

Stress, anxiety, and depression among individuals with epilepsy

Abstract

Background: Epilepsy is a disorder characterised by recurrent seizures of cerebral origin, presenting with episodes of sensory, motor, or autonomic phenomenon with or without loss of consciousness. Patients with epilepsy commonly have coexisting psychiatric conditions including mood disorders, anxiety disorders, psychotic disorders, and attention deficit hyperactivity disorder. **Aim:** To assess and compare stress, anxiety, and depression among male and female with epilepsy. **Methods:** The sample consisted of 100 individuals with epilepsy (50 males and 50 females) selected from the Ranchi Institute of Neuro-Psychiatry & Allied Sciences (RINPAS) outpatient department (OPD) by using purposive sampling method. Socio-demographic and clinical details of the entire individuals were assessed through socio-demographic datasheet, clinical datasheet, and the Depression Anxiety Stress Scales (DASS). **Result:** Finding of this study showed that stress, anxiety, and depression was higher among female with epilepsy in comparison to male with epilepsy.

Keywords: Seizures. Psychiatric Disorders. Psychiatric Social Work.

**Lokesh Kumar Ranjan¹,
Rishi Panday², Manisha Kiran³**

¹MPhil Scholar, Department of Psychiatric Social Work, RINPAS, Ranchi, Jharkhand, India, ²PhD Scholar, Department of Social Work, Jamia Millia Islamia, New Delhi, India, ³Associate Professor and Head, Department of Psychiatric Social Work, RINPAS, Ranchi, Jharkhand, India

Correspondence: Rishi Panday,
Room No-3, 86/2, Sarai Jullena,
New Delhi-110025, India. rishiraj.lu@gmail.com

Received: 24 January 2016

Revised: 23 February 2016

Accepted: 4 March 2016

Epub: 23 March 2016

DOI: 10.5958/2394-2061.2016.00020.3

Introduction

Epilepsy is the second most common chronic neurological condition. When nerve cells in the brain fire electrical impulses at a rate of up to four times higher than normal, this causes a sort of electrical storm in the brain, known as a seizure. A pattern of repeated seizures is referred to as epilepsy. Fears, stress, and anxieties are common in virtually everyone's life. But for those who have epilepsy, fears and anxieties are usually much deeper than those of the average person, and day after day gradually depression grows up in those who have epilepsy. Often, the emotional effects that epilepsy has on patients go unknown as those with epilepsy grow up with psychosocial difficulties that usually last for years. The fear of death along with the anxiety of going into a seizure often leads to significant emotional struggles. A person with epilepsy is prone to carry fear throughout his life. This form of fear deals with the fear of having a seizure in front of strangers or acquaintances that might not be aware of their epilepsy.

Fiordelli *et al.*[1] conducted a study and found out that epilepsy was strongly associated with anxiety and depression. Caplan *et al.*[2] found anxiety and depression in patients with epilepsy. Baker[3] found out that epilepsy was a disorder associated with psychological consequences, with increased levels of anxiety, depression, and poor self-esteem compared with people without this condition. Similar findings were seen by Gilliam and Kanner[4] that depression was highly prevalent in epileptic population and was the most frequent co-morbid psychiatric disorder in patients with epilepsy.

Epilepsy is a worldwide public health problem and a serious concern for mental health professionals. A number of systematic studies of persons suffering from epilepsy have observed that there is often a significant co-occurrence of anxiety in epileptic people. The occurrence of stress, anxiety, and depression in epileptic people has often been associated with worse outcome, impaired functioning, personal suffering, higher rates of repeated seizures, and even suicide.

Aim: To assess and compare stress, anxiety, and depression among male and female with epilepsy.

Materials and methods

The research study was a hospital-based cross-sectional comparative study among the male and female individuals with epilepsy. The sample was drawn from the outpatient department (OPD) of the Ranchi Institute of Neuro-Psychiatry and Allied Sciences (RINPAS), Kanke, Ranchi, Jharkhand through purposive sampling technique. Total 100 respondents were selected for this study which was further divided into 50 males and 50 females.

