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RESEARCH PAPER

Impact of Depression and Religious Coping on Epileptic Patients' Quality of Life

[1]Zubash Aslam*, [2]Dr. Shazia Habib and [3]Aneela Nazir

1. Ph.D Schloar, Department of Applied Psychology, GC University Faisalabad, Allama Iqbal Road, 38000 Faisalabad, Punjabm Pakistan.
2. Assistant Professor Department of Applied Psychology, GC University Faisalabad, Allama Iqbal Road, 38000 Faisalabad, Punjab, Pakistan.
3. Lecturer Department of Applied Psychology, National University of Modern Languages, Faisalabad campus, Punjab, Pakistan

Corresponding Author zubashaslam118@gmail.com

ABSTRACT

The main aim of the current study was to evaluate the role of depression and religious coping in quality of life among epileptic patients. Research has indicated that the common psychiatric comorbid among individuals with epilepsy is depression; and the potential effects of religious coping on epileptic patients. The sample size was 150 patients with epilepsy who were chosen from several hospitals in Faisalabad, Pakistan. Patient Health Questionnaire-9, WHOQOL-BREF Brief and Religious Coping Scale were used to evaluate patients' quality of life and religious beliefs respectively**.** The study's findings suggest that depression is a prevalent condition among epileptic patients and is negatively associated with the quality of life. It is also found depression is negatively associated with positive religious coping scores and positively associated with negative religious coping. It is recommended that individuals with epilepsy receive proper treatment and undergo regular screening for depression.

Keywords: Depression Epilepsy, WHOQOL-BREF

Introduction

One of the most prevalent chronic neurological disorders is epilepsy, which is described by repeated seizures, which are brief episodes of involuntarily shaking without conscious thought. While receiving treatment with antiepileptic medicines (AEDs), an epileptic patient may still encounter any kind of seizure (Tigistu et al., 2018; Meyer et al., 2010). It is noteworthy that almost eighty percent of epileptic patients reside in underdeveloped countries. In these countries when epilepsy treatment is available, it is typically provided by non-physician healthcare workers using first-generation antiepileptic drugs (AEDs). These workers lack access to electroencephalographic neurological imaging, serum-drug level monitoring, or professionals' recommendation, and their care is still very basic (Kvalsund, & Birbeck, 2012). In Pakistan, epilepsy is a widespread medical condition, with a higher prevalence in rural areas. According to estimates, Pakistan has a 9.99 per 1000 population prevalence of epilepsy. Most epilepsy sufferers receive insufficient or improper care (Khatri et al., 2003).

It is a sad fact that epilepsy is often fatal in low-income nations, possibly even with medication available (Birbeck, & Hesdorffer, 2011). A global focus on the "treatment gap" has been brought about by World Health Organization medical recommendations for epilepsy in countries that are underdeveloped. Reducing the treatment gap for epilepsy is a priority, and it is crucial to comprehend the difficulties and risk factors related to the condition (Mehndiratta & Wadhai, 2015). Among risk factors associated with epilepsy, researches have concentrated on the elevated likelihood of depression among individuals with epilepsy. It is widely accepted that individuals with epilepsy experience four to five

times greater rates of depression and up to five times higher rates of suicide compared to the overall population (Yang et al., 2020; Elger et al., 2017).

Comorbid depression is more common in individuals with refractory epilepsy when the frequency approaches 54%. The overall incidence of comorbid depressive disorders fluctuates between 10.7 to 44 percent (Lacey et al., 2016; Fuller-Thomson, & Brennenstuhl, 2009; Mohammadi et al., 2006). The rate of seizure reduction and the side effects of antiepileptic drugs (AEDs) are the typical areas of concern for physicians. Nonetheless, a growing percentage of patients express dissatisfaction over the existence of disturbed mood conditions, which significantly impact their prospects for recovery (Boylan et al., 2004). However, a significant portion of depression in individuals with epilepsy goes untreated, and treating affective disorders can be difficult or ignored (Ribot et al., 2017). Furthermore, poor adherence to AEDs has been linked to mood disorders including anxiety and depression, which feeds a vicious process that, makes both disorders worse and even raises the risk of mortality (Liberati et al., 2009; Stroup et al., 2000). Numerous negative consequences, including a reduced quality of life (QoL) for those with epilepsy, can be brought on by depression (Johnson et al., 2004).

