goal of the analysis is to summarize the data so that it may provide answers to the research question .analysis of data involves the translation of information collected during the course of research project into interpretable ,convenient and descriptive terms and to draw interferences from this, using statistical method.

Organization of the study findings:
The data was tabulated, analyzed and interpreted using descriptive and inferential statistical methods. The findings of the study were grouped and analyzed under the following sections.
Section –A: Description of the demographic variables among the reproductive organ Cancer patients during their follow up period.
Section B: Overall quality of life among reproductive cancer patients
Section c:-Domain wise Quality of Life of Patients with reproductive system cancer
Section –d: Distribution of subjects according to type of cancers and their quality of life.
Section-E: Association between the demographical variable and quality of life.

Section -A: Description of the demographic variables among the reproductive organ cancer patients during their follow up period
Sixty reproductive organ cancer patients were selected through non probability convenient sampling technique based on inclusion criteria. The data obtained on sample characters was analyzed using descriptive statistics the sample characters were described under the subheadings of age, religion, education, occupation, marital status, family income.

Table 1 frequency and percentage distribution of demographic variables of Reproductive organ cancer patients during their follow up period

Sr no	Demograhic variables	Frequency	%
1	Age between		
	A)20-29years	0	0
	B)30-39years	9	15
	C)40-49years	22	36.67
	D)50 and above	29	48.33
2	Religion		
	A) hindu	39	65
	B) muslim	10	16.66
	C) christian	11	18.33
	D) others	0	0
3	Education		
	A)none at all	20	33.33
	B)elementary school	13	21.66
	C)high school	13	21.66
	D)college	14	23.33
4	Occupation		
	A)professional	7	11.66
	B) agriculture	9	15
	C) business	2	3.33
	D) unemployed	16	26.66
	E) others	26	43.33
5	Marital status		
	A) unmarried	1	1.66
	B)married	53	88.33
	C) divorced	0	0
	D) widows	6	10
6	Income		
	A)<10000	31	51.66
	B)10000-20000	27	45
	C)>20000	2	3.33
7	Any other illness		
	A)yes	19	31.66
	B)no	41	68.33

Considering the age of the patients with reproductive organ cancer majority of the people9 (29) belongs to the age group of 50 and above (48.33%) few 9(15%) of the

people belong to 30-39 age group and none of them were in the age group of 20-29. From the data majority of the subjects 39(65%) were Hindus, and few10 (16.66%) were Muslims, From the data majority of the subjects 13 (33.33%) were illiterate, and few 20 (21.66%) were elementary school and high school high school.

With regard with to occupation majority 26(43.33%) of them were involved in other activities and few 2 (3.33%) of them were involved in business

Among the participated patients majority of the subjects 53(88.33%) were married and few 6 (10%) of them were widows and none of them were divorces.

From the data majority 31(51.66%) of the patients belong to the income group of <10000 and few of them 2(3.33%) of them belongs to the income of >20000.

Age group:

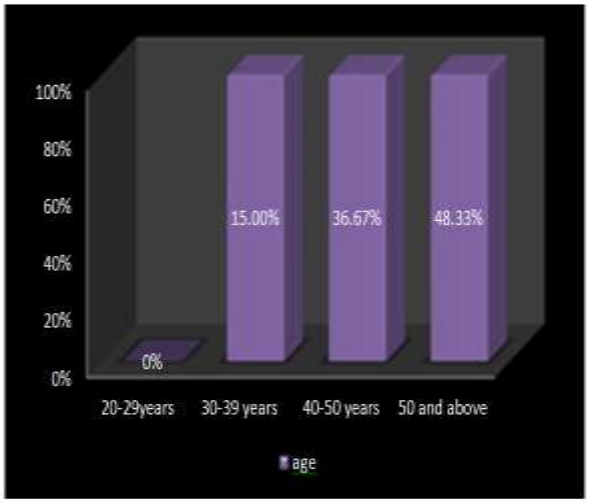

Figure 3: bar diagram showing the percentage and frequency distribution of patients with respect to age

Considering the age, majority 29 (48%), 22 (36.67%), belong to the age group of 50 and above and 40-50years respectively and the least 9 (15%) belong to the age group 30-39 and none of them were in 20-39 years age group

Religion:

