RESEARCH COMMUNICATION

Quality of Life and Influencing Factors in Patients with a Gynaecologic Cancer Diagnosis at Gazi University, Turkey

Gözde Özaras*, Ferda Özyurda

Abstract

Negative impacts of gynecologic cancers on women's health are multi-dimensional. The aim of this study was to determine the quality of life (QOL) of affected patients in comparison with a control group diagnosed with gynecological problems other than cancer, and to investigate demographic and socio-cultural factors potentially affecting QOL. The study, performed between June-December 2008, covered 120 inpatients diagnosed with gynecological cancer at the Gynecologic Oncology Department of Gazi University Medical School and 123 educational level and age matched outpatients without cancer, of the Department of Obstetrics and Gynecology Outpatient Unit. Data were collected through a face to face questionnaire form including basic socio-cultural and demographic characteristics and a quality of life scale (Short Form-36, SF-36). Data entry and analysis were performed with the SPSS v11.5 package program and comparisons were conducted according to socio-demographic and disease-related characteristics of participants. Averages of total scores and all components of the SF-36 Scale of the case group were significantly lower in the cancer group. It is essential to ensure multidisciplinary approaches for living areas determined to be affected by gynecological cancer and also to make efforts to enhance quality of life; therefore, some suggestions were made regarding these issues peculiarly considering early diagnosis of gynecological cancer.

Keywords: SF-36 Short Form - gynecologic cancers - QOL - cases and controls

Asian Pacific J Cancer Prev, **11**, 1403-1408

Introduction

Chronic illness may negatively affect the individual physically, psychologically, and socio-economically. Chronic diseases limit the life of individual, prevent to get pleasure from life, create functional difficulties in his living and cause functional situation and life quality (Ganz, 1994; Baird, 1998). World Cancer Report (2008), recommends that the global burden of cancer is estimated to approximately double between 2008 and 2030 from 12.4 million new cases per year to around 26.4 million. A majority of this increase will occur in the more developing countries where the health services are least able to cope with the challenge. This inequality is highlighted by the markedly lower cancer survival rates in these regions.

Operations which are carried out on the gynecological cancers, chemotherapy and effects of the radiotherapy effects as negative the body images of women, sexual identity, life quality of the patients and their family (Wenzel et al., 2003). According to 2007 year datas of the American Cancer Society, endometrial and ovarian cancers are in the fourth and fifth row which seens in the women in USA. Cerviks cancer is the eight in the general row, as a result of scanning tests and early diagnosis and third in the gynecological cancer cases (American Cancer Society Cancer Facts and Figures, 2008).

In this content, the life quality at the gynecologic cancer patients significantly affected from diagnosis of illness, personal mean of this diagnosis, physical effects of disease, long term and short term side effects of different treatment types, mental health of patient, coping with mechanisms and family /society reaction (Anderson et al., 2000).

The objectives of the study are to compare life quality situation between patients who had gynecologic cancer diagnosis and control group who don't have gynecologic cancer diagnosis and to examine demographic and socio-cultural factors that affect the life quality of patients who had gynecologic cancer diagnosis.

Materials and Methods

This study was designed for the purpose of the examine the situaution of the quality of life in gynecologic cancer patients (ovarian cancer, endometrial cancer, cervix cancer, vulva cancer, vagen cancer, leiomyosarcoma) and the factors which affected this situation. Case and control methods were used for this study.

Subjects of The Study

The case group of the study includes 120 the in-patients who had gynaecologic cancer diagnosis at Gazi

*[1]Cankırı Karatekin University School of Health, Cankiri, [2]Public Health Discipline, Faculty of Medicine, Ankara University Ankara, Turkey *For correspondence : favour1984@hotmail.com*

University Faculty of Medicine Hospital Gynecologic Oncology Clinic; the control group comprised 123 patients who applied Gynecology polyclinic, had no cancer diagnosis and at available age and education level to case group. The data were collected between June-December 2008. We looked for the following criterias in every patients recruited in this study.

