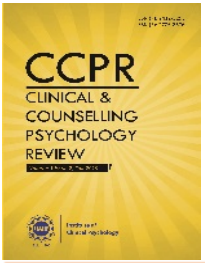

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Article: **Comparison of Anxiety and Depression among Epileptics and Non-Epileptics in Peshawar**

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Comparison of Anxiety and Depression among Epileptics and Non-Epileptics in Peshawar

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Abstract

The current study aimed at differentiating between depression and anxiety levels in epileptics and non-epileptics. The sample included a total of N=200 participants, of which n=100 were epileptics and n=100 were non-epileptics. The sample was drawn from Peshawar's various hospitals and medical institutes. Beck Depression Inventory and Beck Anxiety Inventory were employed to assess depression and anxiety in the participants. Independent sample t-test was used for data analysis and hypothesis testing. It was assumed that epileptics may have higher levels of depression and anxiety than non-epileptics. The study confirmed the above assumption since epileptic patients were shown to have higher levels of sadness and anxiety.

Keywords: anxiety, epilepsy, non-epileptic seizures, sadness

Introduction

Epilepsy is a neurological condition that causes unprovoked seizures on a regular basis. A seizure is a sudden occurrence of abnormal electrical activity in the brain (Yemadje et al., 2011). A seizure is produced by excessive nerve-cell discharge in the brain, which generates unexpected abnormal body function such as frequent loss of awareness, an unnecessary muscular activity, or sometimes loss of it, or irregular or abnormal sensation. The excitation or excessive discharge of nerve cell may exist in a small area of the brain (a localized lesion or focus) which either arise to partial seizure or immediately spread in the whole brain and spinal cord from a small area giving rise to generalized seizures (Dekker, 2002).

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Several people suffer from epilepsy for few years but some suffer throughout their life. There are two main types for epilepsy, one is called symptomatic epilepsy which may occur after specific identifiable events (e.g. head injury, asphyxia, meningitis), whereas the other one is idiopathic epilepsy which may happen without any identifiable event (Kerson et al., 1999).

According to the World Health Organization (2016), epilepsy seizure creates uncontrollable movements and too much electrical disruption in the brain which can disturb any part of the body or the whole body which can be followed by unconscious and impairment of bowel function or loss of bladder.

Although epilepsy is a medical illness yet can also have some psychological consequences that may negatively impact the patient's personality. Temporal lobe epilepsy has a greater impact on the personality of persons who suffer from it (temporal lobe epilepsy is a disorder of the nervous system followed by unprovoked and regular focal seizures that arise in the temporal lobe of the brain) (Stith, 2015) because it is associated with individual emotional responses which lead to personality disorder (Hills & Bater, 1992). It can also give rise to panic disorder, post-traumatic stress disorder, generalized anxiety disorder, and obsessive-compulsive disorder (Heersink et al., 2015). To be epileptic means being exposed to the fear of seizure, having complications in personal or working relationships, and being confronted with unfairness in society. The unpredictability of seizures and attacks is the resource of insecurity and fear which the epileptics constantly feel that they are in a threat situation and are anxious about the occurrence of fits in public. This fear leads to the feeling of shame and ultimately causes social isolation (Moselhy, 2011).

The brain activities of epilepsy affect the mood, behavior, and cognitive performance of the persons suffering from it; also, other people's attitudes toward his or her impairment may disrupt the epileptic individual's behavior and mood. Furthermore, an epileptic's psychological and social adjustment may have an impact on his or her epileptic experiences; epileptics encounter. Several cultural, psychological, and psychosocial challenges are the result of all of these elements (Betts et al., 1976). In addition to feeling

lonely as a result of social isolation, approximately 20% of epileptics investigated that they have defied close friends (Hills, 2007). Even though some epileptics lead a usual or normal life, free from cognitive or emotional difficulties, an important number of them suffer from psychiatric disturbances containing anxiety disorder and mood disorders (Kimiskidis et al., 2007).

Anxiety is described as a state of mind in which one is preoccupied with the possibility of something awful happening in the future. In DSM V, it contains excessive fear and behavior disturbance. It is a Latin word that means discomfort and distress. Fear and anxiety interact with one another from time to time, but they are two distinct phenomena (Vazquez & Devinsky, 2003).

