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Quality of life for caregivers of patients with mental illness in Qassim region: Cross-sectional study

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ABSTRACT

Background: Mental illness is a term use to prescribe a variety of diseases that characterized by abnormal thoughts or behavior or mood of the affected individual. This survey based study aimed to determine the influence of mental illness and poor psychiatric monitoring programs on mind of medical students attending Umm Al-Qura University. *Methods:* This is a survey based study conducted in June 2022 that utilized an online questionnaire designed in Google Form. The study included all medical students in their second to sixth year at Umm-Al-Qura University. *Results:* There were 410 total students who participated in this study. About three quarters of the students were males (73.7%) and most of them were Saudis (97.3%). More than half of students were aged <22 years (59.6%). In general, 11.7% of students had been diagnosed with a mental health condition and 8.3% of students had received medications for mental health conditions. Additionally, 11.2% of students were following-up with a mental health specialist (psychiatrist or psychologist) and 8.3% of students were receiving medications for mental health conditions at the time. *Conclusion:* Our data shows that having a mental illness can have a negative effect on students' academic performance. Importantly, competent psychiatric monitoring programs can minimize the influence of mental illness.

Keywords: Influence, mental illness, psychiatric monitoring programs, students' performance

1. INTRODUCTION

Many studies have assessed the QoL (Quality of life) of Mental illness patients (Galuppi et al., 2010; Guedes de Pinho et al., 2018; Shukla et al., 2022). Yet not many studies were done to determine the burden on their caregivers (Ouali, 2017; Caqueo-Urízar & Gutiérrez-Maldonado, 2006). According to the

American Association of Psychiatry, mental illnesses involve changes in emotion, thinking/behavior (or all of these together). Mental illnesses are linked to distress and issues-related to social work and family activities (Gholami et al., 2016). As stated in the ICD-10, there are 10 types or classes of mental disorders (Whitfield, 1993). Mental disorders are common causes of this burden (Girmenia, 2019).

Many patients with severe mental illness require caregivers. Caregivers are usually family members who look after patients with mental illnesses to help them take care of themselves, check their medications and provide support. Therefore, this statement raised the question of how it affects caregivers (Forcheron et al., 2022; Rus-Calafell et al., 2015).

This study evaluated the burden of mental illnesses on caregivers. However, only few studies have been conducted worldwide. However, to date, no studies have been conducted in Saudi Arabia's Qassim Region. Therefore, the purpose of this study was to evaluate the burden that mental illness patients' caregivers bear. This study was conducted in the Qassim region using the Arabic version of the Zarit Burden Interview (ZBI-A) to evaluate the impact of mental illness on caregivers (Bachner, 2013).

Background/Literature review

The Cambridge dictionary defines burden as something that is challenging, unpleasant, or that causes concern ("Cambridge essential English dictionary," 2011). The global increase in the number of mental illnesses diagnosed every day has made it's among the most significant causes of the burden of disease on members caring for people suffering from mental illnesses. Both the patients and their family caregivers were affected by the burden of mental illness. Poor support, coping techniques, and the distressing nature of the disease are the reasons for the burden (Heller et al., 1997; Sharif et al., 2020). Different tools assess burden globally, and many studies have evaluated this burden on caregivers.

In Brazil, in 2017, a cross-sectional study included 281 caregivers of patients with different mental disorders using 22-items Zarit Burden Interview (ZBI) to determine elements connected with caregivers' burden. Caregivers were mainly females with decreased education and income level with a ZBI score of being on average 27.66. Self-reported depression, age > 60 years, lack of support for caregivers, recent patient crisis and number of contact days and presence of another member in the family requiring support were independent factors linked to the burden of caregiving on the family. Family psychoeducation can assist in reducing the burden on caregivers (Souza et al., 2017). Caring for individuals with schizophrenia is burdensome (hasio).