- Education level and age matched in Obstetrics and Gynecology Policlinic of the same center. Also age between 18-75 years.
- Case group was consisted group of patients with ovarian ca, endometrial ca, cerciks ca, vulvar ca, vagen ca and leiomyosarkoma
- Control group had no malignancy diagnosis.
- Any chronic disease of the case and control group.
- Having the capacity to understand and reply the applied tests.

Data Gathering Method

The data of the study are gathered through Questionnaire Form including socio-demographic, cultural features of the patients and Life Quality Scale (Short Form-36, SF-36) (Ware, 2008). Questionnaire Form composes 27 questions as Identity, address, socio demographic features of individual, disease diagnosis, disease phase, treatment method that was applied up to now and being applied just now. SF-36 Life Quality Scale Version 2.0 composes 36 articles and those provide measuring of 8 aspects. The questions are scored between 1and 5; as high values will show better health situation. The scores of questions that compose each component are summed and raw score is availed for that component (sub scale). The raw scores of SF-36 Scale Version 2.0 scoring that the individual took is turned into a score between 0-100 (percentage point). Applying the forms to case and control groups took approximately 20-25 minutes through face to face meeting method (Ware, 2008).

In the Figure 1, SF-36 Measurement Model has three levels: items, eight scales that aggregate 2-10 items each; and, two summary measures that aggregate scales. All but one of the 36 items (self-reported health transition) are used to score the eight SF-36 scales. Each item is used in scoring only one scale. The eight scales are hypothesized to form two distinct higher-ordered clusters due to the physical and mental health variance that they have in common. Three scales (PF, RP, BP) correlate most highly with the physical component and contribute most to the scoring of the Physical Component Summary (PCS) measure. The mental component correlates most highly with the MH, RE, and SF scales, which also contribute most to the scoring of the Mental Component Summary (MCS) measure. Three of the scales (VT, GH, and SF) have noteworthy correlations with both components. The importance of these findings is illustrated below in the discussion of empirical validity. Specifically, scales that load highest on the physical component are most responsive to treatments that change physical morbidity, whereas scales loading highest on the mental component respond most to drugs and therapies that target mental health (Ware, 2008).

Data evaluation and analysis

SPSS 11.5 packet programme was used at data evaluation. SF-36 subscale scores and total scores were calculated. Socio-demographic features of individuals were compared according to patients and their features. It was determined that the points did not conform to normal distribution. Therefore, nonparametric statistics were used. Mann-Whitney U test was used when two categories were and Kruskal-Wallis single direction variance analysis was used when more than two categories were in the comparisons between groups.

Statistical significance limit is "0.05". The test has accepted significant, If "p" value is small than "0.05". Descriptive values, categorical datas, frequencies and percentile values were presented as average ± standart deviation and median values for the SF-36 subscale scores and total scores.

Results

The dispersion and comparing results of case and control groups that participated to the research according to some socio-demographic features has been presented at Table 1. The age average of case group who participated to the study is 54.2±12.2, the age average of control group is 52.6±13.6, it is similar (t=0.94, p>0.05). When the marital status of participants is considered; 78.3% of case group is married, 69.1% of control group is married (x^2=2.70, p<0.05). When the education situation of the patients is

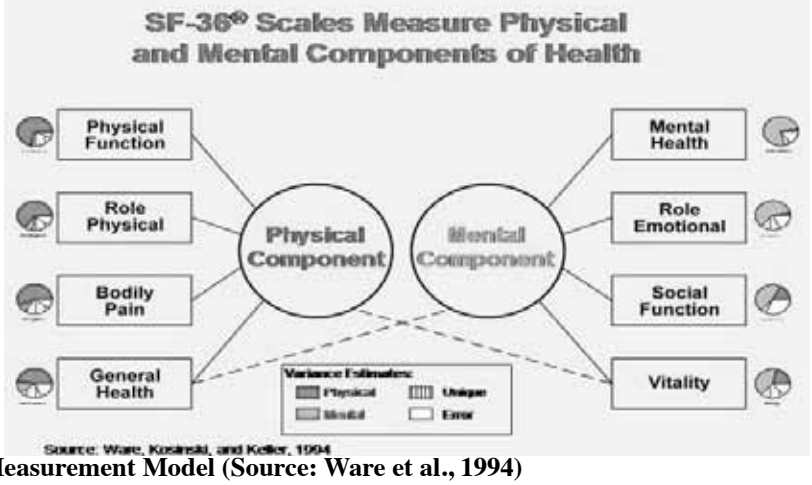

Figure 1. SF-36 Measurement Model (Source: Ware et al., 1994)