Objectives: To assess and compare the socio-demographic profile among male and female with epilepsy, to assess and compare the stress among male and female with epilepsy, to assess and compare the anxiety among male and female with epilepsy, and to assess and compare the depression among male and female with epilepsy.

Inclusion criteria: Patients diagnosed with epilepsy as per the International League Against Epilepsy,[5] both sexes (male and female), age more than 18 years and less than 45 years, and those who gave written informed consent for the participation in study.

Exclusion criteria: History of any chronic physical illnesses, mental illness, organic brain syndromes, and substance abuse/dependence; co-morbid significant psychiatric illness, and mental retardation.

Tools used

Socio-demographic datasheet: The socio-demographic datasheet was semi-structured and developed for the present study, and consisted of variables like age, sex, age of onset, religion, marital status, occupation, family type, family income, and domicile.

Depression Anxiety Stress Scales (DASS): It was developed by Lovibond and Lovibond.[6] The DASS is a 42-item questionnaire which includes three self-report scales designed to measure the negative emotional states of depression, anxiety, and stress. Each of the three scales contains 14 items, divided into subscales of two to five items with similar content. Respondents are asked to use four-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. It shows that high score is indicative of high level of depression, anxiety, and stress.

The Hindi version of the DASS[7] was used by Purushottam *et al.*[8]

Result

Table 1 reveals that mean age and standard deviation (SD) of male with epilepsy were 28.68±5.64 years. The mean age and SD of female with epilepsy were 27.68±5.32 years. The table also shows that mean age of onset and SD of male with epilepsy were 21.70±4.97 years. The mean age of onset and SD of female with epilepsy were 21.58±4.16 years.

Table 2 reveals that there was no significant difference in religion, family type, family income, and domicile between both groups. Twenty three (46%) male and 24(48%) female patients with epilepsy were married, 27 (54%) male and 26 (52%) female patients with epilepsy were unmarried; the value of $\chi^2=0.040$ and $p\leq 0.05$, so there was significant difference in marital status between both groups. Forty two (84%) male patients with epilepsy and 20 (40%) female patients with epilepsy fall within employed group while eight (16%) male and 30 (60%) female patients with epilepsy fall within unemployed group; the value of $\chi^2=20.543$ and $p\leq 0.01$, so there was most significant difference in occupation between both groups.

Table 3 shows mean score and SD of stress, anxiety, and depression among male and female with epilepsy. The mean and SD score of stress in male with epilepsy was 12.34±1.45 and female with epilepsy was 14.62±2.16. Result reveals that there was significant difference in stress among male and female with epilepsy ($t=6.184$, $p\leq 0.05$). Finding of this study showed that stress was more in female with epilepsy in comparison to male with epilepsy. The mean and SD score of anxiety in male with epilepsy was 9.72±1.79 and female with epilepsy was

Table 1: Comparison of age and age of onset among male and female with epilepsy

Variables	Groups (mean±SD) (N=50)	
	Male	Female
Age (years)	28.68±5.64	27.68±5.32
Age of onset (years)	21.70±4.97	21.58±4.16

N=Number, SD=Standard deviation

Table 2: Comparison socio-demographic details among male and female with epilepsy

Variables	Group (N=50) (%)		df	χ^2
	Male	Female		
Religion				
Hindu	32 (64)	34 (68)	2	0.532 NS
Islam	14 (28)	11 (22)		
Others	4 (8)	5 (10)		
Marital status				
Married	23 (46)	24 (48)	1	0.040*
Unmarried	27 (54)	26 (52)		
Occupation				
Employed	42 (84)	20 (40)	1	20.543**
Unemployed	8 (16)	30 (52)		
Family type				
Joint	11 (22)	12 (24)	1	0.838 NS
Nuclear	39 (78)	38 (76)		
Family income				
Less than 5000	6 (12)	6 (12)	2	0.056 NS
5000 to 10000	16 (32)	12 (24)		
Above 10000	28 (56)	32 (64)		
Domicile				
Rural	30 (60)	29 (52)	2	0.324 NS
Semi-urban	11 (22)	12 (24)		
Urban	9 (18)	9 (18)		