A study was conducted in 2015 in Iran with 225 caregivers via face-to-face interviews to estimate the prevalence of the burden, which was assessed by the ZBI, which showed that females have a higher degree of burden than males. A burden of no to low was seen in 7.6%, mild to moderate in 23.5%, average to severe in 41.8%, and unbearable in 27.1% of caregivers. This was significantly associated with age, sex, level of education, connection with the patient, and length of time of caregiving and illness (Ouali, 2017). In 2014, 243 family caregivers in Taiwan were questioned on the attributes of caregiving burden. It has been revealed that being female, having increased family demands, and not being a sibling, close relative, or friend have increased levels of burden (Hsiao & Tsai, 2014).

The family burden of 41 caregivers was examined in Chili, a medium-income country in South America, in 2006 using the Spanish version according to the Zarit Scale of Caregiver Burden. The results revealed a very high burden among all participants, specifically members who take care of young patients (Caqueo-Urízar & Gutiérrez-Maldonado, 2006). For autism spectrum disorder (ASD), as an example of mental illness, a cross-sectional study was carried out on 40 caregivers of patients with ASD to measure the burden with the help of the Burden Assessment Schedule (BAS) in India in 2015. The average burden of 71.73 ± 8.62 indicates a slightly high degree of burden. Families with low-income and children between 6 and 12 years of age have a higher burden.

Increased severity of autism is positively associated with a higher burden on family caregivers (Patel et al., 2022). Another cross-sectional study of 61 caregivers of youngsters with ASD in Nepal in 2018 assessed the burden using the Zarit Burden Interview-22. Moderate to severe burden was obvious in the caregivers, with a mean of 41.49±12.25 (Pandey & Sharma, 2018). Different anxiety disorders exist, and not all of them have been well studied regarding the difficulty for family caregivers (Kalra *et al.*, 2008). OCD, or obsessive-compulsive disorder, is an example of anxiety disorder. The challenge for OCD patients' relatives who provide care for them was examined via a cross-sectional study on a sample of 50 caregivers. The assessment was performed utilizing the Family Burden Interview Schedule, which demonstrated that 56% of the caretakers had a high burden. Severe OCD was associated with increased load and poor QOL in the caregivers. It is necessary to raise the standard of care for patients and their caregivers is necessary (Grover & Dutt, 2011).

At the local level in Saudi Arabia, mental illnesses are considered a public health problem for those suffering from mental ailments and their caregivers. However, there haven't been many studies on this topic. However, one study in which the IEQ, or Involvement Evaluation Questionnaire, was employed to evaluate the burden of caregiving on 377 participants in Jeddah in 2017 showed an average IEQ score of 38.4, and the most affected scale of IEQ was "Worrying," with an average score of 1.8. "Urging" came after it with an average score of 1.6. "Tension" and "Supervision" and supervision had an average score of 1.2 both. The burden of caregiving on these caregivers was found to increase as the relationship and time spent with patients increased (Alzahrani et al., 2017). From this literature, we can see the burden of caregiving and its consequences on caregivers and the importance and need for many strategies, such as educational programs, psychoeducation, family support and group therapy, to help them cope with such patients (Souza et al., 2017).

Research objectives

1. Assessing the Burden on mental health patients' caregivers
2. Comparing Burden on caregivers of schizophrenic patients to bipolar patients

Rationale

Many studies have assessed the standard of living of those with mental diseases. Yet not many studies were done to assess the burden on their caregivers. This study evaluated the burden of mental illnesses on caregivers. Few studies have been conducted globally on Qassim. Our aim was to assess the burden on the people who look after patients with mental illnesses. This study was conducted in the Qassim region using the Arabic Zarit Burden Interview (ZBI-A) tool to evaluate the burden on those who look after patients with mental problems.

2. MATERIALS AND METHODS

Study design

Cross-sectional study

Study setting

Eradah mental health hospital in Qassim region

Study duration

April 4th 2021 – April 4th 2022

Sample size

We distributed a questionnaire to all caregivers of patient follow-ups in the clinic of the Eradah Mental Health Hospital in Qassim, who met the inclusion criteria of our project from April to June 2022.

Sampling technique (with inclusion and exclusion criteria)

Inclusion criteria

Male and female adults aged > 18 years caring for a patient with an established diagnosis of a mental illness disorder

Exclusion criteria

Caregivers with mental illnesses or unstable psychological morbidity
Caregivers with diagnosed chronic diseases
Caregivers below the age of 18

Data collection methods

For convenience sampling, all patients who met the inclusion criteria at Eradah Mental Health Hospital were contacted and asked to complete the self-reported questionnaire.

