



RISK FACTORS AND QUALITY OF LIFE AMONG SAUDI WOMAN WITH REPRODUCTIVE SYSTEM CANCER

Miaad Al Rawi Al Enizi¹, Farida Habib^{1,3}, Nagwa Abdel Fadeel Afefy^{1,2}

¹King Saud Bin Abdulaziz University for Health Sciences, KSA, King Abdullah International Medical Research Center, Ministry of the National Guard, Health Affairs, College of Nursing, Maternal and Newborn Health Nursing.

²Maternal and New Born Health Nursing, Faculty of Nursing, Cairo University, Egypt.

³Maternal and Newborn Health Nursing Department, College of Nursing, Menofya University, Shebin El-Kom, Egypt.

*nagwaazzam@yahoo.com

ABSTRACT

Reproductive cancers have a huge impact in woman quality of life. Research on Saudi Arabian cancer patients is a priority at King Abdulaziz Medical City (KAMC), Riyadh. To date, research on quality of life in cancer patients in Saudi Arabia has been insufficient and there is no enough research that assesses quality of life in gynecological cancer in Saudi women. The aims of this study were to assess the gynecological cancer risk factors and measure the quality of life among Saudi woman who diagnosed with uterine, ovarian or cervical cancer. A descriptive cross-sectional correlational design was used to conduct the study. A convenient sample of 100 Saudi women and who diagnosed with one of reproductive cancer type at King Abdullah Specialized Children Hospital, Riyadh city. Each woman in the sample signed an informed consent to participate in the study. Data was collected using risk factors assessment tool and WHOQOL-BREF questionnaire. Validity and reliability of the questionnaire were ensured. The mean age of the sample was 49.01 ± 12.88 years, 57 % got menarche at age 13 years, 25% had family history of gynecological cancer, 45% had gotten recurrent genital tract infections, and 47% had an abnormal Pap smear results. There was a statistically significant relationship between the physical health domain and social status ($p=0.003$), occupation ($p=0.000$) and monthly income ($p=0.040$). However, woman psychological health domain was significantly related to occupation ($p=0.000$), number of abortions ($p=0.001$) and menstrual age ($p=0.034$). It was clear that the age ($p=0.024$), social status ($p=0.011$) educational level ($p=0.023$), and reproductive system hygiene ($p=0.005$) had significant relationship with woman social relationships domain. Half of the sample had good total quality of life score $>70\%$, while only 11% had poor total quality of life score $<50\%$. This study presented substantial findings that the sample had a moderate quality of life.

Keywords: quality of life; reproductive cancer; saudi woman

INTRODUCTION

Female gynecological cancer can affect any part of the reproductive system - ovaries, fallopian tube, uterus, cervix, vagina, or vulva. Cancer affects physical and psychologically female life. Cancer is the most leading cause of death worldwide (world health organization, 2015). Worldwide, the distribution of death due to cancer was 9.6 million and new cases of cancer reach 18.1 million in 2018. The most common diagnosis of cancer among women worldwide was cervical cancer (569,847) followed by uterine (382,069), ovaries (295,414) (Freddie, et al., 2018).

In 2018, the prevalence of new cases of cervical cancer was 316 and the death rate was 158 (Bruni, 2019). Persistence infection especially human papillomavirus (HPV) raises the incidence of cervical cancer. Cervical cancer usually is asymptomatic. Precancerous cervical cancer can be treated in a various plan like an example, loop electrosurgical excision procedure (remove abnormal by a wire loop which heated by electric current) or conization (remove of one cone-shaped piece which contains abnormal tissue), cryotherapy (used extreme coldness to destruct the cell). However, invasive cervical cancer treated by surgery or radiation combined with chemotherapy. In addition, cervical cancer can be

prevented by two vaccines (Gardasil and Cervarix) against types of HPV (National Cancer Institute, 2016).

Based on the results of the previous research, there are four reproductive cancer risk factors categories identified as socio-demographics, lifestyle, sexual behavior, marital status, and gestational risk factors. The impact of sociodemographics, cancer characteristics, and treatment are important to consider when assessing QoL in the cancer population. Three types of socio-demographic risk factors are educational level, economic status, and occupational status. In lifestyle, there are three types which are smoking, reproductive system hygiene and dietary habits. Three types of sexual behavior and marital status are sexual activity at age less than 20 years, early marriage, and multiparty. Four types of gestational risk factors are contraception, number of pregnancies, early menarche, and late menopause (Xiao Li et al, 2018).

