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Role of religiosity, optimism, demographic characteristics and mental health problems among cancer patients

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Abstract

Objectives: To investigate the role of religiosity, optimism, depression, death anxiety and differences in demographic characteristics among cancer patients.

Method: The cross-sectional study was conducted from July 2018 to July 2019 in three different hospitals of Lahore and Faisalabad, Pakistan, and comprised patients with diagnosed stage 1 and 2 cancer. Non-cancer subjects were enrolled as the control group. Data was collected using the Short Muslim Practice and Brief Scale, the Siddiqui-Shah Depression Scale, Death Anxiety Scale and the revised version of Life Orientation Test. One-way analysis of variance and other tests were used for data analyses.

Results: Of the 400 subjects, 200(50%) each were cases and controls. Among the cases, 100(50%) each were males and females. There was a significant difference between cancer and non-cancer subjects on the variables of religiosity, optimism, depression and death anxiety ($p<0.05$). Significant gender differences were found on the variables of religiosity, depression and death anxiety ($p<0.05$), while the difference on the construct of optimism was non-

significant among cancer patients ($p>0.05$). Cancer patients of rural and urban areas were significantly different on the variables of religiosity, depression and death anxiety ($p<0.05$), but the difference was non-significant on the optimism scale ($p>0.05$). Also, the differences on death anxiety scale were significantly related to the type of cancer ($p<0.05$).

Conclusion: There was a greater role of religiosity and optimism in controlling the level of depression and fear of death among cancer patients. Also, the role of gender, residential area and type of cancer was significant.

Key Words: Religiosity, Optimism, Depression, Death anxiety, Gender, Rural-urban, Types of cancer.

Introduction

Cancer is one of the major leading causes of death globally. A decade ago, it was estimated that 7.6 million people died due to cancer, while the current prevalence rate is estimated at 8.4 million and this rate will go up to 11.5 million by 2030 which is alarming[1]. It is also feared foreseen that by 2030, cancer incidence will actually go up to 21.7 million and 13 million people would die because of it[2]. In 2012, Europe assessed the total number of cancer deaths to be 1.75 million; 56% men and 44% women[3]. In Pakistan, the prevalence rate is higher than Iran, Egypt, India, the United States, Canada etc[4]. According to a 2012 report, 38,285 cases were recorded only in Khyber Pakhtunkhwa (KP) province and the number had risen compared to 2005[5]. In Pakistan, 50% of women deaths are due to lack of awareness, poor health facilities, and improper nursing care[6].

Various other factors cause cancer, like family history, poor nutrition, ultraviolet (UV) light, unhealthy diet, obesity, ulcer problems, stomach issues, etc. Moreover, psychological factors are very important to address. Psychological factors, like hypertension, distress tolerance and drug abuse, develop a potential risk of cancer[7]. Psychological problems also develop after a

cancer diagnosis as reported in an earlier studies[8,9]. Further, depression and anxiety-related problems significantly affect individuals' will-power and well-being. A person with low will-power becomes more vulnerable to disease because such patients use negative coping methods during illness[10]. A cross-sectional study in Pakistan reported that 86% of oncology patients perceived depressive disorders, 79% perceived anxiety disorders, and psychiatric disorders prevalence were found in both males (52%) and females (48%)[11].

Religiosity and optimism are the protective factors that encourage the person to fight against illness[12]. Similarly, Basri et al. reported that religious and optimistic persons perceived less fear on death anxiety and depression scales compared to their counterparts[13]. For example, individuals with low religious commitment and less optimistic behaviour perceived a high level of depression and death anxiety as well as a high risk of cancer severity[14]. Moreover, studies said religiosity significantly reduced the fear of death anxiety[15,16]. In a cross-sectional study, depression and anxiety level was found to be higher in cancer patients than non-cancer subjects[17].

Religious persons have positive beliefs about all aspects of life and even have the strength of their belief about illness and feel less threatened compare to the others[18]. Moreover, regular religious activities and optimistic approaches toward daily life activities decrease fear of death and depression, and enhance psychological well-being, will-power, encouragement and positive signs toward the quality of life among cancer patients[19]. Further, women with cancer were found to be highly depressed and with greater fear of death compared to males[20].