Plan for managing and analyzing data

Caregivers’ data were collected from an electronic self-reported questionnaire sent to the documented phone number in their medical files and asked to complete the questionnaire while in the clinic. The questionnaire did not require sensitive information, and all data were saved securely. Data were gathered on an electronic sheet and analyzed using SPSS software. All data will be used only for this study and will be deleted after publishing the paper to ensure participants’ privacy. Caregivers who did not meet the inclusion criteria were excluded from this study.

3. RESULTS

Demographic profile of the caregivers

A total of 110 participants from Eradah Mental Health Hospital in the Qassim region were interviewed using an interview-administered questionnaire. Table 1 shows the demographic profiles of the caregivers. It was found that most caregivers in this study were males, 73(66.4%) and females, 37(33.6%), with ages ranging from 20 to 80 years. The caregivers' average age was higher, with 43.6% between the ages of 35 and 50. Out of 110 caregivers, almost 77(68.2%) were married, with a maximum education of a bachelor's degree of 45(40.9%). Regarding employment status, the majorities were paid by the government (42, 38.2%) and unemployed (41, 37.3%). Most of the participants were located in the Qassim region, 97 (88.2%), with about (77) 70% of the caregivers owning their own homes and 33 (30%) renting homes. The average number of patients looked after by the caregivers was one, with a frequency of 88(82.2%) serving for approximately 10-20 years (40.9%). Among patients with mental illness, 30 (28.6%) had bipolar disease and 41 (39.0%) had schizophrenia (Table 1).

Table 1 Demo graphic characteristics of caregivers

Characteristics		Frequency (110)	Percentage (%)
Sex	Male	73	66.4%
	Female	37	33.6%
Age	20-35	30	27.3%
	35-50	48	43.6%
	40-65	31	28.2%
	65-80	1	0.9%
Marital Status	Single	25	22.7%
	Married	75	68.2%
	Divorced	6	5.5%
	Widowed	4	3.6%
Educational Level	Illiterate	8	7.3%
	Elementary	8	7.3%
	Middle school	4	3.6%
	High school	37	33.6%
	Bachelor	45	40.9%
	Postgraduate	8	7.3%
Occupation	Governmental	42	38.2%
	Private	10	9.1%
	Student	1	0.9%
	Retired	16	14.5%
	Job No	41	37.3%
Living Location	Qassim	97	88.2%
	Riyadh	8	7.3%
	Hail	5	4.5%
Housing Type	Owned	77	70%
	Rent	33	30%
No. Of Patients	0	6	5.6%
	1	88	82.2%
	2	13	11.8%
	3	3	2.72
Caregiving	0-10	36	32.7%

Years	10-20	45	40.9%
	20-30	19	17.2%
	30-40	6	5.4%
	40-50	4	3.63%
Patients' Diagnosis	Schizophrenia	41	39%
	Bipolar disorder	30	28.6%
	Schizoaffective bipolar disorder	14	12.7%
	Other, mention	25	22.7%

Care giving burdens of caregivers

The stress levels of the caregivers while providing care are shown in Table 2. There were five possible responses to inquiries about their relationships with the family members they were looking after. The responses that most closely related feelings were indicated by 0 (not at all), 1(from time to time), 3 (sometimes), 4 (at frequent times) and 5 (almost always). The pressure felt by the caregivers who received the highest ratings was related to 'feel that you could have taken better care of your relative' and that 'you need to do more for your relative' with mean and standard deviation of (M=1.890, S. D. =1.5476) and (M=1.862, S. D. =1.5897), respectively. Next on the list of care giving burdens of caregivers were 'feel the conflict and pressure between worrying about your relative and other duties such as work or family (M=1.642, S.D=1.4176), 'because how much time you invest with your relative, you do not give yourself adequate time (M=1.294, S.D=1.2118), 'unsure about the correct treatment for your relative' (M=1.101, S.D= 1.3119). The strains with the lowest ratings dealt with the idea that "you've given up on living since your relative got sick (M=0.752, S.D=1.1068) and 'feel angry near your relative' (M=0.789, S. D. =1.1712) (Table 2).

