



RESEARCH ARTICLE

Impact of Cervical Cancer on Women’s Bio-Psycho-Social Aspects of Health

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ABSTRACT

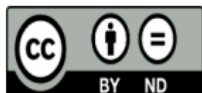
Background: Cervical cancer is one of the most common malignant tumors in human beings. Cervical cancer is a cancer arising from the cervix. It is due to the abnormal cells growth and the ability to invade or spread to other parts of the body

Aim(s) to identify the impact of cervical cancer on women's physical, psychological and social health by examining quality of life and to discover any possible statistically significant relationship between women's quality of life and some social, demographic characteristics.

Design: Descriptive design was used in this study that consists of 100mmarried women who suffer from cervical cancer and who visit the oncology centers in the city of Baghdad from 14th September to 2nd December2021.

Results: The quantitative study showed that there is a profound impact on the dimensions of the physical, psychological and social life of a woman with cervical cancer.

Keywords: Quality of life; Cervical Cancer; Cancer; Gynecological Cancer; Women’s Health



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INTRODUCTION

People who have cancer may experience anxiety, panic, perceived or actual social shame, and a reduction in their quality of life (QoL) (Nicolussi, et al., 2019). It could be any type of tumor or abnormal growth that develops in any area of the body as a result of aberrant cells. Numerous malignancies, including those of the prostate, lung, liver, and many others, can affect different bodily areas. An abnormal growth or tumor of the cervix that is diagnosed as cervical cancer (Collins, Lowy, Hodes, Grady, Gibbon, Fauci et al., 2017). The most prevalent gynecological cancer in the past 20 years has been cervicovaginal carcinoma (Bruni et al., 2015). In the world, cervical cancer affects women more frequently than any other malignancy, with an estimated 527,624 new cases being identified each year and 265,672 deaths (Bruni et al., 2017). Moreover, the leading cause of death for women in low- and middle-income nations is now cervical cancer (Arbyn et al., 2011; Denny, 2012). Early sexual activity with several partners and poor genital cleanliness are a couple of the risk factors for cervical cancer. These ailments, which are relatively common in many low- and middle-income countries, serve as a channel for the Human Papillomavirus (HPV), the primary risk factor for cervical cancer (Kangmennaang, Thogarapalli, Mkandawire, & Luginaah, 2015). The women's continued integration into the community in which they live and dealing with their marriages, partners, families, friends, and other relationships become significant challenges. The society's ideas and opinions of women with cervical cancer vary widely. Sexual dysfunction, bladder dysfunction, such as urinary incontinence, and bowel dysfunction, such as defecation, which are connected to the illness process and its treatment, are the root of these stigmas, attitudes, and concerns. (Donovan, Butler, Butt, Jones, & Hanney, 2014; Grover, DeLuca, Quirin, DeLuca, & Piestun, 2012; Pfaendler et al., 2015; Ros & Espuña, 2013). In addition, women with cervical cancer struggle in many different ways with their psychological quality of life. Depression, anxiety, schizophrenia, bipolar disorder, and personal psychosocial challenges are a few of these issues (Pfaendler et al., 2015; Xiang, 2015).

Additionally, the quality of life (QoL) of women who have cervical cancer is significantly impacted by treatments like radiotherapy, cryosurgery, and chemotherapy. Early detection can significantly enhance the quality of life (QoL) of patients with stage I cervical cancer, with treatment success rates ranging from 85% to 90%. (Pfaendler et al., 2015). Unfortunately, it was discovered that cervical cancer patients had low

quality of life (QoL) scores when compared to only other gynecological cancer patients and not just the general cancer population (Ferrandina et al., 2012). Because of this, the majority of studies on cervical cancer conducted in the west emphasize topics pertaining to patients' quality of life and available treatments (Le Borgne et al., 2013). Therefore, this study was designed to answer the following research question: Is there an impact of cervical cancer on a woman's physical, psychological and social health by examining the subject's quality of life? and is there a possible statistically significant relationship between women's quality of life and some social, demographic, and reproductive variables.

Methods Study design, sample and setting

Descriptive design was used in this study that, a nonprobability (purposive sample) of 100 women who have Cervical Cancers at the Oncology Centers & teaching hospitals in the city of Baghdad for the period from 14th September to 2nd December 2021.