A measure of the quality of life for those with epilepsy has become necessary due to the growing awareness of the psychosocial impacts of the condition. Epileptic patients are more likely to experience a low quality of life (QOL) (Kerr, 2012). According to the WHO, an individual's quality of life is determined by how they see their role in the community and system that provides safety within which they reside, as well as by how these factors relate to their aspirations, norms, goals, and uncertainties (Jacoby et al., 2009). Epilepsy can have a devastating effect on an individual's lifestyle; many patients express having less everyday responsibilities and a lower quality of life (Cramer, 1994). One of the most important factors that appeared to be associated with low quality of life among epileptic patients was their seizure frequency (Haritomeni et al., 2006; Meldolesi et al., 2006). Epileptics frequently experience stigma associated with their illness. Compared to those without epilepsy, they are less likely to get committed and experience greater problems with intimacy (Malik et al., 2022). Patients with epilepsy tend to have a lower quality of life when they experience seizures. Patients with epilepsy who go periods without seizures were found to have a good quality of life score (Szaflarski et al., 2006; Vickrey et al., 200). Patients with epilepsy cope with a condition that can negatively affect their quality of life in a number of domains, including psychological, social, and cognitive (Birhanu et al., 2002).

In patients with epilepsy, depression was a strong predictor of quality of life and contributed to the low levels of quality of life associated with the condition (Szaflarski & Szaflarski, 2004). Numerous people believe that QoL research is crucial to enhancing the standard of care provided to epileptic patients and because of this growing emphasis, the goals of epilepsy treatment have grown to encompass patient productivity and psychological well-being in alongside seizure alleviation or elimination (Gholami et al., 2016).

Patients frequently employ strategies including consistent medication compliance, frequent medical appointments, and education about their illness to manage these difficulties. As a result, the coping mechanisms that patients employ to deal with these difficulties are crucial (Król et al., 2024). However, religious coping is another epileptic patient coping strategy that is frequently overlooked and understudied (Godlewska & Gebreselassie, 2018). One useful coping mechanism under stressful circumstances is religious coping. Religious coping is described as "The use of mental and behavior modification approaches, particularly dealing with life's challenging events" (Pargament, 2001). Religious coping is an umbrella term that can influence results in both positive and negative directions (Pargament et al., 1998). It is believed that positive religious coping contributes to better psychological adaptation while negative religious coping is deemed dysfunctional since it has worse outcomes (Pargament et al., 2004).

Literature Review

The prevalence of depression and anxiousness in epileptic patients fluctuates between 20 to 55 percent. Negative perspectives that arise due to a lack of understanding are a significant contributing element to depression, even though the feeling of relinquishing control, diminished a sense of self overprotective loved ones, and disappointment in academic and professional endeavors are all significant considerations (Verma et al., 2015). According to numerous studies, individuals exhibiting a poor perception about medical conditions are inclined to experience stigma, which in turn causes their incidences of depression and anxiety escalate (Crooks et al., 2017; Shi et al., 2017; Yeni et al., 2016;). In addition to the disease's physical elements, psychological issues significantly lower quality of life(Ridsdale et al., 2017). Research on individuals with epilepsy has shown that their quality of life is often poor (Mollaoglu et al., 2017; Mollaoglu et al., 2001).

According to earlier research, a number of elements, including physiological (Gulden, 2023; Ebrahimpour et al., 2019; Aydemir et al., 2011) and sociodemographic (Panagariya et al., 2019; Tedrus et al., 2013) aspects, are in charge of the wellbeing of epileptic patients. Along with these elements, which have been extensively covered in scientific studies, people's societal issues and faiths have grown in significance in the past few decades. In this regard, literature shows that religious coping is positively correlated with improved quality of life and psychological consequences in epileptic patients (Ozcan, S., & Ciftci, B. 2024; Bone & Dein, 2021; Ranjbar & Sadeghi, 2018)

Thus, the main aim of the current study was to evaluate the role of depression in quality of life among epileptic patients. Furthermore, the study aimed to find out the role of religious coping in relationship between depression and quality of life among patients with epilepsy in Pakistan. This study can enhance the ways epileptic patients are treated and provide valuable information for hospital managers to gauge their effectiveness. Additionally, researchers that need to carry out additional research in the field might utilize it as preliminary information.