The current study was planned to investigate the role of religiosity, optimism, depression, death anxiety and differences in demographic characteristics among cancer patients.

Subjects and methods

The cross-sectional study was conducted at the Department of Applied Psychology, Government College University, Faisalabad (GCUF), Pakistan, from July 2018 to July 2019. After approval from the institutional ethics review board, data was collected from Allied Hospital, Faisalabad, Gulab Davi Hospital, Lahore, and Jinnah Hospital, Lahore. The sample size was calculated using G-Power software with an effect size of 0.5, alpha (α) error 0.05 at 95% confidence interval.[21]. The sample was raised using purposive sampling technique from among cancer patients of either gender aged 18-80 years who were undergoing sessions of different types of treatment in different wards.

A group of non-cancer subjects from the general population was also enrolled. After taking informed consent, detailed demographic information was gathered from all the subjects.

Urdu version of the Short Muslim Practice and Brief Scale (SMPBS) was used to assess the variable of religiosity[22]. The scale comprises 9 items with two religious practice and religious belief subscales. Higher scores indicate a higher level of religiosity. Scale reliability was ($r=.78$, $p<0.001$) and cross-language validation was estimated ($r=0.64$, $p<0.001$). Further, the Urdu version of Life Orientation Test-Revised (LOT-R) was used to measure the level of optimism[23]. The scale comprises 10 items, and higher scores indicate greater optimism. The correlation between the revised scale and the original scale was 0.95. The Siddiqui-Shah Depression Scale (SSDS) was used to screen depression[24]. It is a 36-item scale scored on a 4-point Likert scale. The alpha coefficients for the clinical and non-clinical samples were 0.91 and 0.89 respectively. Death Anxiety Scale (DAS) was used to find the level of death anxiety[25]. Score range 9-15 indicated high level of death anxiety and 4-8 indicated medium level.

For data analysis, one-way analysis of variance (ANOVA) and t test were used.

Results

Of the 400 subjects, 200(50%) each were cases and controls. Among the cases, 100(50%) each were males and females. Overall, 118(29.5%) participants were single, 188(47%) were married, 58(14.5%) were divorced, 36(9%) were widows. Also, 150(37.5%) subjects were from the rural areas and 250(62.5%) were living in urban areas. Cancer stage I was diagnosed in 24(12%) subjects, 54(27%) stage II, 66(33%) stage III, and 56(28%) stage IV. In terms of cancer type, 56(28%) had carcinoma, 26(13%) sarcoma, 42(21%) leukaemia, 50(25%) lymphoma, and 26(13%) myeloma. Parents were taking care of the patients in 62(31%) cases, siblings 42(21%), and spouse and family 96(48%). There was significant difference between cancer patients and non-cancer subjects on the variables of religiosity, optimism, depression and death anxiety (Table 1). In terms of rural-urban divide, significant difference was found on the variables of religiosity, depression and death anxiety and non-significant difference on the variable of optimism (Table 2). IN gender terms, the difference was significant on the variable of religiosity, depression and death anxiety, while it was not insignificant on the variable of optimism (Table 3). Finally, significant differences were found related to the type of cancer on the variable of death anxiety (Table 4).

Discussion

The findings showed there was a significant difference between cancer patients and non-cancer subjects on the variables of religiosity, optimism, depression and death anxiety which is in line with literature[26]. It was observed that non-cancer subjects did not have any kind of illness, and, therefore, they were found to be less depressive, and had less death-related anxiety. Religious practices enhance the level of patience and tolerance among individuals and make the persons more optimistic[10]. Similarly, when patients are diagnosed with cancer, they become depressed and feel anxious, but individuals with religious

inclinations feel less depressed and less fearful of death[27]. There was a significant difference between cancer and non-cancer subjects on depression. Further, in cancer patients, the level of death anxiety was high because they were more fearful about the chance of recovery than non-cancer subjects[28].

Rural and urban areas are different in terms of services and facilities. Patients of rural areas had mean scores higher compared to those from urban areas on the religiosity scale. This indicates that people of rural areas are more involved in religious activities, which makes them more patient and tolerant. Their high involvement in religious activates makes them less fearful about mental health problems and fear of death[17]. Therefore, they seemed less depressed than urban patients, while rural patients seemed more anxious on death anxiety scale which indicates lack of awareness, education and resources that increase the level of distress because they do not know what is happing with them and what may happen at any time. They even do not know about the illness[29]. On the optimism scale, there was no difference between rural and urban patients.