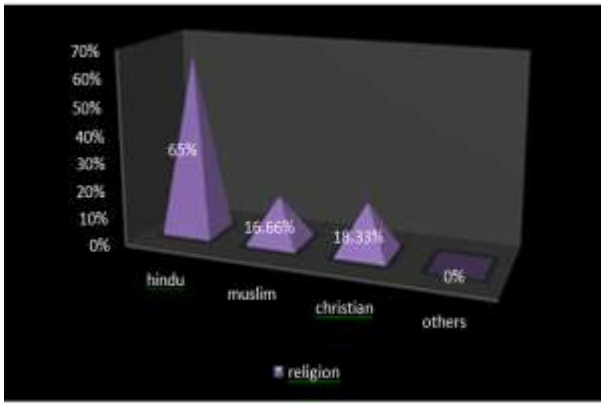

Figure 4: showing the percentage and frequency distribution of patients with respect to religion

From the data majority 39(65%) were Hindus, 10(16.66%) were Muslims, 11(18.33%) were Christians

Education:

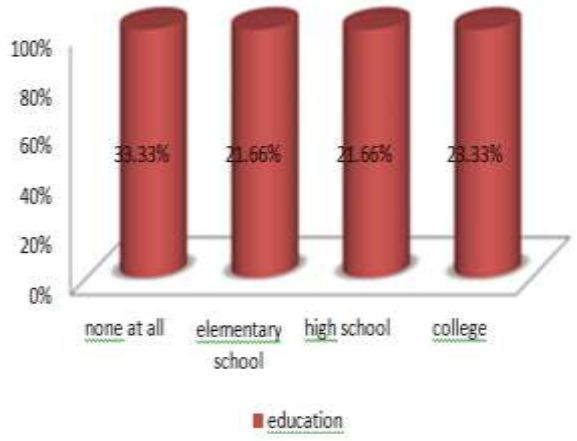

Figure 5: Diagram showing the percentage and frequency distribution of Patients with respect to education

With regard to educational status, most of them 20(33.33%) were illiterates, 13(21.66%) were elementary school, 13(21.66%) were high school , 14 (23.33%) had been gone to college

Occupation:

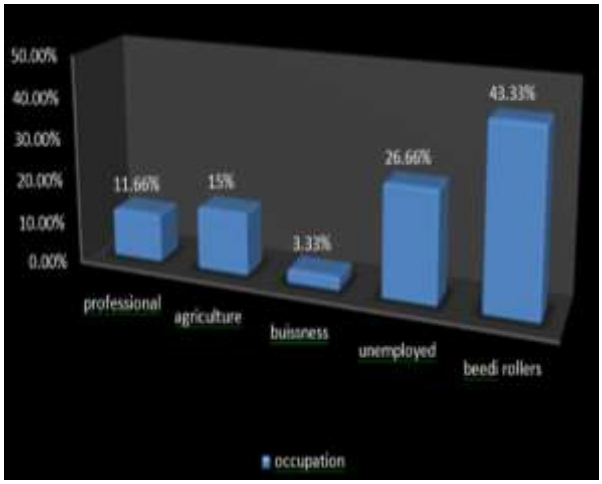

Figure 6: Diagram showing the percentage distribution of patients with respect to occupation

With regard to occupation majority 26 (43.33%) were involved in other beedi rollers, 16 (26.66%) were unemployed, 9(15%) were involved in agriculture work, 7(11.66%) were professionals and 2 (3.33%) were involved in business

Marital status:

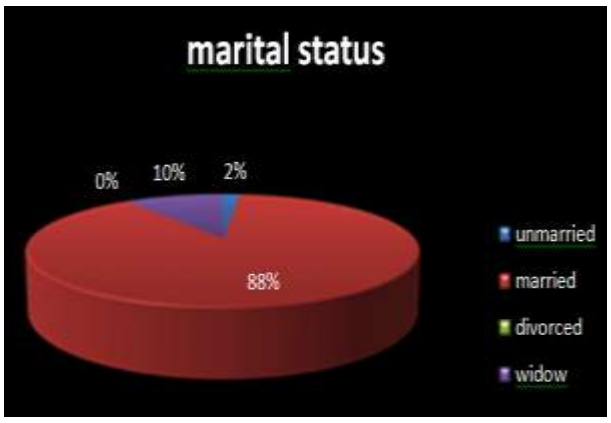

Figure 7: Diagram showing the percentage distribution of patients with respect to marital status

With respect to marital status most of them 53(88%) were married, 6 (10%) were widows and 2% were unmarried

Monthly income:

Figure 8: Diagram showing the percentage distribution of patients with respect to family income

31(51.66%) of the patients belongs to the income group of <10000, 27(45%) belongs to the income group in between 10000-20000, 2(3.33%) of them belongs to the income of >20000.