Material and Methods

Research Design

This study employed cross-sectional correlational study design

Research Participants

The participant pool size was 150 individuals with epilepsy who were chosen from several hospitals in Faisalabad, Pakistan. From the hospitals' indoor and outdoor patient departments, patients were chosen. The patients ranged in age from 14 to 60 years. The patients who could read and write with ease were chosen. Purposive sampling was used for selecting the sample.

Study Measures

The following study measures were used;

Patient Health Questionnaire-9 (PHQ-9; Kroenke et al., 2001; Urdu Version, Ahmad et al., 2018). The PHQ-9 was developed to screen out depression in health-care settings and identify the disease in big epidemiological investigations. The PHQ-9 is made up of nine items that are aligned with the Diagnostic and Statistical Manual of Mental Disorders (DSM–IV) major depressive disorder diagnostic criteria (Bell, 1994). The frequency of each item is scored on a 4-point Likert type scale (0 = hardly at all, 3 = almost every day), and the possible total values are 0 to 27. Based on the score, one can conclude that there is no depression,

minimal depression, mild depression, moderate depression, fairly severe depression, or severe depression. In an outpatient population, it demonstrated strong stability reliability (0.84) and internal reliability of 0.86–0.89 (Kroenke et al., 2001).

World Health Organization Quality-of-Life Scale (WHOQOL-BREF; WHOQOL Group, 1998; Urdu Version, Lodhi et al., 2017). WHOQOL-BREF is a condensed version of the WHOQOL questionnaire which includes 100 items, WHOQOL-BREF consist of 26 items. It encompasses a broad spectrum of quality of life questions, categorized into four domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environmental health (8 items) and also includes 2 items assess QOL and general health questions in addition. On a Likert-type scale, each item is given a score between 1 and 5, with 1 indicating very dissatisfied or very poor and 5 indicating satisfied. After that, the score is converted into a linear scale with 0 representing the least satisfying and 100 being the most preferred. The Cronbach's alpha reliability standards were reached by the four aspects' reliability (psychological health, physical health, social relationship and environmental health), which were .71, .78,.56, and.73, respectively (Lodhi et al., 2017).

Brief Religious Coping Scale (RCOPE; Pargament et al., 1998; Urdu Version, Khan et al., 2016). This is a 14-item scale that measures religious coping. There are seven items in the self-assessed questionnaire, all of which relate to positive and negative religious coping. A four-point Likert- type rating system, ranging from 0 to 3, is used to rate each question. The questionnaire was developed from a more complex one that evaluated religious coping on a broad scale. The first seven questions of the scale were used to evaluate positive religious coping (PRC), and the last seven questions evaluate negative religious coping (NRC). PRC and NRC are having respective alpha values of 0.93 and 0.82.

Demographic Information Sheet

The demographic sheet includes participant's socio- demographic information such as age, gender, education, marital status, employment status, issue at work, family history, use of antiepileptic drugs, age of epilepsy onset, types of seizures, and frequency of seizures.

Procedure

After obtaining permission from the hospitals and clinics in Faisalabad, Pakistan, the current study was carried out. Before proceeding with the measurement instrument administration, consent was obtained from the patients and their care givers. They were made aware of the importance of the research and how their data would be used. They received assurances on the privacy of the data. They were given a thorough demographic sheet and all of the study instruments.

Results and Discussion

Table 1
Socio-Demographic Characteristics of the Participants (N = 150)

Variables	*f(%)*	*M(SD)*
Age		1.78 (1.00)
Gender		
Male	57(38.0)	
Female	93(62.0)	
Education		
Preliterate	70(46.7)	
Primary/ Secondary	16(10.7)	
Bachelor	26(17.3)	
Masters	30(25.3)	
Marital Status		

Married	96(64.0)
Single	54(36.0)
Employment Status	
Employed	37(24.7)
Unemployed	83(55.3)
Have to quit the job	30(20.0)
Issue at work due to illness	
Yes	93(62.0)
No	57(38.0)
Family history of illness	
Yes	56(37.3)
No	94(62.7)
Use of antiepileptic drugs	
Yes	128(85.3)
No	94(62.7)
Age of onset of illness	
Before 20's	104(69.3)
After 60's	46(30.7)
Type of seizures	
Generalized seizures	103(68.7)
Focal seizures	47(31.3)
Frequency of seizures	
> 10 per day	7(4.7)
4 days per week with at least two seizures	16(10.7)
One to three per week	52(34.7)
One to three per month	61(40.7)
One to three per year	14(9.3)

Table 1 shows the demographic characteristics of the study sample comprised of epileptic patients (*N*=150) including 57 and 93 female patients. Table also demonstrated that 20% reported to quit their jobs and 55 % are unemployed due to their illness. Study result also showa that 68 % patients reported experience generalized seizure while 31% reported focal seizures.