N=Number, df=Degree of freedom, NS=Not significant, *=Significant at 0.05 level, **=Significant at 0.01 level

Table 3: Comparison of various domains of stress, anxiety, and depression among male and female with epilepsy

Variables	Group (mean±SD) (N=50)		t	p-value
	Male	Female		
Stress	12.34±1.45	14.62±2.16	6.184	0.000
Anxiety	9.72±1.79	16.10±1.86	17.421	0.000
Depression	13.88±1.64	16.96±2.25	7.689	0.000

N=Number, SD=Standard deviation

16.10±1.86. It also shows that there was significant difference in anxiety among males and females with epilepsy ($t=17.421$, $p\leq 0.05$). Findings of this study showed that anxiety was high in female with epilepsy in comparison to male with epilepsy. The mean and SD score of depression in male with epilepsy was 13.88±1.64 and female with epilepsy was 16.96±2.25. It shows that there was significant difference in depression

among male and female with epilepsy ($t=7.689$, $p\leq 0.05$). Finding of this study showed that depression was higher in female with epilepsy in comparison to male with epilepsy.

Discussion

Findings of this study show that depression, anxiety, and stress were higher in female respondents in comparison to male respondents. Some earlier studies also support this. Caplan *et al.*[2] found that female with epilepsy had more depression in comparison to males. Turkey *et al.*[9] found out in their study that female with epilepsy were more likely to have depression than males. Nuhu *et al.*[10] found that depression and anxiety were more common in female with epilepsy in comparison to male with epilepsy. Kimiskidis *et al.*[11] conducted a study and found that depression and anxiety in epilepsy were more common in female patient compared to male patient, and this study also found higher depression and anxiety in female with epilepsy compared to male. Rigdon and Epting[12] found that females reported a significantly higher level of death anxiety and thus represents a serious issue. It is consistent with the Middle Eastern culture where females are more vulnerable to threats of illness and often feel more insecure due to the responsibility inherent in caring for family and children. Servaty *et al.*[13] reported higher levels of empathy scores for females that were associated with higher levels of anxiety. Ootom *et al.*[14] found that the mean death anxiety score of the patients was moderate and indicated that only death anxiety showed a gender difference with female patients reporting higher levels of death anxiety in comparison to males.

Kumar *et al.*[15] studied subjective well-being and coping by evaluating patients with diagnosis of schizophrenia and epilepsy. Caregivers of persons with schizophrenia and those suffering from epilepsy were assessed for burden and social support by Karim *et al.*[16]

Implications

- The scope for intervention by mental health professionals, especially psychiatric social workers in planning and delivering adequate therapeutic services in the clinical context
- Individual therapy (cognitive behavioural, and supportive), supportive intervention and relaxation techniques are helpful for person with epilepsy
- Family intervention, especially primary caregivers to provide knowledge of stress, anxiety, and depression for management technique which is helpful for person with epilepsy.

Limitations

- Being a time bound study and sample size was small
- The samples were selected by using purposive sampling technique
- Data was collected from only RINPAS, Ranchi.

Conclusion

This study is based on cross-sectional research design to assess and compare depression, anxiety, and stress among male and female with epilepsy. Findings of this study indicate that depression, anxiety, and stress were higher in female

with epilepsy in comparison to male with epilepsy. Epilepsy is a stigmatising condition, because people with epilepsy may not be adapted to the social norms due to unexpected seizures. Consequently, the society is afraid of interacting with a person who has epileptic seizures. The findings of the study have to be taken in the light of certain limitations. The sample was purposively selected and size was small. There is a need for further large scale studies in order to substantiate the findings. Such findings would have thrown more light in terms of predictors for knowledge and attitude.

