



A STUDY OF COGNITIVE FUNCTION OF PEOPLE EPILEPSY WITH QUALITY OF LIFE

Usha Banerjee

Research Scholar Sunrise University Alwar

Dr. Manju Shukla

Professor Sunrise University Alwar

ABSTRACT

The purpose of this research is to examine how good and negative emotions contribute to a person's overall feeling of well-being (which is operationally defined as their "quality of life"). After reviewing the research on cognitive rehabilitation for people with epilepsy, one thing stands out: there is a lot of room for improvement in this area. One of the primary goals of this research is to determine the impact that demographic factors like age, sex, education, marital status, occupation, and income have on a variety of psychosocial factors like family history, emotional adjustment, interpersonal adjustment, vocational adjustment, financial status, adaptation to seizure, medication, and medical management, cognitive ability, disability, and quality of life. To put the theories to the test, a suitable technique of research was developed. The findings have implications for classifying psychosocial issues, developing experimentally determined independent risk factors, identifying general aspects of psychopathology, and designing efficient and successful treatment plans.

KEYWORDS: Cognitive Function, People Epilepsy, Quality Of Life, cognitive rehabilitation, psychopathology

INTRODUCTION

Epilepsy is considered as a medical and social label that stigmatizes individuals with epilepsy. The stigma associated with epilepsy is based on the occurrence of seizure. The fear about seizure, the ever present dread of losing control over one's body and related aspects of epilepsy disrupts perception of control. Dependency on anti— consultants, social and economic restrictions placed on some people who have epilepsy result in diminished sense of control on oneself. Researchers have found that an individual's diminished sense of control has serious physiological and psychological consequences in general. It is likely to produce feeling of helplessness, depression, anxiety and low self-esteem. The social stigma and generalized fear and misunderstanding about epilepsy, may lead to social isolation of people with epilepsy. Rejection and social isolation can lead to depression, anxiety and somatic symptoms. It is

considered that social 1 able "epileptic" is the major cause of the psychosocial problems of people with epilepsy. The commission for the control of epilepsy and its consequences (1978) concluded that the psychological and social problems surrounding epilepsy were more difficult to handle than actual seizure problem itself. Bower and Wood (1978) studied the families of epileptic children. All except four of the parents expressed fear and horror while seeing their child having the first attack. The child with epilepsy is subjected to a number of restrictions. The attitude of teachers at school is one of anxiety and highly risk conscious.

The study conducted by Arntson et al. (1986) examined the relationships between psychopathology reported seizure occurrence, perception of control, stigmatisation and psychosocial measures of health. This study has demonstrated a significant relationship between stigma and epilepsy, helplessness, self-esteem, anxiety, somatic symptoms and epilepsy . The authors suggest that the implication of the study is that r a full understanding of the determinants of psychopathology in epilepsy requires a multi etiological approach encompassing neuro-epilepsy factors, psychosocial factors and medication factors.

Another important finding of the above study is that, the socie-psychological environments like perceived stigma, helplessness, loss of control, self-esteem and life satisfaction seem to be more important than the physical characteristics of seizure activity. Social and economic restrictions, negative social reactions, and loss of personal social control were disrupting and distorting the lives of people with epilepsy. In the above study another important finding is that, patients' perceptions of the severity of the seizure disorder highly associated with feelings of helplessness, external locus of control, life satisfaction & self-esteem. Even well-adjusted persons may fail to react normally to external stress. Reynolds (1981) states that management of seizures is only one of the patients ' problems . He emphasises that management of associated psychological disturbances and social factors should be given due attention even in the absence of overt psychological disorders. This he considers essential in the best control of seizures and stresses that instead of unnecessary drug manipulation the important psychological aspects should be managed so as to get optimum seizure control.