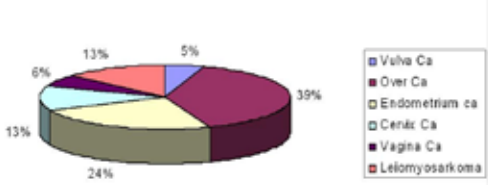

Figure 2. Cancer Types

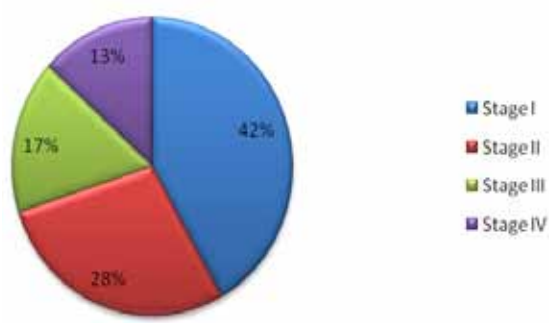

Figure 3. Cancer Stages

considered, 30% of case group, 29.3% of control group is graduated from primary school (x^2 =0.44, p>0.05). 75.8% of case group and 68.3% of control group is housewife.

Data for cancer type and stage are shown in Figure 2 and Figure 3.

The definitive values and comparing results regarding SF-36 sub scale and total grades of people who participated to study in the case and control group have been presented at the Table 2.

When the dispersion according to scale scores of case and control group who participated to the research is examined, when the dispersion according to SF-36 general and sub scale scores is examined, the life quality of case group with genital cancer is significantly lower than control group (Table 2).

The disease diagnosis (vulva cancer, over cancer, endomethrium cancer, cervix cancer, vagina cancer leiomyosarcoma.) and phases of outpatient and in-patient people don't affect their life quality (p>0.05). Life quality situation of the case and control group who participated to study according to independent variable have been presented at the Table 3.

When the SF-36 general and sub scale scores of the research are examined according to marital status in the case and control groups, regardless of the marital status, general score of the case group who are married, single and widower are significantly lower than control group (p<0.05). But, in the case group, no differences were observed between the SF-36 general score according to marital status (p>0.05). In the control group, SF-36 general score is lower in the widower and separated than married and single (Table 3).

When the SF-36 scale scores are examined according to education situation in the case and control groups, general score of the case group consisting all education groups is significantly lower than control group (p<0.001). In the case group, SF-36 general score is higher than other education situation alternatives in the group which is graduated from high school (p<0.01). SF-36 general scores increase as the education level increases in the control group.

When the SF-36 scale scores of the research are examined according to employment situation in the case and control groups, SF-36 general and sub scale scores in the case groups consisting the employed and unemployed are significantly lower than control group. Employment situation is not a factor which affects the quality of life in patients and control groups.

When the SF-36 scale scores of the research are examined according to the nursery situation in the case and control groups, SF-36 general scores are significantly lower than control group in the case group living with their families who have nursery services and living with their family without nursery services. But, there are no significant differences between SF-36 general scores with participants who live alone and with nursery services in the case and control groups (p<0.05).

When the SF-36 scale scores of the research are examined according to thinking of about their future in the case group, the general score of case group is the highest

Table 1. Socio-Demographic Features of the Case and Control Groups

Features	Cases (n=120)		Controls (n=123)		X^2	p
	n	%	n	%		
Marital Status						
Married	94	78.3	85	69.1		
Unmarried	5	4.2	8	6.5	2.70	>0.05
Widower	21	17.5	30	24.4		
Education						
Literate	31	25.8	28	22.8		
Primary	36	30.0	36	29.3		
Secondary	8	6.7	9	7.3	0.44	>0.05
High School	25	20.8	28	22.8		
University	20	16.7	22	17.9		
Occupation						
Housewife	91	75.8	84	68.3		
White-collar	11	9.2	18	14.6		
Self Employed	2	1.7	2	1.6	3.73	>0.05
Retired	14	11.7	14	11.4		
Blue Collar	1	0.8	4	3.3		
Other	1	0.8	1	0.8		
No of children						
0	12	10.0	17	13.8		
1	8	6.7	9	7.3	6.71	>0.05
2	27	22.5	33	26.8		
3	31	25.8	39	31.7		
4 and over	42	35.0	25	20.3		

