

# Epilepsy Patients at Suicidal Risk with Psychological Distress, Cognitive Failure and Perceived Social Support

Iram Batool<sup>1</sup>, Nadia Afzal<sup>2</sup> and Maria Younis<sup>1</sup>

## ABSTRACT

**Objectives:** Core objective of present study was to explore the relationships between Suicidal risk, Psychological Distress, Perceived Social Support and Cognitive failure among the individuals with epilepsy and to find out gender differences (if any) on all variables.

**Study Design:** Co-relational research study.

**Place and Duration of Study:** This study was conducted at the Department of Applied Psychology, Bahauddin Zakariya University, Multan from 15<sup>th</sup> January, 2016 to 22<sup>nd</sup> March, 2016.

**Materials and Methods:** Correlational research design was used for the present study. Total N=80 (both men and women) participants (all were diagnosed epilepsy patients) were recruited from different hospitals (Nishtar, CMH and Ibn-e-Seena hospital) of Multan, Pakistan by using purposive and convenient sampling technique. Data was collected from participants on Suicidal risk, Psychological Distress, Perceived Social Support and Cognitive failure by using relevant valid and reliable scales.

**Results:** It was revealed that psychological distress, cognitive failure were positively associated with suicide risk whereas perceived social support negatively correlated with suicidal risk among individuals with epilepsy. Furthermore, perceived social support negatively related with psychological distress and cognition failure. Significant gender differences were found on Suicidal risk, Psychological Distress, Perceived Social Support and Cognitive failure in individuals with epilepsy.

**Conclusion:** It was concluded that psychological distress and cognitive failure exacerbate the chance of suicidal risk whereas social support play vital role in decreasing the suicide risk, psychological distress and cognitive failure among epilepsy patients. So, the pertinent importance should be paid to the element of social support to enhance the overall quality of psychological health of people with epilepsy.

**Key Words:** Epilepsy, Suicidal risk, Psychological distress, Perceived Social Support, Cognitive failure

**Citation of article:** Batool I, Afzal N, Younis M. Epilepsy Patients at Suicidal Risk with Psychological Distress, Cognitive Failure and Perceived Social Support. Med Forum 2017;28(6):64-68.

## INTRODUCTION

Present study intends to examine relationships between psychological distress, cognitive impairment, perceived social support and suicidal ideation in adults with epilepsy. Furthermore, to identify the gender differences on psychological distress, cognitive impairment, perceived social support and suicidal ideation in adults with epilepsy.

Epilepsy is a neurological disorder that involves the abrupt, unstructured and frequent seizure. The term "seizure" depicts the conditions which involve the period of sudden decrease in the normal activity of brain cells and they act more rapidly than the normal

neural functioning. Seizure usually comes to end within seconds and few minutes when brain get control over the increased activity of brain cells<sup>1</sup>. Most common clinical test that are used to diagnosed epilepsy include Computed Tomography (CT), Magnetic Resonance Imaging (MRI), and Electroencephalogram (EEG)<sup>2</sup>.

According to epidemiological study in Pakistan, the prevalence of epilepsy in Pakistan to be assessed is that every 10<sup>th</sup> person suffered from epilepsy out of 1000 individuals. Epilepsy seen to be more prevalent at the younger age than 30 years whereas slightly less prevalent at the age between 40 and 59 years. Furthermore, highest prevalence of epilepsy is documented in rural areas of Pakistan<sup>3</sup>.

Suicidal ideation is medical term that involves the thoughts, ideas, wishes and plans to provide physically harm to one's self to the extent that one can commit suicide even after planning and wishing suicide<sup>4</sup>. Suicide rate among individuals with epilepsy reported 11% that is higher than the normal population<sup>5</sup>. Nilsson et al<sup>6</sup> reported that 26 individuals committed suicide out of 171 individuals who also had epilepsy. It was concluded that psychological distress such as depression, anxiety and psychosis was associated with 10 % increase in the risk of suicide in individuals with

<sup>1</sup>. Department of Applied Psychology, Bahauddin Zakariya University, Multan.

<sup>2</sup>. Department of Applied Psychology, Lahore College for Women University, Lahore.

Correspondence: Dr. Iram Batool, Department of Applied Psychology, Bahauddin Zakariya University, Multan.

Contact No:

Email: i.batool@bzu.edu.pk

Received: April 22, 2017;

Accepted: May 19, 2017

epilepsy whereas antipsychotic drugs proved to be increased 10 % in the risk of suicide in individuals with epilepsy.

A vast array of literature has been done to examine the correlates and risk factors of suicidal ideation in individuals with epilepsy. Young age, psychosocial problems, male sex, temporal lobe seizure, brain injuries, seizure episodes, unemployment and financial stress are proved to be risk factors of suicide in individuals with epilepsy<sup>7, 8, 9</sup>.