In generalized anxiety disorder, the person has persistent anxieties or fears, and their daily activities are disrupted or they are continuously thinking that something bad is going to happen. Insomnia, restlessness, stomach distress, exhaustion, and other physical discomfort are the symptoms of generalized anxiety disorder. Individuals with panic disorder undergo panic attacks that are overwhelming and contain physical symptoms such as shortness of breath, dizziness, and extreme perspiration. Throughout these episodes, they also express psychological symptoms (thoughts) like I will go crazy, I am going to die. These attacks occur for no apparent causes. OCD people have continuous fear and thoughts that activate anxiety (obsession) and force them to perform certain actions repetitively to relieve their anxiety (compulsion). Hand washing and door checking, for example, greatly disrupt a person's life (Smith et al., 2018).

It’s an illogical or unfounded kind of fear-specific scenario. Phobias are unconfirmed fears and the person with phobias escapes from the situation or object that elicits his/her anxiety. Their fears could range from being in crowded places, flying in airplanes, and also from harmless things such as high-rise buildings and spiders (Smith et al., 2018). Individuals with social anxiety disorder have encounters with social apprehension and performance-related settings in which they may be scrutinized by others. They are terrified that something they say or do may cause them to be

embarrassed. They are unable to deal with regular scenarios such as eating in public or making small talk (Nordqvist, 2017).

In PTSD (Post Traumatic Stress Disorder), witnessing or part of an excessive traumatic event such as disaster, accident war, the sudden death of a loved one, etc. or an assault can be the leading cause of its onset. The person will have trouble relaxing or sleeping due to constant flashbacks of the incident (Nordqvist, 2017). People with separation anxiety disorder are anxious about being separated from their attachment partners. This illness is most common in youngsters, but it can also affect adults. Headache, nausea, and a sore throat are examples of physical symptoms (Nall et al., 2018).

Environmental factors such as tension from an interpersonal relationship, career, school, and financial issues can all contribute to anxiety disorder. Another factor could be hereditary, such as anxiety condition, which can easily be passed down through the generations. Other medical conditions, such as pharmaceutical side effects, signs, or symptoms of a medical ailment, might also contribute to anxiety (Felman, 2018; Konkel et al., 2015).

The most effective treatment for anxiety is psychological treatment. It includes CBT for anxiety management. Cognitive behavioral therapy's major goal is to modify illogical thinking and behavioral patterns through dialogue sessions with a therapist. In this session, the client will learn how to change his or her irritating mind process and cope with anxiety.

A research was conducted by Pham et al. (2017) to assess the prevalence of and factors associated with, anxiety in epilepsy. The total samples included were 250 epileptics and the hospital anxiety and depression scale were administered. Descriptive statistics and logistic regression were used to measure the prevalence of anxiety and associated factors. The finding of the study showed a high prevalence of anxiety among people with epilepsy.

Kimskidis et al. (2007) measured anxiety and depression in epileptics, and it was concluded that anxiety and depression were found in people with epilepsy. Oliveira et al. (2010) conducted a study to assess psychiatric disorders, 73 patients' socio-demographic and clinical data were collected.

The instrument used were structural clinical interview, Hamilton anxiety scale, Hamilton depression scale, minimal state examination, and brief psychiatric rating scale. Temporal lobe epileptic patients have 70% psychiatric disorders, (49.3%) have frequent mood disorders and anxiety disorders were also common (42.5%) such as generalized anxiety disorder, and obsessive-compulsive disorder in epileptic patients. It was found that temporal lobe epilepsy and psychiatric disorder are related to each other.

Vaswani et al. (2018) proclaim that epilepsy is found to be a neurological disorder that has a negative influence on the life of people with epilepsy. Although this disorder is not permanently cured but antiepileptic medication can easily manage epilepsy. This disorder is also associated with comorbid psychiatric disorders such as anxiety and depression. This psychiatric condition creates complications in the prognosis of epilepsy. A study was conducted in the Pakistan outpatient department of neurology in Civil Hospital Karachi to explore the frequency of anxiety and depression among Epileptic People. The total sample of the study consisted of 171 epileptic participants. Data were examined statistically. Among 171 epileptic people, Majority of the study participants were females. Most of the participants reported depression from moderate to severe and anxiety was also reported from moderate to severe. Living with epilepsy is a great problem in a stigmatized society like Pakistan. Findings of a study showed a high prevalence of psychiatric comorbid in epileptics such as anxiety and depression. It is also suggested that people with epilepsy may also be treated and investigated for such comorbid psychiatric disorders for better clinical outcomes.

