Depression and Perception of Stigma: A Correlational Study of Epileptic Patients

Aqsa Shamim Ahmed[1*], Jamshaid Ahmed[1], Seema Gul[2] and Imran Abbas[1]

[1]Department of Sports Sciences & Physical Education, Faculty of Allied Health Sciences, University of Lahore, Lahore, Pakistan
[2]Department of Psychology, Islamic International University Islamabad, Pakistan

Abstract:

Epilepsy is found to be standout amongst the most well-known and unending neurological issue portrayed by irregular recurring and extreme neuronal discharge within the central nervous system.

Objective:

The study was an endeavor to find out the relationship of depression and perception of stigma in patients with different types of epilepsy where, stigma go about as a covariate of depression in epilepsy.

Methods:

A co-relational study was conducted on 100 epileptic patients, chosen from the indoor and outdoor departments of Pakistan Ordinance Factories (POF) Hospital in Wah Cantt, Pakistan Institute of Medical Sciences (PIMS), Islamabad and Benazir Bhutto Shaheed Hospital in Rawalpindi. In order to measure the feelings of stigma and depression in epileptic patients Urdu translation of stigma of epilepsy scale by Jacoby, 1994 was used combined with Siddique Shah Depression scale (SSDS) (1992).

Results:

Patients with generalized epilepsy score highmon both depression and Stigma scale (M=98.26, SD=28.26), (M=2.60, SD=.66) with most astounding score on subscale hopelessness of depression. Likewise, results demonstrated that stigmatization go about as a covariant of depression ($p < .01$), finally when impact of stigmatization was controlled noteworthy impact of three distinctive epilepsy types was found on scores of depression ($p < .001$). A positive relationship between depression and stigma was observed.

Conclusions:

Higher levels of depression and feelings of stigma were reported by generalized epileptic patients where feelings of stigma were responsible for the development of depression in epileptic patients.

Keywords:

Depression, Stigma, Epilepsy, Siddiqui Shah Depression Scale

Introduction:

Epilepsy is found to be standout amongst the most well-known and unending neurological issue portrayed by irregular recurring and extreme neuronal discharge within the central nervous system.[1]It has no age, social, racial or geographic boundaries; contributing 0.49% of overall global burden of diseases where developing countries are far more affected than the developed ones[2,3]. Because of the dramatic presentation of seizures there are bunch of misconception and mythology associated to the epilepsy. People attribute demonic or supernatural causes to its manifestation resulting in epileptic patients to feel stigmatized from this disorder.[4] The fear and hatred caused by the stigmatizing effect of epilepsy instills the feelings of low self-esteem and social isolation in epileptic patients which eventually make them feel depressed. Stigma is hereby conceptualized as "an attribute that is deeply discrediting" found to be the most disabling factor in development of depression with life time prevalence varying from 40% to 60% where depression is low, gloomy condition in which life appears to be dim and its difficulties overpowering. Stigma is usually supposed as something prevalent in the mind of other people, but epileptics internalize this stigma and think of their state as disgraceful, deplorably different, less admirable, less skilled and most likely to encounter disrespectful feelings from others even from their primary relations[5,6]. In one study, conducted by DiIorio et al. indicated that stigma is closely related to depression among epileptic patients[7]. Results of another community study conducted in Hong Kong reported the prevalence rate of depressive symptoms 19.6% out of 500 self administered questionnaires where more that 30% felt highly stigmatized[8]. Epilepsy is found to be the most common inadequately and inappropriately treated medical condition in rural areas of Pakistan with an overall prevalence of 9.99 per 1000 population, where

generalized seizures are the most common seizure type.[9] Epilepsy is accompanied by both somatic and psychological disabilities where the emotional baggage of epileptic patients is far greater than any other disorder. Because of the little knowledge about the stigma and depression associated to epilepsy people frequently look for the healing of local faith healers instead of consulting to the doctor. In addition doctors also consider the associated depression as a reactive process of disabilities caused by epilepsy rather as a result of stigmatization; they do not screen the patients for the presence of depression and further take no steps in its management. There is little research data present in literature on the area of stigma and depression related to epilepsy in Pakistan.

So, this co-relational study aimed to investigate the relationship of depression and stigma in epilepsy where stigma acts as covariate of depression.