Previous literature showed that individuals with epilepsy experienced more psychological distress than normal individuals or healthy controls<sup>10</sup>. Comorbidity of psychological disorder such as anxiety, depression, psychosis, attention deficit disorder and frequent seizures have been documented<sup>11, 12</sup>. Adolescents with epilepsy reported higher level of depression and anxiety than the healthy controls and individuals who had not epilepsy<sup>13</sup>. Social support proved to be significant predictors to lessen the severity of psychological issues in individuals with epilepsy. Lack of social support and stigmatization exacerbate the psychological distress, poor mental health and bad physical condition in individuals with severe medical conditions including epilepsy<sup>14, 15</sup>.

Cognitive deficit in survey based study was proved to be highest in the ranking of different concerns that individuals with epilepsy experienced in their life<sup>16</sup>. A previous study was done to evaluate the nature and extent of subjective and objective deficit in the individuals with epilepsy. Results revealed that epileptic patients scored lower on the measures of learning, attention and speed of information processing. It was concluded that individuals with epilepsy who had normal daily life functioning and even performing different jobs had impaired health related quality of life and cognition<sup>17</sup>.

There is very limited and up to dated literature regarding the suicidal behaviors in individuals with epilepsy in Pakistan. So in order to fill this gap in literature present study is being done that would provide worthwhile data related to suicidal risk and behaviors in individuals with epilepsy and other related factors such as perceived social support, psychological distress and cognitive deficits.

**Hypotheses:** Following hypotheses were formulated on the basis of previous literature.

1. There would be positive association between psychological distress, cognitive failures and suicide risk in individuals with epilepsy.
2. Social support would be negatively correlated with suicide risk, psychological distress and cognitive failures.
3. Gender differences would exist on Suicidal risk, Psychological Distress, Perceived Social Support and Cognitive failure among individuals with epilepsy.

## MATERIALS AND METHODS

**Participants:** For the present co-relational study, sample of N=80 (both men= 47 and women 33) adults, who were diagnosed with epilepsy, were recruited from different hospitals of Multan, Pakistan by using purposive and convenient sampling technique. Their age range was 18-43 years old. Only those individuals recruited who diagnosed as epileptics by concerned physician and neurologist. Individuals with severe condition or had any other comorbidity of physical ailment were excluded from the study.

### Instruments

#### 1. Suicidal Risk Assessment Form

To assess suicide risk in the individuals with epilepsy, suicidal of risk assessment form developed by Beck, Kovacs, & Weissman<sup>18</sup> in 1979 was used. The internal consistency of scale was .89 and inter-rater reliability was .83.

#### 2. Kessler Psychological Distress Scale (K10)

In order to measure psychological distress, Kessler Psychological Distress Scale Developed by Kessler et al<sup>19</sup> was used. It is a self-report measure consisting on 10 items based on depression and anxiety symptoms.

#### 3. Multidimensional Scale of Perceived Social Support (MSPSS)

Perceived social support was measured by Multidimensional Scale of Perceived Social Support (MSPSS) which was developed by Zimet, Dahlem, Zimet & Farley<sup>20</sup> in 1988. It measure Perceived social support for family, friend, and significant others. Internal consistency of scale was .88 whereas test-retest reliability was .85.

#### 4. Cognitive Failures Questionnaire (CFQ)

CFQ developed by Broadbent et al<sup>21</sup> in 1982 was used to assess cognitive failures in respondents. It is a self-report measure of perception, memory and motor function. Alpha reliability of the scale was .89.

**Procedure:** First of all, in order to collect data permission was obtained from the MS of different hospitals. After completing all the ethical concerned, participants were approached in different hospitals of Multan by using purposive and convenient sampling technique. Participants were debriefed about the study and informed consent was taken. Then they were requested to fulfill different self-report questionnaires regarding suicidal risk, psychological distress, perceived social support and cognitive impairment. Obtained data was entered in SPSS and different analysis was carried out.

## RESULTS

For the present study, eighty participants diagnosed with epilepsy (Men= 47, Women=33) were recruited in order to examine the relationship between psychological distress, cognitive impairment, perceived social support and suicidal ideation in adults with

epilepsy. Pearson correlation analysis was carried out after entering data in SPSS. Results showed that psychological distress is positively associated with suicidal risk ( $r = .20$ ,  $p = .00$ ) whereas perceived social support negatively associated with suicidal risk ( $r = -.165$ ,  $p = .00$ ). Furthermore, cognitive failure is positively associated with suicidal risk in individuals with epilepsy ( $r = .38$ ,  $p = .00$ ). Additionally, there was negative relationships between perceived social support and psychological distress ( $r = -.190$ ,  $p = .00$ ) and between perceived social support and cognitive failure ( $r = -.002$ ,  $p = .00$ ). Detailed results can be seen in Table 1.