Data collection and tool

Data collection was done through the use of the study tools. These are the European Organization for Research and Treatment of Cancer EORTC QLQ-C30 and EORTC QLQ-CX24, to measure cervical cancer-specific Quality of Life. The questionnaire is consisted of three sections. The First section included demographic and clinical characteristic. The second section covered a set of six questions about reproductive health information. It included the reproductive age, menstruation regularity, pregnancy history, contraception usage, information related to sexually transmitted diseases, and chronic diseases. Third section: The impact of cervical cancer on aspects of physical, psychological, and social health which includes the use of the tool for European Organization for Research and Treatment of Cancer EORTC QLQ-C30 and EORTC QLQ-CX24.

The EORTC QLQ-C30 and EORTC QLQ-CX24 are both reliable and valid instrument to measure cervical cancer-specific Quality of Life. The Pearson correlation coefficient was used to measure the reliability of the tool. The results of this calculation indicate that the correlation coefficient is acceptable (0.74). The validity of the questionnaire is tested by presenting it to 10 experts in the field of health. A score of 1 was given to the paragraph that is related to the

observed phenomenon or closely related to the phenomenon, and 0 was given to the paragraph that is not related to the phenomenon or the paragraph is somewhat related. Also, consideration was given to modifying some elements according to the expert's recommendations. The results of this calculation indicate that the degree of validity is acceptable for the ten experts (Content Validity Index 0.80).

Ethical consideration

First, the research ethics committee at the University of Baghdad, College of Nursing had reviewed and approved the study protocol, reflecting that the intended study research procedures are congruent with the Declaration of Helsinki Ethical Principles for Medical Research involving human subjects. After obtaining the

Result

Table (1): Distribution of socio-demographic of the study sample

Variables	Categories (n=100 women)	f	%
Age	25 - 36 years	7	7.0
	37 - 47 years	25	25.0
	48 - 58 years	33	33.0
	59 - 69 years	24	24.0
	70 - 80 years	11	11.0
Educational Level	Illiterate	17	17.0
	Read and write	30	30.0
	Primary School Graduate	16	16.0
	Medium Graduate	14	14.0
	Graduate	13	13.0
	Institute Graduate,	6	6.0
	College or more	4	4.0
Occupational Status	Employees	13	13.0
	Housewife	81	81.0
	Retired	6	6.0
Husband Relation	Relatives	58	58.0
	Unrelated	42	42.0

official approval from the departments of oncology centers in the City of Baghdad, an oral consent was taken from women with cervical cancer after informing them that the information will be treated confidentially and used for scientific research purposes only.

The participants were told that they could refuse to answer any question or that they could withdraw from the study at any time during the interview or if the questions were embarrassing or if they were unable to complete the interview due to their poor health. The confidentiality of the participants was protected and their privacy was secured.

Numerical numbers were given to each participant, not names, to maintain complete confidentiality of the participant.

Family Type		Nucleus	83	83.0
		Extended	17	17.0
Place of Residence	Environment	Outskirts of Cities	65	65.0
		Rural	5	5.0
		Urban	30	30.0
	Housing Ownership	Owned	93	93.0
		Rent	7	7.0

The results of this table show that more than one-third of the study sample's age group were within (48-58 years), it represented (33%). Also, in regarding to the subject's level of education, the results show that only (30%) of the participants were able to read and write. In addition, (81%) of the study sample were housewife, which recorded

the highest percentage of the occupational status. Additionally, more than half (58%) of study sample were family-relative. About (83%), of the study participant's family type were living in nucleus family type. Regarding the subject place of residence, two-thirds (65%) of women were living in outskirts of cities in the city of Baghdad. Regarding home ownership, the majority were owned (93%).