References

1. Fiordelli E, Beghi E, Bogliun G, Crespi V. Epilepsy and psychiatric disturbance. A cross-sectional study. *Br J Psychiatry*. 1993;163:446-50.
2. Caplan R, Siddarth P, Gurbani S, Hanson R, Sankar R, Shields WD. Depression and anxiety disorders in pediatric epilepsy. *Epilepsia*. 2005;46:720-30.
3. Baker GA. The psychosocial burden of epilepsy. *Epilepsia*. 2002;43 Suppl 6:26-30.
4. Gilliam F, Kanner AM. Treatment of depressive disorders in epilepsy patients. *Epilepsy Behav*. 2002;3(5S):2-9.
5. Engel J Jr. ILAE classification of epilepsy syndromes. *Epilepsy Res*. 2006;70 Suppl 1:S5-10.
6. Lovibond PF, Lovibond SH. The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behav Res Ther*. 1995;33:335-43.
7. Singh B, Prabhuappa KP, Eqbal S, Singh AR. Depression, anxiety and stress scale: Reliability and validity of Hindi adaptation. *International Journal of Education and Management Studies* [serial online]. 2013 [cited 2016 Mar 4];3(4):446-9. Available from: http://www.iahrw.com/index.php/home/journal_detail_menu/21/55/107
8. Purushottam, Singh B, Kumar K, Gupta R. A comparative study of depression, anxiety, stress and their relationships with smoking pattern in caregivers of patients of casualty and outpatient departments. *Open J Psychiatry Allied Sci*. 2016;7:36-40.
9. Turkey A, Beavis JM, Thapar AK, Kerr MP. Psychopathology in children and adolescents with epilepsy: An investigation of predictive variables. *Epilepsy Behav*. 2008;12:136-44.
10. Nuhu FT, Yusuf AJ, Lasisi MD, Aremu SB. Emotional distress among people with epilepsy in Kaduna, Northern Nigeria. *Ann Trop Med Public Health* [serial online]. 2013 [cited 2016 Feb 15];6:42-6. Available from: <http://www.atmph.org/text.asp?2013/6/1/42/115179>
11. Kimiskidis VK, Triantafyllou NI, Kararizou E, Gatzonis SS, Fountoulakis KN, Siatouni A, *et al.* Depression and anxiety in epilepsy: The association with demographic and seizure-related variables. *Ann Gen Psychiatry*. 2007;6:28.
12. Rigdon MA, Epting FR. Reduction in death threat as a basis for optimal functioning. *Death Studies*. 1985;9:427-48.
13. Servaty HL, Krejci MJ, Hayslip B Jr. Relationships among death anxiety, communication apprehension with the dying, and empathy in those seeking occupations as nurses and physicians. *Death Stud*. 1996;20:149-61.
14. Ootom S, Al-Jishi A, Montgomery A, Ghwanmeh M, Atoum A. Death anxiety in patients with epilepsy. *Seizure*. 2007;16:142-6.
15. Kumar P, Nehra DK, Verma AN. Subjective well-being and coping among people with schizophrenia and epilepsy. *Dysphrenia*. 2013;4:25-30.
16. Karim N, Ali A, Deuri SP. A comparative study of care burden and social support among caregivers of persons with schizophrenia and epilepsy. *Open J Psychiatry Allied Sci*. 2015;6:132-7.

Ranjan LK, Panday R, Kiran M. Stress, anxiety, and depression among individuals with epilepsy. *Open J Psychiatry Allied Sci*. 2016;7:129-31. doi: 10.5958/2394-2061.2016.00020.3. Epub 2016 Mar 23.

Source of support: Nil. Declaration of interest: None.