Table 2
Severity index by PHQ-9(N=150)

	Gender		
	Male	**Female**	**Total**
Minimal	4	3	07
Mild	4	6	10
Moderate	12	24	36
Moderate severe	22	33	55
Severe	17	25	42

Table 2 shows the severity index of depression among epileptic patients. Among 150 study sample 55 patients reported moderated to severe depression.

Table 3
Correlation Matrices of Patient Health Questionnaire, Quality of Life and Religious Coping Among Epileptic Patients (N = 150)

Variables	1	2	3	4	5	6	7
1-PHQ-9	1						
2-Physical Health	-.44***	1					
3-Psychological Health	-.40**	.84***	1				
4-Social Relationship	-.22**	.54***	.52**	1			
5-Enviornmental Health	-.28***	.59***	.56***	.40***	1		

6-Negative Religious Coping	.19*	-.26**	-.21**	-.10	-.17*	1	
7-Positive Religious Coping	-.24**	.24**	.21**	.16*	.10	-.38	1

Note. ***p < .001, **p < .01, **p < .05 , *PHQ-9; Patient Health Questionnaire*

Table 3 shows the Correlation Matrices of Patient Health Questionnaire, Quality of Life and Religious Coping Among Epileptic Patients. The results suggested that depression is positively related with negative religious coping (p < .05), and negatively related with physical health (p < .001), psychological health (p < .01), social relationship (p < .01), environmental health (p < .001),and positive religious coping (p < .01).

Table 4
Depression, Positive Religious Coping and Negative Religious Coping as Predictor of Poor Physical Health among Epileptic Men and Women (N=150)

Variables	*B*	*SE*	*B*	*T*	R^2	ΔR^2
Step 1						
Depression	-.210	.035	-.445***	-6.04	.19	.19
Step 2						
Depression	-.194	.035	-.410***	-5.55	.22	.21
Negative Religious Coping	-.154	.063	-.180**	-2.43		

Step 1;F(148)=36.57,p < .001 Step 2; F (147)= 21.85,p < .001

Table 4 Show Multiple Linear Regression indicating Depression, Positive Religious Coping and Negative Religious Coping as Predictor of Poor Physical Health among Epileptic patients. First step indicating that depression by accounting 19% variance significantly (β = -.445, p < .001) contributed to the poor physical health among patients with epilepsy. In step 2 by contributing 21% variance depression (β= -.410, p < .001) and negative religious coping (β= -.180, p < .01) significantly predict poor physical health.

Table 5
Depression, Positive Religious Coping and Negative Religious Coping as Predictor of Quality of Life among Epileptic Men and Women (N=150)

Predictors	Outcomes	*B*	*SE*	*B*	*T*	R^2	ΔR^2
Depression	Psychological health	-.18	.03	-.40***	-5.36	.16	.15
Depression	Social relations	-.17	.06	-.22**	-2.81	.05	.04
Depression	Environmental health	-.15	.04	-.29***	-3.65	.08	.07

Step 1;F(148)=28.81,p < .001 ; Step 1;F(148)=7.90,p > .001 ; Step 1;F(148)=13.32,p > .001

Table 5 Show Multiple Linear Regression indicating Depression, Positive Religious Coping and Negative Religious Coping as Predictor of Poor quality of life among Epileptic patients. Results indicated that depression by accounting 15% variance significantly (β = -.40, p < .001) contributed to the poor psychological health, by accounting 4% variance significantly (β = -.22, p < .01) contributed to the poor social relationship and by accounting 7% variance significantly (β = -.29, p < .001) contributed to the poor environmental health among patients with epilepsy.