Configuration of Psychosocial Problems

Dodrill (1983) states that psychosocial problems do exist in patients with epilepsy in systematic configurations which can be objectively specified. The author has found that on the average people with epilepsy have emotional problems at the foremost and also have significant interpersonal, vocational, financial concerns and problem in adjusting to their seizures. He found that approximately two thirds of the adults with epilepsy can be classified in one of the following 6 types: -

1. Emotional - financial.
2. Vocational-financial.
3. Emotional -Adjustment to seizure.
4. Emotional-vocational.

5. Emotional -Interpersonal.
6. Vocational -Adjustment to seizures.

In another study, Dodrill and Batzel (19 8 1) demonstrated that when the extents of psychosocial problems are compared with one another, emotional and financial concerns were most frequently identified as the greatest difficulties, although problems pertaining to job were nearly as great. In their study people with epilepsy, problems of emotional adjustment emerged as the most prevalent based on profile analysis. The following combinations were seen most frequently: Emotional adjustment-interpersonal adjustment (158 of all cases) ; Emotional adjustment-Vocational adjustment (13%) ; Emotional adjustment-financial status (16%) . Emotional adjustment and adjustment to seizures (13%) and vocational adjustment and financial status (12%). The authors conclude that vast majority of individuals with epilepsy display only a handful of patterns of major psychosocial problems. It was further observed that problems related to family background were relatively rarely observed and very rarely occurred in combination. Rare combinations provided further evidence that psychosocial problems in people with epilepsy follow certain patterns which can be identical. As the problems are present in patterns, appropriate therapeutic interventions based on the individual problem pattern would only produce expected changes in people with epilepsy.

While dealing with the psychosocial problems of people with epilepsy, care should be paid to the patterns of problems the individual exhibits. The most commonly seen emotional problems are neurotic like concerns presenting with the features of anxiety, depression, somatic concerns ,poor self-image. When such a problem comes to the fore it needs a particular therapeutic approach. The individual with financial problem and emotional problems would require a particular approach; while a person with emotional problems in combination to the interpersonal adjustment would require a different approach. Some may require appropriate strategies to cope with emotions, some may require to adjust and adopt to the interpersonal situations and still others may require employment counseling and placement. Hence, a thorough understanding of the problem would only solve the psychosocial difficulties of the person with epilepsy.

GENERAL PSYCHOPATHOLOGY

Herman and Whitman (1984) propose a conceptual framework for understanding the precursors of psychopathology in epilepsy. They consider that the overall precursors of psychopathology in epilepsy fall into three major categories namely biological, psychosocial and drug related. The psychosocial sphere include8 the unique stress and problems associated with the disorder. In epilepsy, many factors outside of those biological factors play very significant roles in the determination of psycho—pathology.

Generally, under psychopathology a wide range of behavior and personality characteristics are evaluated using diverse methods to assess general psychopathology in epileptics. Comparison of epilepsy with healthy controls have shown increased psychopathology in people with epilepsy. Stevens (1982) states that many published reports on psychopathology in epilepsy imply casual relationships between epilepsy and psychopathology or a variety of unpleasant personality traits.

When appropriate controls are employed, it appears that it is not epilepsy alone, including TLE, that is the chief risk factor for psychopathology, but Abbrain damage. Whiteman et al. (1984) compared overall level of psychopathology using Goldberg's (1972) sequential diagnostic system in epileptics. They had taken large samples of three groups comprising patients with epilepsy, chronic non-neurological disorders and neurological disorders other than epilepsy. They found that overall rate of psychopathology was not elevated in epilepsy. However, they found that in the patients who manifested psychopathology the epilepsy group manifested a significantly high rate of psychosis than the neurological control group. The neurological group manifested a higher rate of neurosis than chronically ill controls. It is obvious that overall rates of psychopathology were not elevated in epilepsy in relation to chronically ill and neurologically disordered groups. Those cases which manifested psychopathology, also manifested higher rate of psychosis. The overall psychopathology is similar among these groups. Further they observed that the cause of severity effect does not appear to be simply the presence or absence of TLE, and that TLE itself is not a very important determining variable.