Comparing Burden on caregivers of schizophrenic patients to bipolar patients

Caregivers are a fundamental aspect of human nature and key components of great relations. Over the past five decades, most research in this area has focused on households of schizophrenic patients. It has been found that illnesses significantly burden the families. Subsequent research for those who look after people with depression also revealed that the relatives of patients with depressive illness were also considerably distressed. It was concluded in this study that among the patients, 39.0% suffered from schizophrenia, which was comparable to that of bipolar disorders, which was 28.6% (Table 1). The duration of illness was significantly longer in patients with schizophrenia than in those with bipolar disorder. The caregivers did not experience any mental illness. Only 21.8% of caregivers had mental disorders, including schizophrenia, schizoaffective disorder, bipolar disorder, depression, anxiety, addiction, hallucinations, insomnia, mood swings, Isolation and Autism. Among them, 1.3% (13) of caregivers had schizophrenia and 0.6% (6) had bipolar disease (Table 2). This means that the schizophrenia group had a significantly higher total burden score than caregivers with bipolar disorder. The people who look after schizophrenic patients face a greater burden than those of bipolar illness sufferers.

Table 2 Care giving burdens of caregivers

	N	Minimum	Maimum	Mean	Std. Deviation
Do you suffer from chronic diseases?	110	1.0	2.0	1.691	.4642
Do you suffer from mental disorders?	110	1.0	2.0	1.782	.4149
The number of patients you take care of?	110	.0	3.0	1.084	.4782
What is the diagnosis for the patient you are caring for?	110	1.0	4.0	2.152	1.1667
How long did you take care of the patient?	110	.0	45.0	15.733	9.6746
Do you feel that is the result of your time spent with your relative, you don't have adequate personal time?	110	.0	4.0	1.294	1.2118

Do you feel the conflict and pressure between worrying about your relative and other duties such as your work or family?	110	.0	4.0	1.642	1.4176
Do you feel angry near your relative?	110	.0	4.0	.789	1.1712
Do you think that your relative affects your relationships with other family members in a negative way?	110	.0	4.0	1.046	1.3634
Do you feel nervous around your relative?	110	.0	4.0	1.037	1.2467
Do you think that your health has been affected after your participation in the care of your relative?	110	.0	4.0	1.092	1.3371
Do you believe that you do not have enough privacy because of your relative?	110	.0	4.0	.798	1.1368
Do you think that your societal life has been damaged because of your relative?	110	.0	4.0	.862	1.2358
Do you feel like your life has gotten out of hand since your relative became ill?	110	.0	4.0	.752	1.1068
Do you feel unsure about the correct treatment for your relative?	110	.0	4.0	1.101	1.3119
Do you think that you need to do more for your relative?	110	.0	4.0	1.862	1.5897
Do you think that you could have taken better care of your relative?	110	.0	4.0	1.890	1.5476

Correlation of WHOQOL-BREF average results across four domains

The WHO Quality of Life Scale (BRIEF) was utilized to evaluate the caregivers' QoL. The average QOL score for the study population was 13.54, with a physical domain score of 15.51, followed by the social, environmental and physical domains at 12.87, 12.64 and 12.65, respectively. Table 2 shows the distribution of caregiver sex, age and total years of care giving, patient count, patient diagnosis, caregiver education and working status, along with the mean QOL Scores for the four domains.

The mean WHOQOL ratings for caregivers' age, level of education, employment situation and occupation were statistically significant in the physical domain. The mean WHOQOL scores for caregiver age, educational level, marital status, daily care giving hours, presence of chronic illness and patient diagnosis were statistically significant in the psychological domain. The mean WHOQOL caregiver age and educational status ratings were statistically significant for the social category. The mean WHOQOL scores for caregivers' age, education level and marital status were statistically significant in the environmental domain (Table 3).

Table 3 Correlation of four domains' mean WHOQOL-BREF scores based on study characteristics in caretakers for individuals with mental illness at an Eradah mental health institution in the Qassim district.