Depression, often known as major depressive disorder, is a type of mental illness. characterized by a deplorable sense of solitude, despair, and melancholy that disrupts a person's thought process. This disorder also disrupted the person's regular activities, leading to suicidal ideas. Depression is a medical condition that has a detrimental impact on a person's mood, behavior, and thinking. Depression can diminish someone's daily life activities and causes an emotional and physical disturbance, It has the potential to impair a person's capacity to perform various tasks (Parekh, 2017). According to DSM-V depression is mentioned as a condition of

mood that is low and feeling of emptiness, as well as a sense of hopelessness, that can disrupt moods and daily living functions (American Psychological Association, 2013).

Major depressive disorder (MDD) was previously known as classical depression and unipolar depression. Almost every day, major depression lasts most of the day. Sleep issues, food aversion, exhaustion, suicidal thoughts, and death gloom are all indications of acute depression. These signs and symptoms may last a week or even months (Lieber, 2018).

Dysthymia is defined as persistent or chronic depression that lasts for two years or longer. Persistent or chronic depression is also known as double depression because it occurs after or after a major depressive episode. Despair or gloominess, difficulty sleeping, changes in appetite, feelings of inadequacy, and social withdrawal are signs and symptoms of persistent depression (Hurley, 2019).

Screaming and temper tantrums are common symptoms of this type of depression in youngsters. Symptoms of disruptive mood dysregulation, include persistent irritation and recurrent behavioral issues in children aged six to twelve. The issue is the same in all three settings: at home, among peers, and at school (Pallarito, 2017).

A depressed or sad mood is one of the affective symptoms. He or she may respond or experience a loss of enjoyment in a normal pleasant movement, wrath, or impatience. Limited concentration in daily activities, avoiding social connection, and changes in movement such as delayed talking, reduced gesturing, and depressed facial expression are all examples of behavioral symptoms. Decreasing or increasing weight, changes in sleep and appetite, weariness, and energy loss are among somatic symptoms. Helplessness, a sense of worthlessness, pessimism, suicidal thoughts, and a loss of motivation are all cognitive symptoms (Lee, 2007). A duration of two weeks is the actual criteria for depression (DSM-IV APA, 1994).

A person with fewer coping methods is more likely leads to depression. The existence of emotional past experiences and violence leads to depression symptoms. Important Occasions Depression can emerge as a result of sadness or loss and also as a result of positive events such as

starting a new career, getting married, or graduating. Grief and sorrow that accompany the death of a loved one are risk factors for depression. Substance misuse may make you feel better for a brief time, but it will eventually worsen your condition (Legg & Holand, 2016).

Depression is a treatable condition, and symptoms can be improved by taking medicine and psychotherapies regularly. There are seven distinct types of psychotherapies used to treat depression, including

Interpersonal counseling therapy is based on the premise that the central aspect of depression is the relationship. The therapy focuses on the patient's interactions with family and friends, as well as their self-perception. The goal of this therapy is for the therapist to help the person examine and repair interpersonal issues with family members, as well as improve conflict resolution and communication skills (Schimelpfeming, 2019).

The idea behind Cognitive behavioral therapy (CBT) is that mistaken beliefs and current ideas, rather than a prior unconscious event, can contribute to bad feelings and actions in an individual. This therapy changes people's thoughts to change their behavior and emotion. It also explains how to be more practical or sensible, which leads to bitter feelings (Legg & Holand, 2016).

In Therapy for Social Skills, the therapist assists the patient in forming a strong bond with his or her partner. The primary purpose of social skill treatment is to assist patients in clarifying their social networks and promoting trust and respect-based communication. Psychodynamic therapy holds that an individual's current problem and inner conflict are linked to previous experiences, hence it is recommended that before seeking a solution, you first acknowledge the source of psychological distress. (Legg & Holand, 2016). This therapy assists the patient in being aware of unconscious desires, impulses, and defensive mechanisms, as well as developing coping methods so that the individual may respond to a stressful circumstance more positively and productively (Barber et al., 2001).

Behavioral activation therapy is a type of treatment that emphasizes the importance of the client's behavior to modify it. The focus of this theory is on the client's cognitive process and overt actions (Turner & leach, 2012).

Behavioral activation intervention encourages people to engage in joyful activities while also improving their social skills. It aims to help patients deal with their negative emotions and create awareness positively (Tull & Mathear, 2018).

Solving problem therapy clarifies the person's ability to manage correctly the (-) effects of stressful events in everyday life. The goal of this treatment is to examine the issue and provided a variety of remedies (Pierce, 2012).