The primary objective of the present investigation was to determine the impact of religious coping among epileptic patients in Pakistan as well as the role of depression on their quality of life. According to the study's findings, most epileptic patients experience moderate to severe depression. Additionally, our study revealed that a significant proportion of women suffer from depression (see Table 2). The findings of this study support those of other studies because depression is a common co-morbid mental illness

among people with epilepsy (Onwuekwe et al., 2012; Asadi-Pooya & Sperling, 2011; Lee et al., 2010). The mere existence of a mental disorder is rarely embraced in Pakistani cultural context. Lack of awareness and rejection lead to greater severity symptoms as well as depression-causing deficiencies. Also due to unemployment, and impoverishment, individuals in Pakistani society live in an unhealthy environment and cannot afford to acquire their fundamental necessities. Additionally, individuals who have epilepsy have a lifetime impairment, consider themselves an inconvenience to the community, are unable to live on their own and are unable to achieve what they want in life.

According to our study findings, depression is negatively associated with physical/ psychological health, social relationship and environmental health among epileptic patients and overall, the quality of life was considerably lower for epileptic patients that had become depressed (see Table 3). It has been demonstrated that people with epilepsy have a lower quality of life since they are more prone to suffer from social isolation, anxiousness, and depression (Malik et al., 2022). Additionally, our results indicate that depression was a significant predictor of low quality of life for epileptic patients (see Table 4, 5). Studies involving epileptic patients additionally demonstrated the fact that quality of life is rapidly evolving as a gauge of outcome for most persistent diseases (Scévola et al., 2021; Ogundare et al., 2020; Siarava et al., 2019). The reason for poor quality of life among epileptic patients is because in our cultural setting, epilepsy can cause individuals to feel depressed since it limits their physical well-being and autonomy. The stigma associated with epilepsy and the sporadic nature of seizures, which can result in depression, are the causes of poor psychological health among epileptic patients. Family and close relationships may suffer as a result depression in epilepsy and especially if seizures are intense or recurrent.

The results of our study showed that while there was an inverse relationship between depression and positive religious coping scores, suggesting that as the use of positive religious approaches to coping increased, depression scores tended to decline, negative religious coping was positively associated with depression, referring to that using negative religious coping increases depression (see Table 3). Notwithstanding the fact that most of the research on spirituality, religion, and overall wellness indicates that religious coping and depression have opposite associations, however, has previously been ample proof that this association is contingent on the individual's adoption of their personal convictions (Vitorino et al., 2018; Santos et al., 2017). Tremendous demands from society and culture to adhere to customary practices of religion may be present in Pakistan. Concern of being scrutinized or shunned by peers can cause depressive symptoms among individuals who suffer from faith issues or concerns. There are frequently little information on mental health available in Pakistan, and getting treatment for depression may be stigmatized. Because of this, people may choose coping mechanisms or spiritual figures as their primary means to deal with psychological issues.

This study found that religious coping strategies appear to have varying effects on epilepsy sufferers' quality of life. In every area of life such as physical, psychological, social, and environmental, a higher level of religiosity was linked to a higher quality of life. On the other hand, greater depressive manifestations and poorer quality of life consequences were linked to negative religious coping (see Table 3). According to our findings, negative religious coping is also a strong predictor of low life quality among epileptic patients. These results are in line with earlier research and emphasize the need for practitioners who care with patients who have epilepsy to evaluate their religious views (Ozcan& Ciftci, 2024; Bone & Dein, 2021; Lin et al., 2018). As religion gives people courage, consolation, and convenience, enabling them to face life's obstacles. Therefore, in Pakistan, religious coping is linked to improved psychological wellness, fulfillment with life, and quality of life.

Conclusion

The study's findings suggest that depression is a prevalent condition among epileptic patients. To sum up, depression was a predictor of a lower quality of life for the participants in our study. According to the current study, religious coping has two different effects on epileptic patients' quality of life. Positive results could result from its constructive use. Negative use, on the other hand, might have detrimental effects like increased depressed indicators and lower quality of life.

Recommendations

Thus, it is our recommendation that individuals with epilepsy receive proper treatment and undergo regular screening for depression. To enhance the results for people with epilepsy, health workers need to understand "two sides of the same coin" about religious coping. It is recommended that future studies be conducted using a larger sample size from various cities to offer data that can be applied globally. One can use sample groups as comparisons to identify the differences between young people, adults, and children's epileptic patients.

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