Domains					
	Mean ±S.D				
Characteristics	Physical health	Psychological health	Social wellbeing	Ecological welfare	Total
Total	15.51±2.6	12.52±2.9	12.87±3.8	12.64±2.8	13.54±2.5
Sex					
Male	15.40±2.7	12.95±3.5	11.98±3.9	12.64±2.2	13.74±2.5
Female	15.92±2.9	13.25±2.9	13.82±3.9	13.51±29	13.78±2.7
P	0.789	0.584	0.730	0.089	0.876

Age					
20-35	15.4±2.9	13.5±3.1	13.6±3.6	13.5±3.5	13.8±2.8
35-50	14.7±3.4	11.07±2.9	14.9±4.3	11.6±2.9	12.9±2.4
40-65	15.8±2.9	13.9±3.1	11.9±4.1	12.7±2.8	13.6±2.7
65-80	13.8±2.0	13.7±2.8	8.9±3.1	12.7±1.7	13.7±2.8
P	0.021	<0.001	0.0923	0.001	0.071
Marital status					
Single	14.75±2.9	12.45±3,5	11.59±4.9	12.54±2.6	14.50±2.7
Married	15.45±2.7	12.53±2.9	13.89±3.5	12.98±2.9	13.75±2.7
Divorced	15.34±2.8	14.93±2.6	12.34±4.1	12.93±3.1	11.64± 1.6
Widowed	12.35±3.1	13.56±3.1	13.56±3.7	13.56±3.3	12.68±2.9
P	0.231	0.032	0.876	0.980	0.005
Educational level					
Illiterate	14.75±2.8	12.67±2.9	10.92±3.8	11.78±2.5	12.75±2.9
Elementary	12.97±2.9	11.98±2.8	11.82±2.8	11.93±3.1	12.87±2.1
Middle school	15.89±2.8	11.78±3.1	13.49±4.2	12.78±2.4	11.76±1.9
High school	15.67±3.1	14.67±2.9	14.68±3.1	12.83±2.8	14.68±2.5
Bachelor	12.98±2.9	11.67±2.6	11.78±3.1	11.82±2.4	12.54±2.9
Postgraduate	11.76±3.1	12.41±2.9	12.68±3.1	11.54±2.8	12.01±2.7
P	<0.001	0.041	0.009	0.002	0.089
Occupation					
Governmental	13.49±4.2	11.78±3.1	12.34±4.1	11.9±4.1	12.93±3.1
Private	11.82±2.4	11.76±1.9	12.7±2.8	13.9±3.1	11.07±2.9
Student	14.75±2.8	14.67±2.9	13.56±3.7	12.7±2.8	14.93±4.3
Retired	14.67±2.9	14.50±2.7	13.61±3.3	12.34±4.1	12.64±2.2
No job	11.78±3.1	11.98±2.9	12.78±2.4	12.67±2.9	12.83±2.8
P	0.678	0.006	0.776	0.678	0.981
Living location					
Qassim	14.34±2.7	12.45±3.1	11.45±2.6	11.65±4.4	11.67±2.9
Riyadh	16.70±2.4	12.67±2.9	12.45±3.1	13.56±3.8	13.34±2..6
Hail	15.37±3.1	14.46±2.9	13.93±2.7	13.78±3.1	14.34±2.9
P	0.045	0.004	0.931	0.209	0.981
Housing type					
Owned house	11.98±2.9	12.7±2.8	11.78±3.1	11.98±2.8	11.76±1.9
Rent	14.50±2.7	13.56±3.7	13.49±4.2	13.56±3.7	13.9±3.1
P	0.59	0.005	0.678	0.981	0.931
No of patients					
0	11.76±1.9	12.41±2.9	11.07±2.9	11.78±3.1	11.98±2.9
1	14.9±4.3	14.68±2.5	13.56±3.8	12.7±2.8	11.76±1.9