Cramer et al. (2003) inspected the relationships between depression and symptoms of epilepsy. Nationwide community samples were included in the study and used postal questionnaires to survey patients, such as a seizure severity questionnaire to evaluate the frequency of seizures and a depression scale to categorize the level of depression. The result showed that epileptics with depression reported a high frequency of seizures and upset from seizures. Adhikari et al. (2013) conducted a study to find out the frequency of depression among epileptics and to see for any association with demographic and clinical variables. Results of the study revealed a high prevalence of depression among epileptics and associated factors such as younger age group, males with generalized epilepsy have more proven more to depression. Thapar et al. (2009) conducted a study to examine the interrelationship between seizures and psychological variables such as depression, anxiety, and stress. The data on psychological variables were collected through validated questionnaires. The result indicated that depression makes an association between anxiety and stress and also increases the frequency of seizures.

Rationale

Epilepsy is a prevalent neurological or medical illness that affects people of all ages, regardless of their gender or race. Fifty million individuals worldwide suffer from epilepsy. Psychological and social disorders, which are widespread in epileptics, have been shown in the literature to be more debilitating than the seizures themselves. Social isolation, anxiety, and despair are just a few examples (Mirnics et al., 2001). In another study, anxiety and depression existence were found in epileptics

and mostly found in seizures (Partial) (Indaco et al., 1992). Another study found that epileptics are prone to both despair and anxiety (Kimskidis et al., 2007). Epileptics, depression, and anxiety are studied mostly but the current study is the first to give a comprehensive study on the study of epileptic and non-epileptic based on anxiety and depression in Peshawar (KPK), Only a few studies comparing epileptics and non-epileptics have been carried out.

In a world where the majority of people have normal brain function, being an epileptic is one of the most difficult challenges to overcome. Epilepsy is a physical condition that also has psychological ramifications for people who suffer from it. This study demonstrates how depression and anxiety affect people's lives when they are confronted with everyday challenges. It looks into how a person's life is altered when epileptic seizures come without warning. The basic issue is that seizures have an impact on their psychological well-being and raise fear and depression. This research leads us to believe that every hospital should have a psychologist who can assist patients in accepting their epilepsy and treating their anxiety and sadness.

Objective

To assess the levels of anxiety and depression among epileptics and non-epileptics.

Hypotheses

Epileptics will have a higher level of anxiety and depression as compared to the opposite group (Non-epileptics).

Methodology

Participants

Sample size for this research was N=200, with epileptics n=100 and non-epileptics n=100; recruited using the Purposive sampling. For this study 18 to 45 years was counted as the age range. This study only included epileptics and non-epileptics. Participants with other psychiatric disorders were not allowed to participate.

Instruments

Demographic Sheet

A thorough demographic sheet was employed for the current investigation. This demographic sheet included information on the participant's education, job status, age, marital status, family members, gender, and medical history (medical). Depression and anxiety were among the factors and scales that were considered.

Beck Depression Inventory (BDI)

Beck et al. (1961) created the Beck Depression Inventory, which consists of 21 questions answered on a four-point Likert scale ranging from 0 to 3. It assesses people's attitudes, personality traits, and depression symptoms. Internal consistency of the BDI with alpha coefficients of.86 and.87, respectively, for non-psychiatric and psychiatric populations (Beck & Robert et al., 1988).

Beck Anxiety Inventory (BAI)

BAI was created by Beck et al. (1988). The self-report questionnaire has 21 multiple-choice items that assess adolescent and adult anxiety levels. It can tell the difference between depression and anxiety. The age range for measuring anxiety is 17 to 80 years old. Each issue contains four possible responses on a four-point Likert scale: Not at all, Mildly, Moderately, and Severely. The doctor assigned the following standards to each response: 0 represents not at all, 1 represents somewhat, 2 represents moderately, and 3 represents badly. The sum of all 21 things' scores, can range from 0 to 36 points. Beck anxiety inventory has an internal consistency of .92 to.94 and test-retest reliability of.75.

Procedure

In this study, numerous institutes, and hospitals were sought for data collecting, the epileptics' samples data were collected from KTH and LRH and the non-epileptics data were collected from Shaheed Benazir Women University and Peshawar University in Peshawar. The goal of the study was explained to the participants. The participants are informed that the information acquired will be kept private by the researchers. Following informed consent, each participant was given a booklet including the two tests indicated above, as well as a demographic sheet, to which they were asked to respond. After data collection t-test was applied to generate the results after data collection.