Methods:

A co-relational study was conducted during the year of 2011 at International Islamic University Islamabad, (IIUI) Pakistan. Data was collected through pre-tested questionnaire comprised of SSDS and feelings of Stigma scale, by purposive sampling technique from POF Hospital Wah Cantt, PIMS Islamabad, and Benazir Bhutto Shaheed Hospital Rawalpindi. SSDS was used as a screening tool for depression and stigma of epilepsy was used to measure the extant of stigmatization. For the assessment of clinical and non clinical depression in Pakistani population, SSDS was used having high validity and reliability as an instrument. SSDS was a 36-item; 4-point likert scale having a range of 1 to 4 where 1 stands for never and 4 stands for every time. High scores on the scale were indicative of presence of depression. In scale, the items1, 3, 5, 9, 10, 16 & 25 indicate the hopelessness feature of depression, items 6,7,17, 24, 30 & 34 to interpersonal conflicts with the loved ones, items 9, 15, 16, 22, 23 & 27 to personal incompetence and worthlessness, items 4, 11, 21 & 32 are related to somatic complaints, guilt was indicated by the items 5 and 10 and death wish to items 13 and 36. Siddiqui Shah (1992) has revealed that split half reliability for both clinical groups on clinical group is significant (0.79) and (0.80), where spearman correlation for full scale of both clinical group as well as non clinical group is (0.84) (0.89). Similarly, the internal consistency was also significant for both groups i-ealpha coefficient for clinical group and non clinical group is 0.91 and 0.89 respectively. A 3-item dichotomous scale by Jacoby, 1994 is used to asses Stigma of epilepsy. The scale was originally developed for stroke patients and later on adaptation was done by Jacoby in 1992 for use in epilepsy. For the present study the scale was translated into Urdu. The score of zero on the scale indicates that the respondents do not feel stigmatized; where higher positive scores correspond to high feelings of stigmatization. The questionnaire does not contain any negative item. Internal consistency, Cronbach alpha was found to be 0.77 and established test-retest reliability was r = 0.77. SPSS version 16.0 (SPSS Inc., Chicago, IL, USA 2007) was used for data analysis. Correlation coefficient was used for finding the relationship between depression and feelings of stigma. Analysis of variance ANOVA was used for evaluating the difference among the depression and stigma levels where ANOVA was for finding the effects of covariance.

Results:

The study was conducted on 100 patients (N=100) diagnosed with epilepsy including 50 male and 50 female patients. 61 patients were diagnosed with generalized epilepsy, 18 with childhood absence epilepsy and 21 with partial epilepsy. The demographic details were presented in Table1.

Variables	*f*	*M*	*SD*	*%*
Generalized epilepsy	61	98.33	28.26	61.0%
Childhood absence epilepsy	18	72.61	23.83	18.0 %
Partial epilepsy	21	71.09	23.86	21.0%

Table 1: Descriptive Statistics of three epilepsy types

A correlation analysis was performed to find out the relationship of SSDS, its subscales with stigma. Table 2 shows the inter correlations between the scores of SSDS and stigma, indicating a significant positive correlation between the variables ($p < .01$). It was evident from the results that epileptic patients who scored high in depression also scored high on the stigma of epilepsy scale, where the strongest correlation was found to be on the hopelessness subscale. Vertical column of the table consists of Means and standard deviations for the patients with epilepsy. Higher scores on both the scales indicate the more significant response in the direction of the construct measured.

Measure	1	2	3	4	5	6	7	8	M	SD
Stigma of epilepsy	-	.39**	.35**	.41**	.21*	.38**	.19*	.30**	2.46	.80
SSDS	-	-	.93**	.86**	.72**	.91**	.65**	.83**	87.98	29.42
Hopelessness	-	-	-	.75**	.81**	.90**	.53**	.76**	16.74	6.26
Interpersonal conflicts	-	-	-	-	.57**	.80**	.47**	.71**	15.11	5.52
Guilt	-	-	-	-	-	.67**	.37**	.54**	4.10	2.02
Personal worthlessness	-	-	-	-	-	-	.45**	.71**	14.73	5.89
Somatic complaints	-	-	-	-	-	-	-	.49**	8.88	3.03
Death wish	-	-	-	-	-	-	-	-	4.74	2.15

Table 2: Co-relational Analysis of SSDS and Stigma of Epilepsy Scale (N =100)

Note. SSDS=Siddique Shah Depression Scale

***p<.01*

**p<.05*

One way analysis of variance ANOVA was used for finding out which type of epilepsy scores higher on SSDS and stigma of epilepsy scale. The differences in the mean scores of respondents having different types of epilepsy on SSDS and Stigma of Epilepsy Scale are shown in Table 3. The variations in the scores of three types of epilepsy show that patients of generalized epilepsy scored higher on both depression and Stigma scales as compared to other epilepsy types.