*: Average ± Standard Deviation

Table 2. SF-36 Scale Scores According to Treatment Situation

SF-36 sub Components	Case (n=120)	Control (n=123)	z*
	Average±SD	Average±SD	value
General Health	42.9±24.2	62.3±19.6	6.2
Physical Functionality	33.3±28.4	81.4±21.8	10.7
Physical role	12.9±30.2	76.4±36.1	11.1
Emotional Role	22.8±37.7	79.1±34.5	9.6
Bodily Ache	34.3±31.8	70.8±27.3	8.4
Liveliness	37.2±19.8	62.5±18.2	8.9
Social Functionality	54.2±35.2	87.2±21.0	7.4
General Mental health	48.2±22.3	68.7±19.1	7.1
General	35.7±18.8	73.6±17.4	10.7

Z*: Mann-Whitney U test statistic

Table 3. Life Quality Situation of the Case and Control Group Who Participated to Study According to Independent Variable

SF-36 sub Components	General score	Case (n=120)		Control (n=123)		Statistical Inspection	
		Average±SD	Medium	Average±SD	Medium	Z*	p
Marital Status	Married	36.3±18.4	32.7	77.1±14.1	81.3	10.0	<0.001
	Single	35.3±26.9	22.9	76.2±17.8	85.6	2.3	<0.05
	Widow	33.2±19.2	27.8	62.9±21.4	70.4	3.8	<0.001
	Statistical Inspection**	X^2=0.6 p>0.05		X^2=9.5 p<0.01			
Education Situation	Not literate	27.9±17.4	24.9	63.6±19.7	65.3	4.8	<0.001
	Elementary school	39.8±19.4	35.3	70.5±18.1	74.5	5.3	<0.001
	Middle school	26.9±5.3	28.2	76.8±9.4	77.3	3.5	<0.001
	High school	44.1±16.7	42.3	79.5±13.2	82.9	5.3	<0.001
	University	33.5±20.2	27.6	82.3±13.0	86.1	5.0	<0.001
	Statistical Inspection**	15.3 <0.01		22.8 <0.001			
Employment Situation	Not working	35.2±18.2	32.1	71.9±18.6	77.1	9.0	<0.001
	Working	37.4±20.6	31.0	77.1±13.9	80.5	5.7	<0.001
	Statistical Inspection*	0.1 >0.05		z*= 1.6 >0.05			
Nursery Situation	Having family and nursery situation	34.3±16.1	31.4	75.9±12.6	79.5	8.5	<0.001
	By alone	36.3±26.1	24.3	54.0±22.7	54.7	1.4	>0.05
	Having fanmily but not having nursery situation	39.9±25.7	31.2	77.1±15.3	80.5	4.8	<0.001
	By alone and having nursery situation	51.2±27.3	38.3	51.7±24.2	55.9	0.3	>0.05
	Statistical Inspection*	1.2 >0.05		14.6 <0.01			
Thinking of About Future	To get better and return to old life	38.0±18.6				33.6	
	Hopeless about future and, be afraid not being get better	23.0±15.4				19.9	
	Nothing thinking	38.0±18.7				31.6	
	Other	38.5±18.6				32.08	
	Statistical Inspection**	15.1 <0.01					

*: Mann-Whitney U test statistic; **: Kruskall-Wallis test statistic

score on the people who are hopeless from their future and afraid not to be getting better (23.0 + 15.4).

Discussion

When case and control groups of the study is compared about the age average, marital status, education level, working situation and having living child number, no difference is found; Case and control groups have similar features.