Male and female cancer patients were not significantly different on the variable of optimism. Male and female patients were found to be significantly different on depression[20]. Female cancer patients were higher on the level of depression compared to men. However, male and female patients were significantly different on death anxiety. Female cancer patients were higher on death anxiety than male cancer patients[30], and there was a significant difference in male and female patients on depression[31].

The current study may prove to be a valuable addition to the existing body of knowledge on the psychological dimensions of cancer in Pakistan.

Conclusion

There was found to be a role of religious inclination which led to optimistic behaviour, which, in turn, controlled negative emotions, and decreased the fear of death and the level of depression.

Disclaimer: The text is based on an M.Phil thesis.

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Table 1: Comparison of cancer and non-cancer patients on the variables of religiosity, optimism, depression and death anxiety using independent sample t-test (n=400).

Variables	Cancer Patients N=200		Non-Cancer Patients N=200				95% CL	
	M	SD	M	SD	t	p	LL	UL
Religiosity	27.00	3.96	32.79	3.18	-16.10	<.000	-6.49	-5.08
Optimism	11.24	2.22	15.06	2.63	-15.67	<.000	-4.30	-3.34
Depression	60.04	15.72	26.32	9.51	25.94	<.000	31.16	36.2
Death Anxiety	9.81	1.98	6.53	1.81	17.24	<.000	2.90	3.65

CI: Confidence interval; LL: Lower limit, UL: Upper limit
*p< .05, **p< .01, ***p<.001

Table 2: Comparison of rural and urban cancer patients on the variables of religiosity, optimism, depression and death anxiety using independent sample t-test (n=200).

Variables	Rural N=94		Urban N=106				95% CL	
	M	SD	M	SD	t	p	LL	UL
Religiosity	27.71	4.58	26.37	3.21	2.38	<.018	.22	2.42
Optimism	11.36	2.45	11.13	2.00	.73	>.468	-.38	.85
Depression	56.19	16.49	63.45	14.23	-3.34	<.001	-11.55	-2.97
Death Anxiety	10.14	1.98	09.50	1.94	2.30	<.022	.09	1.18

CL: Confidence interval; LL: Lower limit, UL: Upper limit
*p< .05, **p< .01, ***p<.001

Table 3: Comparison of males and females cancer patients on the variables of religiosity, optimism, depression and death anxiety using independent sample t-test (n=200).

Variables	Males N=100		Females N=100				95% CL	
	M	SD	M	SD	t	p	LL	UL
Religiosity	26.10	2.70	27.90	4.76	-3.28	<.001	-2.87	-.72
Optimism	11.18	1.75	11.30	2.63	-.38	>.704	-.74	.50
Depression	57.36	13.78	62.72	17.11	-2.44	<.016	-9.69	-1.02
Death Anxiety	9.24	1.64	10.38	2.14	-4.24	<.000	-1.67	-.60

M: Mean, SD: Standard deviation, CI: Confidence interval, LL: Lower limit, UL: Upper limit, *p< .05, **p< .01, ***p<.001

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293 **Table 4: Multiple comparisons of type of cancer on the variable of death**
294 **anxiety among cancer patients (n=200).**

Variable	(I) Cancer Types	(J) Cancer Types	Mean Difference (I-J)	Standard Error	Sig.
	Carcinoma	Sarcoma	2.37088*	.42381	.000
		Lymphoma	1.03857*	.34747	.026
		Melanoma	2.06319*	.42381	.000
Death Anxiety	Sarcoma	Carcinoma	-2.37088*	.42381	.000
		Leukaemia	-2.21612*	.44564	.000
		Lymphoma	-1.33231*	.43180	.020
	Leukaemia	Sarcoma	2.21612*	.44564	.000
		Melanoma	1.90842*	.44564	.000
	Lymphoma	Carcinoma	-1.03857*	.34747	.026
		Sarcoma	1.33231*	.43180	.020
	Melanoma	Carcinoma	-2.06319*	.42381	.000
		Leukaemia	-1.90842*	.44564	.000
F (4,195) =12.61, p < 0.001)					

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