	Generalized absence epilepsy (n=61)		Partial epilepsy (n=18)		Childhood epilepsy (n=21)			
Scale	M	SD	M	SD	M	SD	F	p
SSDS	98.32	28.26	72.61	23.83	71.09	23.86	11.79	.00
Stigma of Epilepsy	2.60.66	.66	2.11	.96	2.33	.96	3.05	.05

Table 3: One Way Analysis of Variance of Scores of depression and stigma on epilepsy Types (N=100)

Note. SSDS= Siddique Shah Depression Scale, df= Degree of Freedom

df =2, 97

One way analysis of covariance for scores of depression along with stigma in epileptic patients is shown in Table 4. Epilepsy including its three types (generalized, childhood and partial) was taken as an independent variable. Scores on depression scale was the dependent variable, where stigmatization acts as covariate for epileptic patients. The Levene's test, when feelings of stigmatization were integrated in the model as a covariate was calculated, $F(2, 97) = 2.036$, $p > .05$ signifying to group variances were equivalent and non-significant, thus there was no violation of assumption of homogeneity of variances. So, from the figures it was evident that the stigma which was acting as a covariate highly significantly predicts the dependent variable because the significant value is lesser than .001. Hence, the three types of epilepsy influence the depression scores. Moreover, it was also found out that when an effect of stigmatization was removed the difference between the groups was found to be statistically significant. The stigma acting as covariate was found to be linked to the scores of depression; $F(1, 96) = 12.12$, $p < .01$. Also, when the effect of stigma was controlled there was found to be the significant impact of three epilepsy types of on scores of depression; $F(2, 96) = 8.95$, $p < .001$.

Source	SS	Df	MS	F	p
Feelings of stigma	7736.51	1	7736.51	12.12	.001
Type of epilepsy	11427.15	2	5713.57	8.95	.000
Error	61233.01	96	637.84		
Total corrected	85739.96	99			

Table 4: Analysis of Covariance for depression by feelings of stigma in epileptic patients (N=100)

Note. SS=Sum of Squares, MS=Mean Sum of Squares

Discussion:

Results of the present study showed that there was a positive correlation (p< .01)among depression and stigma of epilepsy where patients of generalized epilepsy were more depressed and stigmatized than any other epilepsy type, where highest contributing factor was hopelessness. These findings was supported by another recent study conducted in Bulgaria in which stigma, seizure severity, gender, age and educational level were found to be the predictors of depression in refractory epilepsy.[10, 11] The findings of the study also reveal that stigma acts as a covariate of depression (F=12. 12, p< .01). From demon to spirit moreover castigation from the God, unusual labels were attached to the people suffering from epilepsy in Pakistan resulting from the lack of knowledge and information about the disorder. Because of fear and hatred people attach different labels to epileptic patient sand make them feel stigmatized creating major implication not only for wellbeing but also for autonomous living, for service and education, mobility and interaction in society. Distress and hopelessness caused by the feelings of stigma was later manifested in the form of depression[12, 13, 14]. Learned helplessness model of depression can also be used to support the findings of the present research[15]. The social stigma, volatility of seizure and failure of useful autonomy creates the feelings of hopelessness and helplessness which make them to consider their life as burden. Although there was little research evidence in this area but depression and epilepsy were found to have a bidirectional nature; depression was more common in epileptic patients and epilepsy was more common in people suffering from depression. The evidence for this notion was that both the disorders share common pathogenic mechanisms and neurotransmitters; contradicting the long held beliefs by patients and clinicians that depression was just a "normal reaction" to the obstacles posed by epilepsy [16, 17]. Furthermore, antiepileptic drugs (AED) are also found to be responsible for the development of depression in epileptic patients[18]. Depression and feelings of stigmatization may lead to suicidal ideation or attempts and ultimately worsen the quality of life of an individual suffering from epilepsy resulting in poor responses to pharmacological and surgical treatments.[19]

Conclusions:

Epileptic patients who were depressed also found to have feelings of stigma; feelings of stigma were positively correlated with depression where generalized epilepsy was found to be the most prevalent type of epilepsy. Feelings of stigma were found to be responsible for and act as a covariate of depression.

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