Other illness

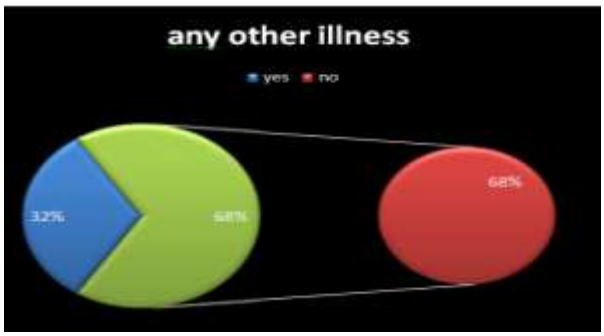

Figure 9 Diagram showing the percentage distribution of patients with respect to any other illness.

From the data 31.66% subjects report of having other illness like diabetes, Hypertension etc along with cancer and 68.33% of the subjects report of having no other illness.

Section B: Overall quality of life among reproductive cancer patients

This section deals with overall quality of life among reproductive cancer Patients

Table 2: Showing Overall quality of life among reproductive cancer patients

N=60 **according to the quality of life among reproductive organ cancer patients during their follow up period N=60**

	Max score	Min score	Max possible	Mean	Standard deviation	Mean Percentage %
Quality of life over all	106	61	130	85.883	12.151	66.06

Table2 depicts the overall quality of life among the reproductive system cancer patients. The study was conducted among 60 reproductive system cancer patients. The maximum score obtained was 106 and the minimum score was 61.The overall mean Quality of life was found to be 85.883 (SD 12.151) which was classified as good quality of life.

Score	Grading	%	Frequency
<40	Very poor	0	0
40-59	Poor	0	0
59-78	Neither poor nor	28.3	17
	Good		
78-97	Good	56.66	34
>97	Very good	15	9

Table 3: Shows the frequency and percentage distribution of of subjects

Among the sixty reproductive organ cancer patients majority 34(56.66 %), 17(28.3 %) were neither poor nor good, 9(15%) of the patients had very good quality of life

Section c: Domain wise quality of life of patient with reproductive system cancer

This section deals with description of subjects according to domain score in terms of physical, psychological, social, environmental, overall quality of life.

Table 4: Domainwise quality of life of patient with reproductive system cancer

N=60

Domain	Max score	Min score	Max score	Mean	Standard deviation	Mean percentage
Physical	30	12	35	22.18	3.92	63.37
Psychological	24	14	30	18.61	2.87	62.03
Social	14	16	15	10.81	1.85	72.06
Environmental	37	18	40	27.48	4.44	68.7
Quality of life	10	4	10	6.61	1.48	66.1

From the above data quality of life of majority of the patients (72.06%) was in the social domain and the minimum (62.03%) was in the psychological domain.

Section D: Quality of life according to type of cancers

This section deals with the quality of life and type of cancers such as cervical cancer, ovarian cancer, endometrial cancer and breast cancer.

Table 5: Shows the frequency and percentage distribution according to their type of cancer

Types of cancer	Frequency	Percentage	Mean	Mean	S.d %	Quality of life
Cervical cancer	12	20	82.75	63.65	7.629	Good
Ovarian cancer	15	25	86.133	66.256	14.22	Good
Endometrial cancer	4	6.66	89.5	68.84	13.30	Good
Breast cancer	29	48.33	87.10	67	12.43	Good

Among the 60 reproductive cancer patients 12 (20%) of the patients were cervical cancer patients and their quality of life was good(63.65%).15 subjects (25%) of them were ovarian cancer patients and their quality of life was good (66.256%).The least was about 4(6.66%) were endometrial cancer and their quality of life was good (68.84%) where as the highest was 29 (48.33%) were breast cancer patients and their quality of life was good (67%). So by this we can conclude that overall quality of life was good.

