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Divorce Rates among Cancer Patients – A Saudi Arabian Study

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ABSTRACT

Introduction: divorce has been a serious problem of major prevalence in our community. According to Saudi Ministry of Justice, divorce rate was estimated to be 27.84% in 2015. Therefore, this study aimed to obtain the incidence of divorce among cancer patients in Princess Noura Oncology Center to know whether being diagnosed with cancer would affect the marital status in terms of divorce.

Patients and Methods: the study included 125 patients with age of 15-70 years, have been married, and diagnosed with cancer. Patients were interviewed in the clinic. For data analysis, we used SPSS. Institutional Review Board approval was obtained.

Results: divorce rate among cancer patients was significantly lower than that of the general population (P value <0.001). It was found to be higher in patients with breast cancer 50%, followed by non-solid tumor 33% of all divorces. 66% of divorced cancer patients were females.

Conclusion: divorce rate in cancer patients is lower than that of the general population. Therefore, we believe that cancer has led to stronger relationships. Cancer by itself does not increase the rate of divorce. Interestingly, it is generally found to be higher in female patients and breast cancer.

Keywords: Cancer, Marriage, Divorce, Saudi Arabia, Marital status.

INTRODUCTION

Divorce is a serious social problem that is prevalent in the Saudi Arabian community. The psychological burden of divorce can have a serious impact on all aspects of an individual's life. Cancer alone has serious consequences on a patient and his/her family members [(1)].

Cancer patients frequently suffer psychological trauma due to their chronic and devastating condition [(1)]. The disease can cause tremendous changes to a patient's lifestyle, which in turn may significantly affect the lifestyle of his/her partner. We thus sought to investigate whether this psychological trauma could lead to divorce or separation among cancer patients in Saudi Arabia.

To date, studies to examine the impact of cancer on marital status have not been conducted in Saudi Arabia, although they have been conducted in other countries [(2, 3)]. One study analyzing young adult cancer survivors concluded that subjects were at a higher risk of divorce or separation due to the financial and emotional burdens of their condition [(1)]. Another study, of the long-term survivors of childhood cancers that was derived from the Childhood Cancer Survivor Study (CCSS), showed that the divorce rate among cancer patients was most pronounced in black male patients [(2)]. Studies have also suggested disparity in divorce rates between male and female cancer patients; Twombly [(4)] demonstrated an eight-fold increase in separation and/or divorce incidence among female brain tumor patients compared to male patients. Conversely; a French study [(5)] concluded that there was no difference in divorce rates between cancer survivors and the general population. Taken together, these studies imply that the effect of a cancer diagnosis on marital status is complex and likely to be multifactorial.

Other studies have found a correlation between the increased divorce rate and specific cancer types such as cervical cancer and brain tumors [(3, 4)].

Other studies have suggested links between marital status and cancer outcome; for example, Ben-Schlomo ***et al.*** [(6)] revealed an increased risk of overall mortality in unmarried patients. In addition, they found that being divorced increased the risk of cancer mortality among male patients.

Therefore, this study aims to determine divorce rates among cancer patients who were treated at the Princess Noura Oncology Center (PNOC).

PATIENTS AND METHODS

The questionnaire

We designed a questionnaire-based cross-sectional study, which consisted of three primary components: patient demographics, cancer status, and marital status. The questionnaire also included a formal consent statement that explained the nature and goals of our study to the patient. Our questionnaire was reviewed and approved by the King Abdullah International Medical Research Center, together with a social worker and an oncologist working at the PNOC.

Participants and recruitment

Patients (n=125) were randomly sampled from cancer patients that were currently, or had

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previously been treated at the PNOC. All male and female patients who were married and aged between 15 and 70 were included – regardless of their cancer type. During the recruitment process, patients were assured that any data collected would remain confidential and that refusal to participate would not alter or affect their treatment plan in any way. Consent was obtained verbally.

Procedure

Data was collected by interviewing consenting patients with the assistance of social workers.

Statistical analysis

We used the Statistical Package for the Social Sciences (SPSS) software version 22 for statistical analysis. For comparative analysis, we used Chi-square for dichotomous data, and the Student t-test for continuous variables. In addition, we report the mean, standard deviation, and 95% confidence intervals.

The study was done after approval of ethical board of King Saud bin Abdulaziz university.