Table (2): Descriptive statistics of General quality of life

Overall, Health-Related Quality of Life	f	%
Fair Overall Quality of Life	76	76.0
Poor Overall Quality of Life	24	24.0
Total	100	100.0
General Quality of Life Domains		
Functional Domain	f	%
Moderate Level of Functioning	81	81.0
Poor Level of Functioning	19	19.0
Total	100	100.0
Symptoms Domain	f	%
Moderate Level of Symptoms/Problems	85	85.0
High Level of Symptoms/Problems	15	15.0
Total	100	100.0
General Health Domain	f	%
Good General Health status	5	5.0

Fair General Health status	65	65.0
Poor General Health status	30	30.0
Total	100	100.0

In terms of General Quality of Life, the majority of the study sample (76.0%) were categorized as experiencing a fair quality of life and Poor Quality of Life is

(24.0) and General Quality of Life Domains was divided (Functional Domain and Symptoms Domain and General Health Domain).

Table (3): Descriptive statistics of cervical cancer related quality of life

Overall, Health-Related Quality of Life	f	%
Fair Overall Quality of Life	76	76.0
Poor Overall Quality of Life	24	24.0
Total	100	100.0
General Quality of Life Domains		
Functional Domain	f	%
Moderate Level of Functioning	81	81.0
Poor Level of Functioning	19	19.0
Total	100	100.0
Symptoms Domain	f	%
Moderate Level of Symptoms/Problems	85	85.0
High Level of Symptoms/Problems	15	15.0
Total	100	100.0
General Health Domain	f	%
Good General Health status	5	5.0
Fair General Health status	65	65.0
Poor General Health status	30	30.0
Total	100	100.0

In terms of General Quality of Life, the majority of the study sample (76.0%) were categorized as experiencing a fair and

Poor Quality of Life is (24.0) and General Quality of Life Domains was divided

(Functional Domain and Symptoms Domain and General Health Domain).

Association Tables

Association tables that show the existence of possible statistically significant relationships between women's quality of life and some social, demographic and reproductive characteristics

Table (4): Association between overall quality of life and age group

Age Groups	Overall Quality of Life 30		Mean	Chi-square test	
	Fair Overall Quality of Life	Poor Overall Quality of Life		Value	Sig
37 - 47 Years Old	23	2	2.7640		
48 - 58 Years Old	28	5	2.7979		
59 - 69 Years Old	16	8	2.9929		
70 - 80 Years Old	2	9	3.2891		
Total	76	24	100		

Pearson Chi-Square in table (4-9) displays that there is statistically significant association

between women's quality of life and their age groups ($\chi^2 = 29.633$, $df = 12$, Exact Sig = 0.003).

Table (5): Association between overall quality of life and education level

Educational level	Overall Quality of Life 30		Mean	Chi-square test	
	Fair Overall Quality of Life	Poor Overall Quality of Life		Value	Sig
Read and write	23	7	2.8920		
Primary School Graduate	16	0	2.6619		
Medium Graduate	11	3	2.8479		
High school graduate	13	0	2.7400		
Institute Graduate,	4	2	2.9550		
College or More	3	1	2.9400		
Total	76	24	100		

Pearson Chi-Square in table (4-10) displays that there is statistical significant association between women's quality of life and their education level ($\chi^2 = 29.633$, $df = 12$, Exact Sig = 0.003).

Table (6): differences between overall quality of life and some socio-demographic for cervical cancer women

Variables	Overall Quality of Life	Sum of Squares	df	Mean Square	F	Sig.
Age	Between Groups	5.731	42	0.136	1.527	0.068
	Within Groups	5.094	57	0.089		
	Total	10.825	99			
Education	Between Groups	2.393	6	0.399	4.400	0.001
	Within Groups	8.432	93	0.091		
	Total	10.825	99			
Occupation	Between Groups	.102	2	0.051	0.460	0.633
	Within Groups	10.723	97	0.111		
	Total	10.825	99			
Environment	Between Groups	.553	2	0.277	2.611	0.079
	Within Groups	10.272	97	0.106		
	Total	10.825	99			
Stage of Disease	Between Groups	4.173	2	2.087	30.425	0.000
	Within Groups	6.652	97	0.069		
	Total	10.825	99			
Treatment	Between Groups	1.320	4	0.330	3.298	0.014
	Within Groups	9.505	95	0.100		
	Total	10.825	99			
Contraceptive	Between Groups	.281	4	0.070	0.634	0.640
	Within Groups	10.544	95	0.111		
	Total	10.825	99			