To test another hypotheses independent sample t-test was carried out to examine the gender differences in all

variables of study such as suicidal risk, perceived social support, psychological distress and cognitive impairment in individuals with epilepsy. Results showed significant gender differences on suicidal risk, perceived social support, psychological distress and cognitive impairment in individuals with epilepsy. Men experienced more suicidal risk ( $M = 16.15$ ,  $SD = 3.10$ ), psychological distress ( $M = 54.83$ ,  $SD = 8.98$ ), cognitive failure ( $M = 49.68$ ,  $SD = 5.82$ ) than women with epilepsy. Whereas females ( $M = 28.90$ ,  $SD = 3.93$ ) perceived more social support than males ( $M = 21.86$ ,  $SD = 4.29$ ). Detailed results can be seen in Table 2.

**Table No.1: Table shows relationships between Suicidal risk, Psychological Distress Perceived Social Support and Cognitive failure in individuals with epilepsy**

Variables	Suicidal Risk	Perceived Social Support	Psychological Distress Scale	Cognitive Failure
Suicidal Risk	-	-0.165	0.209	0.382
Perceived Social support		-	-0.190	-0.002
Psychological Distress			-	0.131
Cognitive Failure				-

Note.  $N = 80$ ,  $p < 0.05$

**Table No.2: Table shows the gender differences on the constructs of Suicidal risk, Psychological Distress, Perceived Social Support and Cognitive failure in individuals with epilepsy**

Variables	Gender	N	M	SD	t	p
SR	Men	47	16.159	3.102	2.408	0.020*
	Women	33	13.739	5.150		
PD	Men	47	54.873	8.980	3.867	0.000***
	Women	33	46.963	9.049		
CF	Men	47	49.681	5.829	5.210	0.000***
	Women	33	40.392	8.988		
PSS	Men	47	21.863	4.291	7.589	0.000***
	Women	33	28.907	3.931		

SR= Suicidal risk, PD= Psychological Distress, CF= Cognitive failure, PSS=Perceived Social Support

## DISCUSSION

Present study examined the relationship between Suicidal risk, psychological distress, perceived social support and cognitive failure in the individuals with epilepsy. For this purpose Pearson correlation was carried out. Results revealed that there was significant positive relationship between suicidal risk and psychological distress in individual with epilepsy. Previous researches also documented the same results that psychological distress like depression, anxiety, and other psychological comorbidities exacerbate and proved to be risk factor in suicidal ideation in individuals with epilepsy<sup>22</sup>. Furthermore results of present study revealed that cognitive failure and suicidal risk were positively associated in individuals with epilepsy. Reason behind that individual with epilepsy experienced cognitive failures such as poor memory, concentration and speed of information

processing even they performed everyday life activities<sup>17</sup>. So the cognitive impairment becomes source of distress and mental burden for the individuals with epilepsy that exacerbate the suicidal risk.

Additionally, results indicated that there was negative relationship between perceived social support and suicidal risk in individuals with epilepsy. Pakistani culture is a collectivistic culture where values and concerns are shared with each other. In this culture usually the individuals with some deficits or physical or mental disabilities received the extra social support, sympathy and extra care particularly from their family members, and friends that increase the psychological well-being of such kind of individuals that lessen the chance of suicide.

Results of present study revealed that there is negative relationship between perceived social support and psychological distress and cognition failure. Previous studies evident that deficiency or lack of perceived

social support associated with higher level of psychological distress and poorer physical health<sup>14</sup>. Social supports proved to be necessary and important predictor in lessen the psychological distress in patients with severe diseases<sup>15</sup>.

Gender differences were also examined by carried out independent sample t-test in individuals with epilepsy on suicide risk, psychological distress, cognitive failure and perceived social support. Results indicated that there was significant gender difference on the variables of suicide risk, psychological distress, cognitive failure and perceived social support. Results revealed that men with epilepsy had higher risk of suicide, psychological distress, and of cognitive failure than women with epilepsy whereas women with epilepsy experience more social support than men with epilepsy. Previous study results consistent with present study that men are higher at suicide risk than men. Previous study revealed that nonfatal injuries were most common in women than men whereas the rate of complete suicide was higher in men than women<sup>23</sup>.

Presents study revealed that women with epilepsy had higher score on perceived social support than men. Previous study results supported the present study findings as it was concluded that women with epilepsy reported higher perceived social support than men with epilepsy<sup>24</sup>. Another previous study concluded that women received higher familial support than men with epilepsy<sup>25</sup>. Underlying reason behind these findings may be the emotional and sharing nature of women. Women tend to share their feeling and more rely on social support and maintain relationships whereas men in our patriarchal society considered the dominant and strong figure. For men it seems odd to share their weakness and miseries and they considered strong and fearless subjects.

## CONCLUSION

Clinicians and other practitioners should also take into consider psychological and social factors in the treatment of individuals with epilepsy and referred to them for psychological intervention to lessen their psychological distress such as anxiety, depression and suicide risk so that the overall quality of life of individuals with epilepsy will improved. Furthermore, social support proved to be an important variable that lessen the suicidal risk, psychological distress, and cognitive failures. So, the availability of social support can be enhanced by disseminate the awareness about the epilepsy and value of social support in its better rehabilitation by conducting different seminars, and workshops in society.

**Conflict of Interest:** The study has no conflict of interest to declare by any author.

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