Section-D: Association between the demographical variable and quality of life

To find association between the demographical variables and quality of life, the following hypothesis was formulated and tested using fisher exact test. Ho: There will be no significant association between quality of life of reproductive system cancer patients with their selected demographic variables

H1: There is a significant association between quality of life of reproductive system cancer patients with their selected demographic variables

Table 6: This table shows association between the demographical variable and their quality of life

Sr no	Variable	<87.5	>87.5	P	Df
1	Age between				
	30-39years	2	7		
	40-50years	11	11	281	2
	50 and above	15	14		
2	Religion				
	Hindu	15	24		
	Muslim	5	5	146	2
	Christian	8	3		
3	Education				
	None at all	12	8		
	Elementary	6	7	375	3
	High school	6	7		
	College	4	10		
4	Occupation				
	Professional	1	6		
	Agriculture	5	4		
	Business	1	1	680	3
	Unemployed	8	8		
	Others	13	13		
5	Marital status				
	Unmarried	0	1		
	Married	24	29		
	Divorced	0		404	2
	Widow	4	2		
6	Income				
	<10000	18	13		
	10000-20000	10	17	092	2
	>20000	0	2		
7	Any other illness				
	Yes	6	13	.111(x^2)	1
	No	22	19		

P at 0.05 level of significance *Significant

The data presented in table5 shows that the computed Chi- square and Fisher's exact test values show no association

between quality of life and the selected demographic variables such as age, religion, education, occupation, marital status, income and other illness at 0.05 level of significance. Hence the research hypothesis H1 was rejected and null hypothesis H0 was accepted. Hence it is concluded that there is no association between the quality of life and selected demographic variables such as age, education, occupation, religion, marital status, income and other illness.

4. Discussion

This study presents the major findings of the study discussed with reference and in relation to similar studies conducted by other researchers. The aim of the study was to assess the quality of life among reproductive organ cancer patients during their follow up period in Father Muller Hospital, Kankanady in Mangalore. BREF WHO quality assessment tool was used to collect data and the obtained data was analyzed using descriptive and inferential statistics.
Discussion is done as four sections:

Section –A: Description of the demographic variables among the reproductive organ cancer patients during their follow up period.
Section B:-Overall quality of life in patients with reproductive system cancer.
Section –C: Domain wise quality of life of patients with reproductive system cancer
Section -D: Type of cancer and quality of life
Section-E: Association between the demographical variable and quality of life
Major findings of the study:
Section-A: Description of demographic variables

The study shows that:
Maximum of the subjects (48.33%)were within the age group of 50 and above.

- Most of the subjects (65%) belong to Hindu religion.
- Most of the subjects (33.33%) were illiterate.
- Most of the subjects (43.33%) were involved in other work other than agriculture, business, home maker etc.
- Most of the subjects (88.33%) were married.
- Most of the subjects (51.66%) were belonging to income group of <10000

The present study is supported by another study to assess the quality of life of the gynecological patients in Boston, among 178 subjects. The results reveal that (30.06%) of the subjects belonged to the group of 35-50 years, were as (45.3%) belongs to age group of 51-70 years.

Section –B: Overall quality of life in patients with reproductive system cancer.
The present study findings reveal that among the sixty reproductive organ cancer patients, 34 patients expressed that they having good quality of life, 17 patients expressed that they were having neither poor nor good, 9 of the patients had very good quality of life.
A descriptive study that conducted in Punjab , 2014 to assess the level of anxiety and quality of life among 200 reproductive cancer patients to assess the level of anxiety and quality of life. The results showed that, majority(73%) having profound level of anxiety present in cancer patients and 90% cancer patients had use poor quality of life.
A study conducted in Iran to evaluate the quality of life (QOL) among Iranian cervical cancer survivors and its relationships with demographic and disease related factors. A total of 65 consecutive cervical cancer survivors in three different oncology centers were included in the study. A descriptive correlation study was used to do the study. The result shows that cervical cancer survivors stated a good quality of life.