Sexually Transmitted Diseases	Total	10.825	99			
	Between Groups	.083	2	0.042	0.377	0.687
	Within Groups	10.742	97	0.111		
Chronic Disease	Total	10.825	99			
	Between Groups	3.794	11	0.345	4.317	0.000
	Within Groups	7.031	88	0.080		
Abortion	Total	10.825	99			
	Between Groups	.768	4	0.192	1.815	0.132
	Within Groups	10.057	95	0.106		
Age at Marriage	Total	10.825	99			
	Between Groups	.569	3	0.190	1.775	0.157
	Within Groups	10.256	96	0.107		
Age at Pregnancy	Total	10.825	99			
	Between Groups	.544	3	0.181	1.692	0.174
	Within Groups	10.281	96	0.107		
Gravida	Total	10.825	99			
	Between Groups	2.316	2	1.158	13.199	0.000
	Within Groups	8.509	97	0.088		
Births	Total	10.825	99			
	Between Groups	2.453	2	1.227	14.213	0.000
	Within Groups	8.372	97	0.086		
	Total	10.825	99			

ANOVA revealed that there was a statistically significant difference between (Age, Education, Environment, Stage of Disease, Treatment,

Chronic Disease, Gravida, Births) and women's quality of life.

Discussion:

Socio-Demographic for Cervical Cancer Women

The study's findings in table (1) indicated that the study sample were within (48-58 years) it presented (33%). Result provides evidence that the most prevalent age around this age group table show that the more of one-third of age group in the study sample were within (48-58 years) it presented (33%). This is consistent with a study conducted by (Pelkofski, et al.,2016) It says the average age of patients enrolled was 54 years old. Altogether, 67.1% of patients were between 40 and 60 years of age, and this age group was consistent with an age of high cervical cancer incidence. Whether age at diagnosis is a predictive risk factor for cervical cancer is controversial. This indicates that women at this age are more likely to discover the disease, meaning that this age group is more than others. This was consistent with other studies conducted in other parts of Ghana as well as in Kenya, where the authors Comment that cervical cancer is common among all age groups Premenopausal for postmenopausal women (Nkyekyer,2000; Ogoncho, et al.,2015). This study agrees with (Peltzer, et al., 2014; Ncube, et al.,2015). a study conducted in South Africa and Portland, Jamaica, which says that the ages (40-49 years). Older women have a higher risk of cervical cancer than younger women.

On the other hand, the educational level of most of the current study showed the women read and write (30.0). This is in agreement with a study conducted by Damayanti (2013) in her study stated that there was a strong relationship between educational level and cervical cancer incident, where cervical cancer is more likely to occur to less-educated women than highly-educated women. The level of education is related to socioeconomic level, sexual activity, and hygiene. Low-educated women are less likely to care about their health especially for their genitals hygiene so that they will have a risk of cervical cancer (Aziz, 2006). This is in disagreement with a study he conducted Sari et al. (2016). high education can decrease the risk of cervical cancer through income, age at first sexual intercourse, and genital hygiene in the study

Regarding the Occupation Status, the result of the current study showed that the highest percentage of Housewife (81.0). With the study conducted in Mekelle, North Ethiopia, and Korea. (Bayu, et al., 2019; Farazi, et al, 2019; Chang, et al.,2017). This study found that participants who indicated their occupation status as housewives were statistically significant which is comparable

with the study conducted in Ethiopia and Iran. (Getahun, et al., 2013; Asgarlou, et al.,2016).

Presenting and discussing the Descriptive statistics of general quality of life domains and cervical cancer related quality of life

The results of table (2) show presented that the responses for participating women in study sample on the most of the items related to quality-of-life Domains was divided (Functional Domain Most of them were Moderate Level of Functioning (81.0) and Symptoms Domain Most of them were Moderate Level of Symptoms/ Problems(85.0)and General Health Domain Most of them were Fair General Health status(65.0))

The women harbored high negative perceptions pertaining to their general health which might have contributed to moderate impairment in the women's quality of life. This assertion of high negative perception which may result in high anxiety and, was earlier reported by Brunton et al. (2015) in England and Heinonen et al. (2013) in Finland

The findings explained that when symptom severity of the women increases, it is associated with a decrease in the quality of life of the women. This finding is not surprising as similar studies have reported symptom status as an important factor that correlates quality of life amongst cervical cancer sufferers (Kim et al., 2015).