In addition, the woman who diagnosed with reproductive cancer goes through stressful experiences on their physiological, psychological, sexual, and social aspects (Antonio et al, 2017- Huffman, et al., 2016). They will suffer from feeling anger, anxiety, depression, shame, and suicidal idea (Antonio et al, 2017). Moreover, the impact of treatment methods can cause physical, psychological, social, and emotional changes and this can decrease the level of QOL (Kanaungnit, et al., 2019- Antonio et al, 2017). Also, it affects women in childbearing age, as it decreases the fertility capacity and loss of menstrual cycle. (Antonio et al, 2017).

Cancer not only affects woman physically, but it may also impact the quality of life (QoL) of cancer survivors negatively (Osann, et al., 2014; Pirri, et al., 2013). Recently, much attention has been paid to the negative impact of cancer and its treatment on the QoL in cancer patients. Several reports have indicated that greater QoL impairment in patients with cancer may be attributable to treatment side effects, cancer symptoms, and psychological distress (Ahmed et al., 2018). Research on Saudi Arabian cancer patients is a priority at King Abdulaziz Medical City (KAMC), Riyadh, Saudi Arabia. To date, research on QoL in cancer patients in Saudi Arabia has been insufficient and there is no enough research that assesses the risk factors and quality of life in gynecological cancer in Saudi women. So, the aims of this study were to assess gynecological cancer risk factors and measure the quality of life among Saudi woman who diagnosed with uterine, ovarian, or cervical cancer.

METHOD

This study was conducted using a descriptive cross-sectional co-relational design to assess the gynecological cancer risk factors and measure the quality of life among Saudi women how diagnosed with uterine, ovarian, or cervical cancer. A convenient sample of 100 adult women who were admitted to ward 71 or visited clinic 720 at King Abdullah Specialized Children Hospital (KASCH) at Riyadh city, was selected to participate in the study. The sample included all Saudi Arabic speaker women who are diagnosed with reproductive cancer, Exclusion criteria included women who are not diagnosed with either ovarian, uterus, and cervical cancer. All participants were informed about the purpose of the study to obtain their acceptance to participate in the study. Data was collected using an interviewing questionnaire, which included three main parts namely demographic data, reproductive cancer risk factors assessment, and Arabic version of the world health organization's quality of life (WHOQOL-BREF). It is an instrument comprises 26 items, which measure the following four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (8 items), and the other two items to measure the general health and overall QOL. The scale assessed the patient satisfaction from (very satisfied to very dissatisfied). The final mean score multiplied by 4 in order to make domain scores comparable to WHOQOL-100. Scores >70 indicated good quality of life score, 50-70% average quality score, and < 50% indicate poor quality score. Ethical approval was obtained from research Unit at College of Nursing, King Saud Bin Abdulaziz University for Health Sciences, and IRB was obtained from King Abdullah International Medical Research Center (KAIMRC).

RESULTS AND DISCUSSION

The mean age of the sample was 49.01 ± 12.88 years and 41% were can not read and write, 66% of the sample were married, 80% were unemployed and 58% were lived with their families. Moreover, 25% of the sample had a family history of gynecological cancer, 29% had suffered from weak immune system, 45% had a recurrent genital tract infection, 47% participants had a previous abnormal pap smear results and 71% exposed to radiation. Regarding to lifestyle risk factors of the sample, 9% were smoker and 39% suffered from obesity. However, 53% followed a healthy lifestyle and 81% of the sample washed their genital area immediately after intercourse. In relation to, marital risk factors, 47% of the sample had got married for the first time at age range 19-25 years old with mean age 20.96 ± 4.4 years, 18% they had married for more than one husband in their life, and 20% their husband suffered from sexually transmitted diseases.

Table 1.
 Obstetrical and Gynecological Risk Factors of the Sample

Obstetrical and Gynecological risk factors		
Variables	f	%
At what age did you get your menarche?		
13 and less	57	57
14 and above	43	43
Mean \pm SD	13.38 \pm 1.33	
At what age your period stopped?		
45 and less	16	16
46-50 Years	27	27
51 and above	10	10
Don't apply	47	47
Mean \pm SD	47.71 \pm 5.14	
Number of abortions		
0	40	40
1-3	38	38
4-7	13	13
8 and Above	0	0
Don't apply	9	9
Mean \pm SD	1.51 \pm 1.88	

Moreover, the mean age of menarche was **13.38 \pm 1.33** while the mean age of menopause was **47.71 \pm 5.14**. And the mean number of abortion in the sample was **1.51 \pm 1.88**.