Section-C: Domain wise quality of life of patients with reproductive system cancer
In the present study shows that the mean percentage was high in the area of social (72.06%), and the least in psychological area (62.03%), the mean percentage in physical, general health and environmental health were 63.37%, 66.1% and 68.7% respectively.
A study was conducted in Germany to assess the degree to which QOL domains and clinical factors in ovarian cancer patients differs from the norm and to examine demographic variables and

determine if there was a correlation between physical/functional and social/emotional scores during chemotherapy. A total of 172 patients were included in this study. The result shows that ovarian cancer patients have decreased QOL in physical, functional, and emotional domains; however, they may compensate with increased social support.

Section -D: Type of cancer and quality of life

The present study findings reveal that majority of patients had breast cancer (48.33%),only few had endometrial cancer(6.66%) and some had cervical cancer (20%) ,ovarian cancer(25%) and the quality of life among these patients was good.

A study was conducted in Chicago among 248 patients to investigate the effect of radiotherapy on the quality of life among the ovarian cancer patients. A structured questionnaire was administered. The results reveal that the quality of life among majority of these patients (68.4%)) was good.

Section-E: Association between the demographical variable and quality of life

The present study findings reveals that there is no association

This study was similar to a study conducted in Dordrecht to assess the quality of life in women diagnosed with breast cancer within the first few weeks of their initial diagnosis. A total of 950 women were included in the study. The results shows that, The mean age ± SD of the sample was 59.6 years (±11.9 years), and the mean time ±SD from diagnosis until interview was 8.0 weeks (±3.2 weeks). Younger age at diagnosis was associated with lower scores in all QOL domains ($P < 0.01$), and later stage at diagnosis was associated with lower scores in all domains ($P < 0.05$) except for social well-being. Higher levels of social support were associated with higher QOL except for physical well-being ($P < 0.05$). These associations were stronger within 2 months of breast cancer diagnosis. Quality of life as influenced by a diagnosis of breast cancer is an important factor in cancer survivorship. Age, stage at diagnosis, and social support are key factors in this important variable. So this study suggested that quality of life was influenced by age.

A descriptive study was conducted in Hong Kong, Taiwan and Mainland to assess the quality of life among reproductive cancer patients. There were 276 patients included in the study. The result shows that patients with chronic illness in younger age and of lower educational level had poor quality of life and were more dissatisfied

Another study conducted in, Netherland to assess the quality of life in female cancer survivors; is it related to ovarian reserve. A total of 125 women's were included in the study. We found that QOL appears to be significantly impaired in cancer survivors compared to controls, even when remote from initial cancer diagnosis. In this study it suggest that quality of life was influenced by age hence there was significant association between quality of life and demographic variable that is age

Another study conducted in Iran to evaluate the quality of life (QOL) among Iranian cervical cancer survivors and its relationships with demographic and disease related factors. A total of 65 consecutive cervical cancer survivors in three different oncology centers were included in the study. The result shows that cervical cancer survivors stated a good QOL. Also, there between demographical varia was a positive association between QOL and economic conditions as well as QOL and social functioning. In this study it suggests that quality of life was good but it negatively associated with demographic variables.

Conclusion

The main purpose of the study was to assess the quality of life among reproductive system cancer patients in their follow up period. Quality of life means general wellbeing of individuals and societies.

There was increased score in quality of life in all the domains mainly physical, social, psychological and environmental.

- There was no significant association between QOL score and selected demographic variables such as age, gender, marital status, education,

occupation, income, religion and presence of any other illness.

- Majority of the subjects (56.66%)have good QOL ,(28.3%)have average QOL , (15%)have very good QOL and none of them have very poor or poor QOL during their follow up period.

Summary

Reproductive organ cancer is a group of cancers that affects the tissues and organs of the female reproductive system. The most commonly diagnosed reproductive cancers in 2010 was uterine cancer, with an incidence rate of 30.3 new cases per 1, 00,000 women.

Cancers of the reproductive system account for 9.2% of all female cancer deaths during the year 2010.Cervical cancer is the second most common malignancy of the female reproductive tract, whereas ovarian cancer stands the fifth in the malignancy of the female reproductive tract. Cervical cancer has an incidence rate of 8. 1 new case per 1, 00,000 in the year 2010.It is said that the Pap test can detect 90% or more of early cervical neoplasia. Many studies have been done on reproductive organ cancer regarding the clinical and pathological pattern of the disease, so keeping the impact of reproductive organ cancers and treatment on patient's life and functioning in mind, we planned to study the quality of life in the reproductive organ cancer patients during their follow up period

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