ANXIETY, DEPRESSION AND EPILEPSY

The stress of being an epileptic itself can cause stress disorders. The most common stress disorder in epilepsy is anxiety, other common disorders are depression and obsessional behavior. Occasionally some breakdown into a psychotic state. The psychological difficulties of people with the chronic epileptic disorders pose problem for the researchers. Epileptics can have problem relating to physical as well as psychological aspects. There is general agreement that neurotic disorders are more common in people with epilepsy than in the general population. Graham and Rutter (1968) reported that about one third of children with epilepsy were having significant psychotic disturbance'. In their study Graham and Rutter found that the prevalence of psychiatric morbidity was twice as frequent in children with epilepsy, compared to children who had other chronic physical disabilities and it was about four times higher than the expected rate in the general population of children. Betts (1981b) states that the phobic anxiety and agoraphobia are seen particularly common in people with epilepsy. Porter (1984) states that persons with epilepsy are more limited by the fearful reactions of others than by seizure themselves.

Anxiety has a psychological as well as somatic components consisting of symptoms of feeling of morbid fear, subjective distress and symptoms related to palpitation, nausea, shaking, muscle aching etc. Epilepsy per se can cause irritability and agitation which are commonly found in organic conditions. Usually anxiety may be situational, free floating or phobic in nature. Betts (1981b, 1988), Desai et al. (1976), Virmani et al. (1976) and Rangaswami (1988) reported that phobic anxiety and agoraphobia are commonly seen in people with epilepsy. Betts considers that these are due to fear of having an epileptic attack in a crowded place or in the street. Betts (1981a) after surveying literature of the past 50 years, suggests that depression is the commonest major psychiatric complication of epilepsy. Anxiety, is generally more common in people with epilepsy than expected by chance. Virmani et al. (1976) have stated that about of psychologically symptomatic patients and 67% epileptics had anxiety. Maithreyi (1966) and

Laxminarayana (1967) reported that emotional disturbances were present in 87 .58 and of their epileptic cases respectively.

The anxiety which the epileptics have, increases the frequency of seizures. In the case of people with epilepsy, anxiety may be a reaction to stigmatization of being an epileptic or a true phobic anxiety related to seizure which may precipitate an epileptic attack. In some cases, anxiety can occur as a prodromal symptom of epilepsy. This type of anxiety gets relieved after an attack. Some individuals experience occasional anxiety, as part of the ictal experience. Anxiety and agitation are part of complex partial seizures. People with epilepsy have long—term fear concerning employability, chances of marriage and the risk of parenthood. These fears are to be handled appropriately. Depression is a feeling of pathological sadness, lowering of spirits, feeling of worthlessness, guilt and self-blame. It is associated with sleep patterns, weight loss, loss of libido, etc. The endogenous depression is more common in people with epilepsy.

They need family support which would enable them to preserve their confidence in their abilities, and protect them from the disabling effects of depression. Mackey (1979) and Williams (1956, 1981) found that depression was more common in people with epilepsy than in the general population. Betts (1981) and Mitton and Locke (1982b) consider that depression and anxiety are the most common behavioral concomitants of epilepsy. Most epileptics, after real ising that they are having epilepsy, go through a painful period of adjustment. This is because of social prejudice and the effect of the illness on himself and his family.

Some people with epilepsy develop hysterical symptoms. Slate (1965) stated that cases which were diagnosed as hysteria often turned out to be organic or psychiatric cases. Hence, care must be taken in diagnosing hysterical fits and distinguish it from genuine ones. The existing literature on affective disturbance in epilepsy clearly suggest that affective disorders are major interracial behavior problems associated with epilepsy (Gunn 1977, Trinible and Perez 1980, Betts 1981, 1988, Robertson et al. 1987, Kogeorgos et al. 1982, Rangaswami, 1988). Hermann and Whitman (1984) reviewed the literature on epilepsy and depression and concluded that affective disorders are major interracial behavioral problems associated with epilepsy.

Betts (1981) considers that depression and anxiety symptoms can also occur side by side. Depression or anxiety or a mixture of the two are commonly seen in people with epilepsy. Robertson et al . (1987) found that of the population studied had moderate depression. Other important features found were high trait and state anxiety.