When the dispersion according to scale scores of case and control group who participated to the research is examined, when the dispersion according to SF-36 general and sub scale scores is examined, the life quality of case group with gynecological cancer is significantly lower than control group without gynecological cancer. Having cancer diagnosis causes feeling fear, worrying and living depressive feelings (Lheureux et al., 2004). At the research results of Hall and Kalra; the life quality scores of cancer patients occurred lower than other people and their life quality is worse (Addington-Hall and Kalra, 2001). In the research results of Ko and et al. of the different types of cancer patients with follow-up study results, the patients, the patients were observed in the first year, 1-5 years and in the period of after 5 years. It was observed that the patients who had lung, breast and colon cancers had taken low scores in the first one year according to the scala of health and limited activity (Ko et al., 2003). In the study of Cella and et al. which observed the differences for about the life quality of the cancer patients (32.8% lung, 24.7% breast, 19.1% colon, 14% prostate, 9.4% head-neck); the patients (n=189) were observed at the beginning and after 2-3 months, period 63% of the patients had no significantly differences (p<0.05) about their functional situation; 37% of them had significantly differences about their scalas of social health situation, psychological health situation, emotional health situation, functional situation and total functional situation (Cella et al., 2002). Our study results are similar to our study results.

75.8% of the case group and 35.8% of the control group live with their families and have nursery services in our study. When the SF-36 general scale scores of the research are examined according to the status of the patients having nursery services in the case and control groups, SF-36 general scores are significantly lower than control group in the case group living with their family who has nursery services and living with their family who hasn't them. But, there are no significant differences between the SF-36 general scores with participants who live alone and who live with nursery services in the case and control groups (p>0.05). In the control group, general scores are significantly lower in the people who live alone

than living with their family. It shows us that, even if the people are the cancer patients, social support and family support make positive effect to the life quality on the people and this is more important on the cancer patients. It is obvious at the research results of Jackson et al., (2007) that, 82% of ovarian cancers in women had received social support; Peterson et al., (2005), specified that ¾ of the women had received social support. Tan and Karabulutlu, specified that the social support was higher which had taken support from the cancer patients' families (Tan ve Karabulutlu, 2005). Most of the women need of support of their families, relatives and also health professionals during the period of the illness. Because; cancer diagnosis, long treatment process and obscurity cause the patients be away from social life and disturbances in interpersonal relationships (Ateşçi et al., 2003; Kara and Fesci, 2004). It has been determined that the social support which is given to the patients will reduce the anxiety and will be useful to cope with disease process and finally will have positive effects on the life quality. Also, Schilling and et al. have determined to provide emotional support of the accompaniers (Schilling et al., 2002).

When the SF-36 scale scores are examined according to education situation in the case and control groups, general score of the case group, who is in the all education groups, is significantly lower than control group. A proportional increase is not observed between the educational situation and life quality in the case group. SF-36 general scores increase as the education level increases in the control group. In parallel to our study, Dow et al., (1997) reported that educational situation hadn't affected the life quality in the study of ovarian cancer patients. Drageset and Lindstrom (2005), determined that the educational situation was an important diagnostic of the life quality.

When the SF-36 scale scores of the research are examined according to employment situation in the case and control groups, SF-36 general and sub scale scores in the case group which is employed and unemployed are significantly lower than control group. The score of the life quality on employed women is higher than housewives in the control group. But, it is not statistically significant. Employment contributes to the women to gain respectability interaction with social environment and be respected in the community (Bloom et al., 2001). The people who have good levels of economic status indicate that the payment of treatment costs and devotion to the patients of their family members who are in good levels of economic status indicates this situation increases the perceived support.

When the life quality researched according to cancer types, there are no statistically significant differences in non subscale and total scores. When Kizilci (1997), investigated the distribution of the life quality scores by using the Rolls-Royce model according to breast cancer, lung cancer, lymphoma, gynecological cancer and digestive system diagnosis of the patients, she hadn't found statistically significant differences between the life quality scores of the people who have different diagnosis ($p>0.05$). It is seen that the results of this study support ours. What the diagnosis is not important in our study. The important point is having cancer diagnosis. Although there is difference between the diagnosis, the patients who had cancer diagnosis have long and difficult treatment period, applied treatment methods and side affects present similarity which causes to present meaningfulness for our study.