Table 2.
 Quality of Life Domains

Quality of Life Domains	Poor		Average		Good	
	f	%	f	%	f	%
Physical Health Domain	31	31	27	27	42	42
Psychological Health Domain	13	13	46	46	41	41
Social Relationships Domain	13	13	21	21	66	66
Environmental Health Domain	10	10	40	40	50	50

Regarding quality of life domains, the current findings revealed that, 42% had good physical health, 41% had good score psychological health domain, 66% of the sample had good score of social relationships domain quality of life and 50% had good quality of life of environmental health domain.

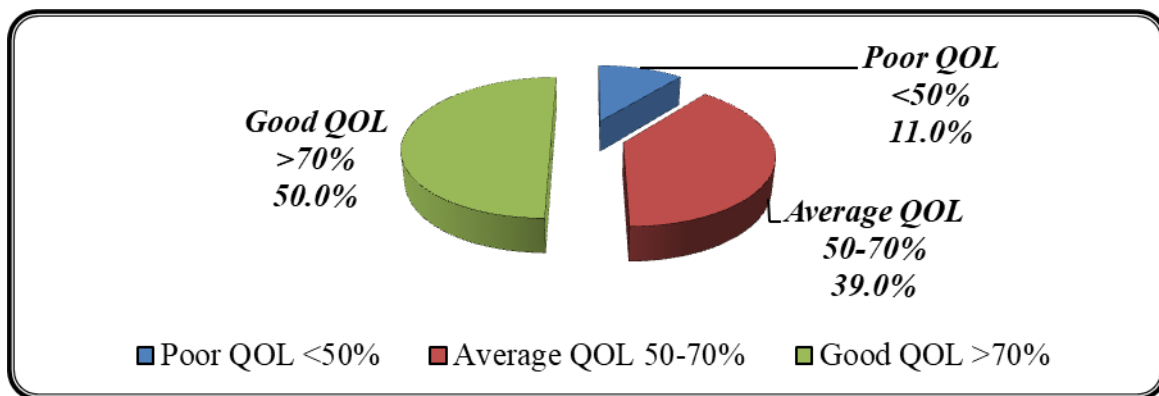


Figure 1. Total Quality of Life on Gynecological Cancer Patients

This figure shows that, the total quality of life on gynecological cancer patients. Half of the sample had good quality of life score >70%. While only 11% had poor quality of life score <50%.

Based on table 3, there were a statistically significant relationship between Physical health domain and social status, occupation and monthly income. Regarding a psychological health domain, there was a statistically significant relationship between psychological health domain and occupation only. Also, there were a statistically significant relationship between social relationships domain and age, social status and educational level. While there was no statistically significant relationship between environment health domain and all Socio-demographic variables.

This table 4 show that, there was no statistically significant relationship between both physical health domain and environment health domain and all obstetric risk factors. While there was a statistically significant relationship between psychological health domain and menstrual age and number of abortions. And there was a statistically significant relationship between social relationships domain and Women Reproductive system hygiene.

Table 3.

Relationship between QOL and Selected Demographic Characteristics of the Sample

WHOQOL-BREF domains	Physical health		Psychological		Social relationships		Environment	
	Test	P	Test	P	Test	P	Test	P
Age	r= 0.185	0.066	r= 0.019	0.849	r= 0.225	0.024	r= 0.060	0.556
Social status	F= 4.87	0.003	F= 1.72	0.167	F= 3.927	0.011	F= 0.265	0.850
Educational level	F= 1.60	0.156	F= 2.19	0.051	F= 2.598	0.023	F= 1.853	0.097
Occupation	F=10.57	0.000	F=7.271	0.000	F=2.668	0.052	F=2.289	0.083
Income	F=3.315	0.040	F=2.359	0.100	F=2.305	0.105	F=1.683	0.191

Table 4.

Relationship between QOL and Obstetric History

WHOQOL-BREF domains	Physical health		Psychological		Social relationships		Environment	
	Test	P	Test	P	Test	P	Test	P
Reproductive system hygiene	F=2.465	0.090	F=1.639	0.200	F=5.577	0.005	F=1.568	0.214
Menstrual age	r= 0.081	0.424	r=0.213	0.034	r=0.003	0.980	r=0.031	0.759
How old are you in your first baby?	r=0.032	0.761	r=0.009	0.932	r=0.001	0.994	r=0.146	0.171
Number of pregnancies	r= 0.081	0.449	r= 0.050	0.638	r= 0.034	0.748	r= 0.027	0.803
Number of living children	r= 0.038	0.719	r= 0.007	0.946	r= 0.099	0.352	r= 0.057	0.590
Number of abortions	r= 0.175	0.098	r= 0.342	0.001	r= 0.175	0.100	r= 0.145	0.173

Measuring the quality of life in gynecological cancer patients has proved essential in managing the disease (Osann et al., 2014). With few cancer patients' quality of life studies presents in Saudi Arabia, it is necessary to conduct research that would study patients' quality of life to positively improve treatment plans and postulate measures to ensure good quality of life in patients. This study aimed to assess the gynecological cancer risk factors and measure the quality of life among Saudi women diagnosed with uterine, ovarian, or cervical cancer.