2	12.98±2.9	11.45±2.6	11.98±2.9	13.78±3.1	12.67±2.9
3	11.67±2.6	11.82±2.4	12.45±3.1	11.65±4.4	13.34±2..6
P	0.004	0.875	0.671	0.084	0.891
Caregiving years					
0-10	12.45±3.5	11.82±2.8	11.93±3.1	12.87±2.1	11.78±2.5
10-20	12.53±2.9	13.49±4.2	12.78±2.4	11.76±1.9	12.75±2.9
20-30	14.93±2.6	14.68±3.1	12.83±2.8	14.68±2.5	13.49±4.2
30-40	13.56±3.1	11.78±3.1	11.82±2.4	12.54±2.9	13.56±3.7
40-50	13.56±3.7	12.68±3.1	11.54±2.8	12.01±2.7	13.7±2.8
P	0.03	0.009	0.002	0.089	0.785
Patient’s diagnosis					
Schizophrenia	13.49±4.2	11.76±1.9	12.34±4.1	11.9±4.1	12.93±3.1
Bipolar	11.82±2.4	14.67±2.9	12.7±2.8	13.9±3.1	11.07±2.9
Schizoaffective	14.75±2.8	14.50±2.7	13.16±3.6	12.7±2.8	14.9±4.3
Other, mention	14.67±2.9	14.23±2.9	13.56±3.7	12.34±4.1	12.64±2.2
P	0.678	0.006	0.776	0.678	0.981

To adjust for confounders, we applied a many-linear regression analysis to identify the different factors affecting QOL (Table 4). The major factors influencing the association with various domains were the patient's diagnosis, caregiver’s age, total number of care giving years, marital status, education and employment status. As explained by these variables, the variability (R^2) in the multiple linear regression models was 45%, 39%, 43% and 26% in the physical, mental, societal and ecological domains, respectively (Table 4).

Table 4 Different linear regression study of significant factors relating to quality of life

QOL Domains	Variables	R^2	Unstandardized coefficient		*t*	*p*
			B	SE		
Domain 1	Constant	0.489	71.34			
	Patient diagnosis		-11.467	4.71	3.506	0.005
	Care giving years		-10.231	4.921	-2.261	0.31
	Occupation		-14.988	5.564	-3.431	0.003
Domain 2	Constant	0.424	38.14			
	Care giving years		-6.789	2.875	-2.645	0.013
	Patient diagnosis		-9.931	6.479	3.178	0.078
	Caregiver age		-13.731	5.671	-1.142	0.09
Domain 3	Constant	0.478	45.12			
	Caregiver age (40-60		-19.34	5.489	2.801	0.012
	Marital status(single)		-23.912	19.541	1.029	0.03
	Chronic illness existence		-22.98	4.761	-2.911	0.078
Domain 4	Constant	0.496	60.10			
	Caregiver age (40-		-9.11	6.329	-2.191	0.011

	Marital status(married)		16.653	5.964	3.560	0.089

4. DISCUSSION

Using QOL as a measurement, one can identify populations with physical or mental health issues and use that information to inform interventions and subsequent assessments (Kalra et al., 2008). This study's objective was to compare the effects of several sets of variables on how well-being (or quality of life) is of family caregivers of individuals with mental illnesses. With a total variance of 12%, the findings showed that caregivers' characteristics affected their quality of life. Caregivers' age, education and chronic illnesses have a substantial impact on their living conditions. These results veer off from the expected values.

They confirm Sales' claim that "contextual elements, such as living circumstances and demographic characteristics, may considerably alter the QoL of caregivers with a relative with a chronic disease" (Ohaeri, 2001). On the other hand, although caregiver responsibilities can impact a caregiver's quality of life, their impact may lessen over time as some caregivers grow accustomed to their positions and develop new management techniques for dealing with mentally ill family members. As a result, people may feel or think less burdened about their caregiving responsibilities. Caregiver characteristics, on the other hand, are traits that are less changeable and more stable. Some of these traits, such as age, cannot be changed, whereas others may worsen over time (e.g., chronic illness). The body of research demonstrates that caregiver traits have both direct and indirect effects on caregivers (Forcheron et al., 2022).