These findings are however, at variance with previous studies which reported significant correlations between functional status, general health perceptions and quality of life in Brazil, Turkey, Taiwan, Columbus- USA and Iran (Fernandes & Kimura, 2010; Goker et al., 2011; Li et al., 2015; Overcash, 2015; Torkzahrani et al., 2013).

Presenting and discussing the Association between quality of life with regard to demographic variables

Tables: (4), (5) that show the existence of possible statistically significant relationships between women's quality of life and some socio, demographic characteristics. Table (4) displays that there is statistically significant association between women's quality of life and their age groups ($\chi^2= 29.633$, $df= 12$, Exact Sig = 0.003).

The result was similar to studies that conducted in South Africa and Portland, Jamaica, which reported that older women have a higher risk of cervical cancer than younger women (Ncube et al, 2015; Peltzer, et al., 2014).

In this context, Renna and Silva (2018); Ogoncho, et al., (2015) showed a statistically significant association between women's quality of life and their age groups.

On the other hand, table (5) displays that there is statistical significant association between women's quality of life and their education level ($\chi^2= 29.633$, $df= 12$, Exact Sig = 0.003). Similar study found that there was positive association between educational level and some health-related behaviors, one of them is screening participation (Cutler & Lleras-Muney, 2010).

The reason is might be that well-educated women may have better interest, and better access to resources and information, so that they have better knowledge about health issue and behavior to improve their health and it reflected on their life quality. Also, they have greater awareness of risks (Adams, 2010; Hahn & Truman, 2015). Simply, sufficiency of current knowledge has a positive influence on health-promoting behavioral option. In a related study, educational status has also shown a significant correlation with health-related quality of life components, those patients who had never gone to school scored lower in physical function, and social function and had higher score in fatigue, pain, dyspnea, financial difficulties and constipations. Goker, et al., (2011) showed that low level educational status was associated with poor physical function and pain. This can be justified by the fact that a lower level of education is associated with poor health seeking behavior (Araya, et al., 2020).

Presenting and discussing of the differences between overall quality of life and some socio-demographic for cervical cancer women

Table (6), showed that when applying the one-way ANOVA test, it was found that there is a significant difference between overall quality of life and some socio-demographic for cervical cancer women, where the calculated F value was greater than the tabulated F value at the significance level (0.05). That is, the error rate in case of retesting 100 times under the same conditions would be 5% (Rumsey, 2016).

The results of the current study are in agreement with the result of another study conducted by (Caroline, et al., 2018). The study provided evidence that slightly more than half of the women suffered from stage IIIA and more advanced cervical cancer. Although a similar

trend was reported in a Polish study (Pasek, Suchocka & Urbański 2013), this percentage is about 30% less than what Snyman and Herbst (2013) found in their study, conducted at another academic hospital in Gauteng. The reason for this difference is unknown; however, it could be possible that the women in this study were primarily from urban areas and not rural areas as found in the previous study, as South African women from rural areas are less aware of cervical cancer and tend to consult traditional healers about abnormal vaginal bleeding (Pillay 2002). However, the drawbacks of living in a rural area are not limited to South Africa, as Palacio-Mejía and others (2003) in a study conducted in Brazil described the disadvantages of rural women compared to urban women in surviving cervical cancer. It was positive to find that the global health status of the groups improved significantly from the time they received treatment to 12 months after treatment. Du Toit and Kidd (2015), in a South African study, found a similar trend when comparing the QOL of South African women who received radiotherapy alone to those who received chemoradiation. The global health status of both groups improved significantly from before treatment to 3 months after treatment. In addition, Ferrandina and colleagues (2012), in a longitudinal study conducted in Italy, found the global health status of women with locally advanced cervical cancer treated with radiotherapy or chemoradiation plus radical surgery improved gradually but significantly from before treatment to 12 months after surgery.

Conclusion

Cervical cancer affects all aspects of a woman's health, including physical, psychological and social well-being.

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