Gynecological Cancer Risk Factors

The study's assessment of possible risk factors implicated in gynecological cancers reveals that most of the sampled subjects do not have a family history of gynecological cancer or suffer from a weak immune system. Neither were they smokers or obese. They were, however, exposed to radiation and washed their genital area immediately after intercourse. It is worthy to note that about half of them had recurrent genital tract infections and abnormal Pap smear results. Results were consistent with that of Evcili and Bekar (2020), as they reported that most of their study subjects were non-smokers and immediately washed their genital area after intercourse. Similarly, results were also consistent with Alshahrani and Sultan (2020), who revealed that most of the sampled subjects do not have a family history of gynecological cancer, with less than a quarter of them admitting to having a family history of cancer. However, in contradiction to the study results, Evcili and Bekar (2020) reveal that very few of their sampled subjects had a history of sexually transmitted infections, and about one-quarter of the women had regular pap-smear tests. Results also show that most women did not use hormonal replacement therapy for postmenopausal symptoms or any infertility treatment and oral hormonal contraceptives. These findings were very similar to those of Ali-Risasi et al. (2015), who also revealed

that most of their sampled subjects had their menarche at age 14. The woman had 3 to 6 pregnancies and living children. However, unlike this study, the authors revealed that most of their sampled subject has once had an abortion, with more women than those seen in this study claiming to have used oral hormonal contraceptive.

Quality of Life

The subjects' quality of life in this study was assessed using the Physical health domain, Psychological domain, Social relationships domain, and environmental domain. Findings from the assessment of the Physical health domain on gynecological cancer patients of this study revealed that about half of the sample had a good physical quality of life, and results can be compared with those of Thapa et al. (2018), who recorded similar results while assessing cervical cancer's impact on women's quality of life in China. However, results contradict Blair et al. (2016), who recorded poor quality of life for general health, vitality, and physical function while in their study. Observable reasons for differences in results can be traced to the age differences seen in both studies. The authors assessed the Physical inactivity and risk of poor quality of life among elderly cancer survivors while the study subjects were young adults.

Near half of the sample had a good psychological quality of life, and these findings were consistent with those of Ahmed et al. (2018), who recorded a high mean scale score for emotional wellbeing in their study assessing health-related Predictors of Quality of Life in Cancer Patients in Saudi Arabia. However, results also contradict Blair et al. (2016), who recorded poor quality of life for psychological domain assessment.

The social relationship domain assessment revealed that half of the sample subjects had an overall good quality of life in the social relationship and environment domain. These results were consistent with those of Ahmed et al. (2018) and Thapa et al. (2018) who recorded similar results in their respective research but contradicts those of Blair et al. (2016), who recorded poor quality of life for both social relationship and environment domain in their study.

Correlation part

This study shows that a woman's social status, occupation, and income play a statistically significant role in her physical health quality of life after having gynecological cancer. Her job also significantly influences her psychological quality of life. At the same time, her age social status, and educational level play a statistically significant role in her social relationship domain quality of life. Studies (Blair et al., 2016), have shown a statistically significant correlation between age and quality of life. In another study conducted in Sweden by Lindskog et al. (2015), the authors revealed that old age is a risk factor for the poor quality of life amongst gynecological cancer patients. Studies have also shown that employed women and those with a high level of education would most certainly have a better quality of life with gynecological cancers than illiterates and jobless women (Wu et al., 2017).

Similarly, regarding obstetric history, a woman's menstrual age and the number of past abortions play a statistically significant role in life's psychological domain quality. In contrast, sexual hygiene plays a statistically significant role in the quality of social relationships. These findings were confirmed by Li et al. (2018), who recorded a significant correlation between menstrual age and breast cancer. However, no recent study showed a correlation between these obstetric factors and quality of life domains.

CONCLUSION

In conclusion, this study presented substantial findings that there was a relationship between the QOL and selected demographic characteristics as the following: physical health domain had a statistically significant relationship with a social status, occupation and monthly income; occupation had a statistically significant relationship with women psychological health domain; while it was clear that the age, social status and educational level had statistically significant relationship with women social relationships domain. Moreover, there were a relationship between the QOL and obstetric history: the number of abortions and menstrual age had a statistically significant relationship with women psychological health domain; women reproductive system hygiene had a statistically significant relationship with social relationships domain.

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