In conclusion, the results of this study are important for documenting the life quality of gynecological cancer patients. We observed that the quality of life of patients diagnosed with gynecological cancer is determined to be lower than the patients who were not diagnosed with a gynecological cancer. In this direction, it is essential to ensure multidisciplinary approaches especially for living areas determined to be affected by gynecological cancer and also to make efforts for enhancing quality of life. Rehabilitation centers and psychosocial approaches to the gyneacological carcinoma patients may have a positive affect in the therapy and prognosis of this patients. We, the clinicians have an important role in providing social support to the patients and to their families, and gyneacologists have a characteristic role in establishing the positive interaction between the patients and their relatives.

References

Addington-Hall J, Kalra L (2001). Measuring quality of life: who should measure quality of life? *BMJ*, **322**, 1417-20.

American Cancer Society Cancer Facts and Figures. Annuel report. California division and public health ins. 2007. http://www.cancer.org/docroot/stt/stt_0.asp.

Anderson B, Lutgendorf S (2000). Quality of life as an outcome measure in gynecologic malignancies. *Curr Opin Obstet Gynecol*, **12**, 21-6.

Ateşçi FÇ, Oğuzhanoğlu NK, Baltalarlı B, et al (2003). Psychiatric disorders and associated factors in cancer patients. *Turkish Psychiatric J*, **14**, 145-52.

Baird S (1998). A cancer source book for nurses. In: Platin N, eds. Handbook for nurses. Evening art school printing press. *Ankara*, 175-85.

Bloom JR, Stewart SL, Johnston M, et al (2001). Sources of support and the physical and mental well-being of young women with breast cancer. *Soc Sci Med*, **53**, 1513-24.

Boyle P and Levin B (2008). IARC Publications. World cancer report. http://www.iarc.fr/en/publications/pdfs-online/wcr/2008/index.php.

Cella D, Hahn EA, Dineen K (2002). Meaningful change in cancer-specific quality of life scores: differences between improvement and worsening. *Qual Life Res*, **11**, 207-21.

Dow KH and Melancon CH (1997). Quality of life in women with overian cancer. *Western J Nurs Res*, **19**, 334-50.

Drageset S and Lindstrom TC (2005). Coping with a possible breast cancer diagnosis: demographic factors and social support. *J Adv Nurs*, **51**, 217-26.

Ganz PA (1994). Quality of life and the patient with cancer. Individual and policy implications. *Cancer*, **4**, 1445-52.

Jackson JM, Rolnick SJ, Coughlin SS, et al (2007). Social support among women who died of ovarian cancer. *Support Care Cancer*, **15**, 547-56.

Kara B and Fesci H (2004). Self-care and quality of life in cancer. *Hematol Oncol*, **6**, 124-9.

Kızılcı S (1997). The factors effected quality of life of people with cancer and their relatives. Birmingham: university of hacettepe.

Ko CY, Maggard M, Livingston EH (2003). Evaluating health utility in patients with melanoma, breast cancer, colon cancer

and lung cancer: a nationwide, population-based assessment. *J Surg Res*, **114**, 1-5.
Lheureux M, Raherison C, Vernejoux JM, et al (2004). Quality of life in lung cancer: does disclosure of the diagnosis have an impact? *Lung Cancer*, **43**, 175-82.
Petersen RW, Graham G, Quinlivan JA (2005). Psychologic changes after a gynecologic cancer. *J Obstet Gynaecol Res*, **31**, 152-7.
Schilling LM, Scatena L, Steiner JF, et al (2002). The third person in the room: frequency, role, and influence of companions during primary care medical encounters. *J Fam Pract*, **51**, 685-90.
Tan M and Karabulutlu E (2005). Social support and hopelessness in Turkish patients with cancer. *Cancer Nurs*, **28**, 236-40.
Ware JR (2008). SF-36 health survey update. http://www.sf-36.org/tools/sf36.shtml.
Wenzel L, Cella D, Vergote I (2003). Quality of life in patient receiving treatment for gynecologic malignancies: Special considerations for patient care. *Int J Gynecol Obstet*, **83**, 211-29.