RESULTS

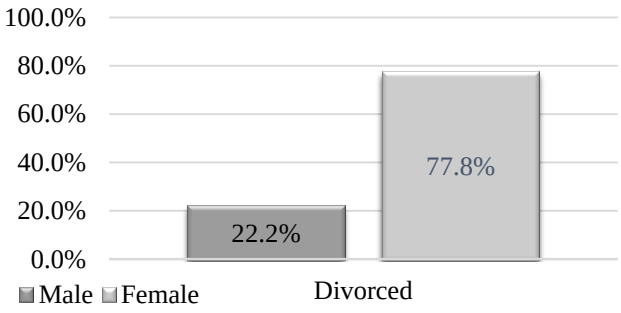
The sample comprised 125 patients in total. The results from the demographic component of the questionnaire (Table 1) indicated a mean age of 52.39 years (+/- 15 years). Among survey participants, 74 were males and 51 were females. Most patients (82%) lived in the western region. Most participants were educated to pre-secondary or secondary level.

Table 1: Patient demographics

Variables	All patients	
	N	%
All patients	125	100
Gender		
Male	74	59.2
Female	51	40.8
Region of residence		
Eastern	0	0
Western	103	82.4
Central	3	2.4
Northern	1	0.8
Southern	18	14.4
Patient education		
Illiterate	23	18.4
econdary/Pre-secondary school	58	46.4
igher education	44	35.2
pouse education		
literate	13	10.4
econdary/Pre-secondary school	74	59.2
igher education	38	30.4
ccupation		
overnmental	55	44
rivate sector	8	6.4
rivate business	5	4.0
nemployed/Retired	57	45.6
ncome per month		
000 SR	46	36.8 %
000 – 15000 SR	68	54.4 %
15000 SR	11	8.8 %

The divorce rate among all study participants was 7%; that is, 9 patients from the total of 125 patients. Polygamy was also reported by 24 patients, representing 19.2% of all participants.

Among the divorced patients, 77.8% were females (Figure 1). We also found that patients educated to secondary school level had a higher incidence of divorce, and that unemployed patients also had a higher divorce rate than those in employment.