Results

Table 1

Difference of Anxiety and Depression in Epileptic and Non-Epileptic (n=200)

	Epileptics (n=100)		Non-Epileptics (n=100)		T	p	Cohen's d
	M	SD	M	SD			
Anxiety	42.08	4.64	10.24	5.01	46.62	0.000	6.59
Depression	30.99	10.63	9.72	4.69	18.31	0.000	2.59

Table 1 Above results support the hypotheses 1 and it is found that epileptic is found high on anxiety and depression as compared to non-epileptic. Epileptic was found (M=42.08, SD=4.65, t=46.62, p>.01 with Cohen's d=6.59) as compared to non-epileptic based on the anxiety variable, and Epileptic was found depressed (M=30.99, SD=10.63, t= 18.31, p>.01) and Cohen's d=2.58 as compared to non-epileptic

Discussion

The researchers wanted to investigate anxiety and depression in epileptics and non-epileptics in the current study. According to first hypothesis epileptics might have higher levels of anxiety and depression than non-epileptics. Epilepsy is linked to neurobiological and psychosocial variables that induce depression and anxiety in epileptics such as seizure type, the intensity of seizures, medicine use, mostly unpleasant life episode, low-self-esteem, and other factors. The difference between epileptics and non-epileptics was shown to be significant.

In comparison to non-epileptics, epileptics experience a high level of anxiety and depression, as shown in Table 1. Our hypothesis is also supported by the literature.

Indaco et al. (1992) found that 50% of people with epilepsy found complete existence of DSM-3 criteria. Thapar et al. (2009) conducted a research to assess the Interrelationship between seizure and psychological variables such as depression, anxiety, and stress. The result indicated that

depression makes an association between anxiety and stress and also increases the frequency of seizures.

Another research was conducted by Fiest et al. (2013) about depression in people with epilepsy and the association between epilepsy and depression. It was concluded that epilepsy was significantly associated with depression and depression was highly common in epileptic people.

Anxiety was studied among two different epileptic patients such as frontal lobe epilepsy and generalized epilepsy by Tang et al. (2012). The Hamilton Anxiety Scale was used to assess the anxiety of the 78 individuals in the study. Patients with frontal lobe epilepsy exhibit more anxiety symptoms than generalized epileptics, according to the findings of the study.

According to Balibey (2015), different psychological issues like anxiety and depression are regularly twined among patients. The coexistence of psychiatric disorders has a negative impact on improving quality of life and obtaining appropriate treatment. The purpose of another study was to determine the differences between depression and anxiety in epileptic and multiple existing groups of epileptics, and their relation with illness duration and seizure frequency. 41 epileptic men (13 with temporal lobe epilepsy) and 48 healthy men were included in the study. Anxiety (26.8%) and depression (34.14%) were found to be higher in epileptics than in the control group. Extra Temporal lobe epileptics reported higher levels of anxiety and depression than the temporal lobe epileptics. Between disease duration and anxiety or depression inventory scores, no relationship was found. Epileptics had a significant risk of depression and anxiety, according to the findings.

Conclusion

This study investigated the differences of anxiety and depression between epileptics and non- epileptics. There was a significant difference between the two groups. Epileptics have irregular brain functioning and frequent seizures, which can lead to psychological issues including depression and anxiety. Non-epileptics are people who do not have epilepsy and have normal brain function. They are not affected in the same way as

epileptics are. In comparison to non-epileptics, epileptic patients experience a higher level of depression and anxiety.

Implications

This study confirmed that epileptics require assistance and care. Friends, parents, siblings, and coworkers should exercise caution when dealing with epileptics with anxiety and depression. In the hospital, the neurological department must appoint a psychologist to assist epileptics with psychological issues so that they can be free of such challenges and accept their disease. Patients must accept their conditions and learn to deal with it to progress in life. When people accept their disorders and their families and society provide social support, they experience less anxiety and depression.

Limitations and Suggestions

1. Non-epileptics and epileptics participated in this study. More research on different forms of epilepsy is needed.

2. Men made up a larger proportion of the current study's participants than women. The number of women participants in further studies could be increased, and the study should be expanded to cities other than Peshawar.

3. In the current study, samples were gathered from only one culture and the research was conducted solely in KPK; however, future research might be undertaken in a variety of cultures.

4. The current study only looked at certain psychological disorders like anxiety and depression; future research could look into additional psychological issues like low self-esteem and personality disorder that are linked to epilepsy.

5. To investigate in different cultures such kinds of studies by putting different psychological factors as an aim of the study.

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