In the case of direct effects, caregiver traits have an impact on caregivers' quality of life regardless of their caregiving duties. For instance, caregivers with greater education typically have better occupations, higher salaries and more resources available to improve QoL. However, these traits may be combined with other elements, such as the stress of providing care, to indirectly affect caregivers' quality of life. For instance, caregivers with greater education may be better equipped to utilize their assets, both material and social to help them manage their caring responsibilities, leading to improved QoL (Kolay Çepni, 2020). For instance, it makes their jobs easier if they can understand and read the fundamental instructions needed to provide care for those who severe mental illness. Further statistical analysis of our data confirmed this finding, demonstrating the moderating influence of the interplay between caregivers' education level and caring responsibilities on their existence quality, with the highest rating (M=1.890, S.D=1.5476). Future studies should provide additional empirical data to explain the nature of this link, given comprehensive data on the relationship between the traits and the standard of living of relatives who are caring for mental illness.

People in good health can potentially have a greater quality of life because they are typically content with their health status. Because they worry about regarding their own and their patients' wellbeing, people with low health status are typically unhappy with their health. The health and happiness of caregivers can be significantly impacted by professional health care professionals (Grover & Dutt, 2011). Therefore, healthcare professionals should be careful in spotting health care issues in this population early so that they can handle them effectively. This can be achieved when caregivers accompany patients.

Hospital or when in an inpatient ward, Healthcare programs can be established to increase healthcare professionals' knowledge of caregivers' crucial role in managing patients with mental illness so that they aren't disregarded during regular clinic or hospital visits (Laranjeira & Querido, 2021). According to this report, families with bipolar disorder and schizophrenia both have similar symptoms and substantial burdens. According to previous studies, the degree of stress experienced by relatives with schizophrenia is far greater than that experienced by relatives with bipolar disorder. However, the overall effect was modest. (Ohaeri, 2001) reported that the burden is greater for the family members of individuals who exhibit psychotic symptoms. Given that both groups were equivalent, this difference could not be attributed to their socio demographic characteristics. Although the illness and treatment bipolar disorder victims lasted longer, the impact on schizophrenia patients' caregivers was greater. One of the potential causes for this discrepancy could be related to the fact that most bipolar disorder patients are in remission.

In contrast, persistent symptoms have been observed in patients with schizophrenia. Additionally, it might result from a lower level of functionality in persons with schizophrenia compared to bipolar illness; the probability of the sickness lasting longer increases the objective burden. Families with bipolar disorder also experience significant burden. Except for external assistance, caregivers' daily activities and other relationships, the manner in which family of individuals with schizophrenia and bipolar illness experience burden was nearly identical in most dimensions.

Caregivers' age was found to have an inverse relationship with QOL, which could explain their age-related morbidities and financial dependency. Older caregivers must offer emotional support, help with everyday tasks and push for various services at the cost of their health and other co-morbidities (Girmenia, 2019). These results are in line with several studies that discovered that older caregivers had lower QOL due to a larger care burden. Heterogeneity in the majority of domains (psychological, social, and environmental) was explained by the older caregiver age group (35-50 years) (Table 4). Parents were likely to have lower QOL than their spouses or other family members. Parents of patients with mental health issues face greater hardships than their spouses do (Kalra et al., 2008). Analysis of the available evidence, Social support, particularly emotional support, is an important protective factor against mental-health problems. Close relationships with parents or spouses. This support system is negatively impacted, resulting in a low QOL (Palli et al., 2015).

In our study, caregivers reported decreased QOL scores, with psychological and physical health domains being the most and least adversely affected, respectively. The mean WHOQOL ratings varied significantly, depending on the patient's diagnosis and psychosocial condition. Aged caregivers considerably affected most of the WHOQOL domains. Other characteristics that affected QOL included caregiver income, patient diagnosis, number of patients, and years of caregiving. Our study's higher QOL index for the physical domain was comparable to that of Iran (Gholami et al., 2016). According to the physical domain, the study population had good daily living skills, sufficient energy and mobility, minimal pain and discomfort, sufficient sleep and rest and good job capacity. A low psychological domain score indicated a pessimistic outlook on life and low self-esteem.