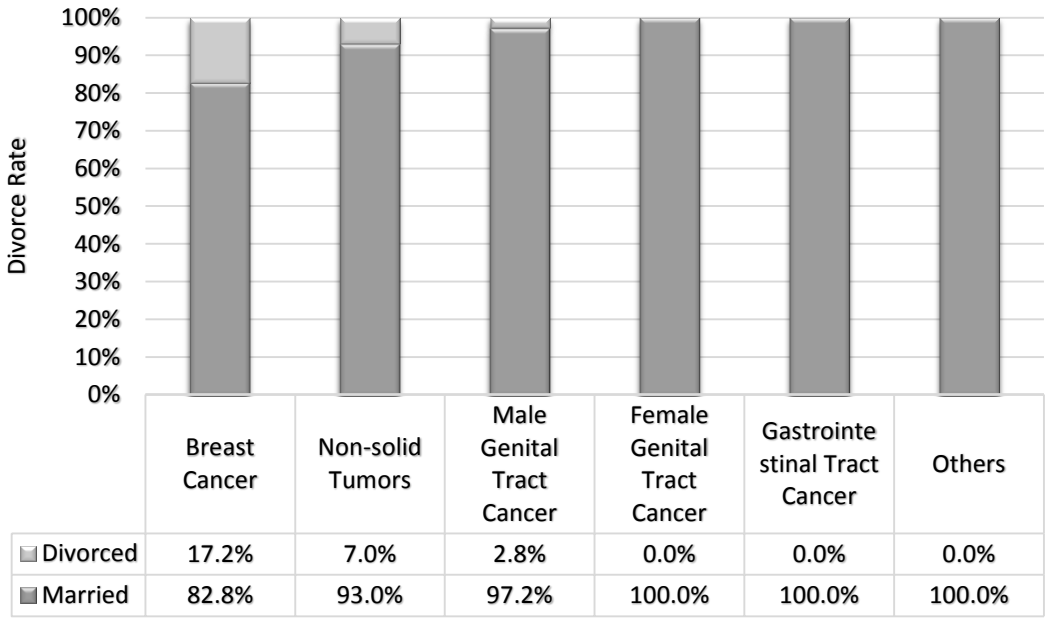


Graph 1. Divorce Rate and Gender

Table 2: Marital status

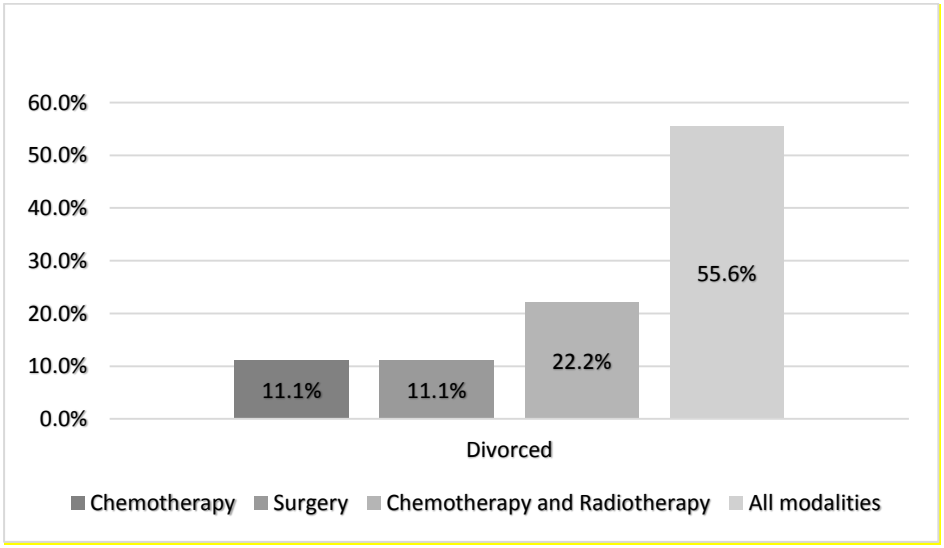
Variables	Married		Divorced		P value
	N	%	N	%	
All patients	116	92.8	9	7.2	-
Gender					
Male	72	62.1	2	22.2	0.019
Female	44	37.9	7	77.8%	
Region of residence					
Eastern	0	0.0	0	0.0	0.003
Western	97	83.6	6	66.7	
Central	3	2.6	0	0.0	
Northern	0	0.0	1	11.1	
Southern	16	13.8	2	22.2	
Patient education					
Illiterate	22	19.0	1	11.2	0.770
Secondary/Pre-secondary school	54	46.5	4	44.4	
Higher education	40	34.5	4	44.4	
Spouse education					
Illiterate	12	10.3	1	11.1	0.973
Secondary/Pre-secondary school	69	59.5	5	55.6	
Higher education	35	30.2	3	33.3	
Occupation					
Governmental	53	45.7	2	22.2	0.024
Private sector	7	6.0	1	11.1	
Private business	3	2.6	2	22.2	
Unemployed/Retired	53	45.7	4	44.4	
Income					
5000 SR	42	36.2	4	44.4	0.604
5000 – 15000 SR	63	54.3	5	55.6	
> 15000 SR	11	9.5	0	0.0	
Polygamy					
No	95	81.9	6	66.7	0.264
Yes	21	18.1	3	33.3	

Among cancer types, we found that breast cancer patients had the highest divorce rates in our participant population, followed by patients with hematological malignancies (Figure 2). The data indicate that divorced patients had generally been treated with all modalities including surgery, chemotherapy, and radiotherapy, as shown in Graph 3.



*Chi-square
P= 0.240

Graph 2. Divorce and Type of Cancer



Graph 3. Type of treatment in divorced patients

DISCUSSION

Divorce rate is clearly reduced in patients suffering from cancer in our hospital [(1)]. Interestingly, the conclusions we have drawn did not agree with our initial hypothesis. Before conducting the study, we estimated that the divorce rate in our study population would be identical or slightly higher than that of the general population. We based this estimate on the general divorce rate in Saudi Arabia that we obtained from the Ministry of Justice annual report [(7)]. In addition, a literature review revealed conflicting results in terms of the divorce rate among cancer patients [(8)]. It became necessary to conduct this research and analyze the new data to provide conclusive evidence. The overall divorce rate in Saudi Arabia is estimated to be 27.84% [(7)]. We thus find that the divorce rate among cancer patients of the PNOC is significantly lower than that of the Saudi general population.

Our conclusion contradicts studies performed by others, in other areas. **Carlsen *et al.*** [(3)] concluded that Danish cancer survivors are at a higher risk of divorce, with the exception of cervical cancer survivors. **Kirchhoff *et al.*** [(1)] reported an increased risk of divorce/separation among cancer survivors. Although we did not investigate specific reasons for these differences, we note that patients treated at the PNOC are offered access to a team of social workers with whom they maintain direct and frequent contact. Moreover, positive family relationships can result in a lower chance of separation or divorce for the patients. Furthermore, the involvement of family members, specifically the spouse, may also contribute to this noticeably low rate of divorce among cancer patients of the PNOC.

This study also demonstrated that 77.8% of divorced patients were female. This may indicate a need for increased spousal involvement when the patient is female. Another significant result is that 44.4% of our divorced patients were unemployed, suggesting that unemployment is perhaps a factor that increases the risk of divorce.

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