The societal stigma associated with mental health conditions perhaps played a role in this finding. Our results are in agreement with those of a previous study conducted in Taiwan (Hsiao, 2010). Nearly 43% of the variability in the psychological domain can be explained by older caregivers (35–50 years old) and patients with psychotic mental illness compared to patients with other forms of mental diseases (Table 4). It is interesting to highlight that family members, individuals with mental diseases experienced poor QOL compared to the general population, according to previous studies (Lázaro et al., 2019). Depression and schizophrenia are the two most prevalent mental illnesses among caregivers. Caregivers need social help or support in caring for their relatives or pals who have been diagnosed with serious mental illness to promote psychological health and avoid the development of mental disorders (Stanley, 2008). This support ensures that caregivers have the time and resources necessary to meet their needs and desires. Through support groups, caregivers can better manage their duties by sharing stressors and enhancing psychological health. Typically, support groups provide practical and emotional assistance. As a result of improved psychological health, caregivers have a higher quality of life and can perform their duties better for those suffering from mental ailments (Tennakoon et al., 2000).

Environmental domain scores and caregivers' QoL were positively correlated. Financial resources, independence, physical safety, security, health, social care, home situation, opportunities for learning new knowledge and skills, leisure activities, physical environment and transportation were components used to evaluate environmental domain. These factors may not greatly impact QoL but can be combined. According to a Chinese study, the environment significantly affects caregivers' quality of life (Zhou et al., 2016).

However, more extensive and ongoing research should be conducted to provide specific information on how the relationship is structured between these two variables. The development of our knowledge of caregivers' awareness of the many services available, as well as the sufficiency and accessibility of such services, should be a special emphasis of this research. The information gathered would make it easier to create future policies and initiatives that would encourage caregivers to fully utilize official psychiatric services.

Limitations

Because this study was cross-sectional, causal inferences could not be made. The longitudinal link between patient and caregiver characteristics and QOL may be a subject of future research. Our study was carried out at the Eradah Mental Health Hospital in the Qassim region. Therefore, the findings have restricted their extension to urban tertiary care outpatient settings in Saudi Arabia. Because there are regional variations in culture and environment, the results of this research cannot be extrapolated to the entire global population of caregivers.

5. CONCLUSION

This study aimed to define the functions of several variables related to caregivers' QOL at the Eradah Mental Health Hospital in the Qassim region. Caregivers' contentment with health, both physical and emotional as well as their environment and educational status are key determinants of QoL. Therefore, interventions for those who look after this population should focus on these factors. Younger caregivers with less education had more caring responsibilities and were less satisfied with mental health treatments, resulting in a life of inferior quality. In particular, caregiver traits seemed to have the greatest correlation with caregivers' quality of life. Future studies should use a longitudinal design to investigate the relationships between QoL and these and other factors in the caregiver characteristics, caregiving situations and environmental factor domains. The effects of these variables on the living standard of those with mental disorders should also be investigated.

Ethical considerations

We sought ethical approval from the Subcommittee of Health Research Ethics, Qassim Province, registered at National Committee of Bio & Med. Ethics (NCBE) Registration No H-04-Q-001 to conduct this research. We will ensure the protection and anonymity of participants.

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Authors’ contributions

Dr. Mansour Mathna Alharbi: I coordinated and oversaw the entire project from the start of the research proposal to its conclusion, and I took part in all phases of the study.

Fahad Hussain Almazyad: From the creation of the idea through the completion of the study, I was involved at every level.

Abdulmonem Ali Alsalhi: I have participated in the majority of research phases, from proposal writing through conclusion.

Dr. Yasser Meshaal Alharbi: I was in charge of writing the discussion and conclusion and was heavily involved throughout the study process, from developing the proposal to writing the conclusion.

Abdullah Sulaiman Alkhumayri: I was involved in questionnaire writing and data analyzing.

Fahad Abdullah Alolayan: I was in charge of collecting and analyzing the data.

Mohammed Abdullah Albesher: From the creation of the study proposal through its completion, I was involved at every level.

Ali Khalid Alshaya: I have involved in writing the manuscript and helped in the development of research questionnaire.

Faisal Fahad Almishali: I was in charge of writing the discussion and conclusion.

Ethical Approval

Registered at National Committee of Bio & Med. Ethics (NCBE) Registration No H-04-Q-001

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Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

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