QUALITY OF LIFE

Research on quality of life in psychology and medicine has increased in the intensity since 1964 with the emphasis given for this concept by the then president of America Lyndon B. Johnson. He has stated that goals cannot be measured based on the bank balance but can be measured in the quality of lives of the people. In their study Virmani et al. (1976) have found that people with epilepsy had shown specific disturbances in the area of personal perception or body Gestalt. They observe that, these patients had disturbed self-perception or body schema, feeling of inadequacy, insecurity and anxiety. These resulted in lowered self-esteem and confidence. They further state that premorbid personality, cultural background, economic security, family

integration are some of the factors influencing the quality of personal, educational and social adaptation.

The concept of quality of life has been phenomenally described as discomfort and psychological boredom. Beck (1987) states that elements of fatigue, anxiety and depression seems to be the core symptoms of dysfunction in quality of life. Quality of life has great importance in all aspects of planning medical management Lehman (1983) opines that quality of life is a subjective matter reflected in sense of global well-being. Williams (1988) emphasizes the importance of measuring quality of life as it is essential in understanding the patient.

For people with epilepsy, the experience of complex, frightening auras, frequent major convulsions with threat to life and/or danger to body will lead to greater restriction of activity, and distortion of social interaction and vocational problems. The stigma attached to epilepsy, the loss of self-image and the onset of a chronic illness, would have various implications for persons with epilepsy. The impact of this illness and the social environment adversely affect the sense of well-being (Virmani and Swahey 1966, Agnihotri 1972, Rodin et al. 1972, Virmani et al. (1973) . Fenton (1981b) states that the potential risk of loss of consciousness and self-control during the attack would be a potential threat to the individual 's feeling of well-being. The feeling of dependency, lack of social skills, low self-esteem are usually acquired because of being an epileptic. These would cause problems in finding friends, marital partner, and also suitable job. These would lead to social isolation, feelings of dejection and frustration.

Ärntson et al . (1986) wrote that perceived stigmata helplessness, and external locus of control are found to be significantly associated with increased depression, anxiety, somatic problems and decreased life satisfaction. The management of people with epilepsy should aim at controlling epilepsy and also restoring the individual to the normal life. It is possible that the adversity faced by chronic patients in many areas of life may upset and impair the quality of life.

DETERMINENTS OF PSYCHOPATHOLOGY IN EPILEPSY

Determinants of psychopathology in epilepsy are quite controversial. This could be because of the involvement of various factors in the causation of psychopathology in epilepsy. Researchers do no contest about the observation that the psychopathology in epilepsy is significantly elevated in relation to general population. Hermann and Whitman (1986) have identified three hypotheses which explain the psychopathology in epilepsy .

They are neuroepilepsy variables medication variables and psychosocial variables.

The seizure related risk variable which are primary precursors of psychopathology in epilepsy are: etiology of epilepsy, laterality of lesion, duration of the disorder, presence of multiple seizure types, seizure control etc. Anticonvulsant drugs have significant role in the etiology of psychopathology in epilepsy.

The specific psychosocial variables studied are: fear of seizures, perceived stigma, adjustment to epilepsy, Locus of control, life event changes, social support, socio—economic status etc.

Hermann and Whitman (1986) state that these variables are implicitly considered to be independent risk factors. When the patient possesses a number of such factors, the greater is the probability the particular patient will have for psychopathology, these authors consider that,

these variables may not be independent of one another, but may inter correlate and reflect a more general factor.

Hence, a full understanding of the determinants of psychopathology in epilepsy requires a multi etiological approach comprising neuroepilepsy factors, psychosocial factors and medication factors. team approach to epilepsy is essential for the patient's well-being.

Psychosocial Model of Epilepsy

Attempts to understand the functioning of epilepsy have mostly ignored the role of psychosocial factors. The neurological model rarely focusses on psychosocial functioning. A substantial body of literature in this area is descriptive. It examines the extent of psychopathology arraign people with epilepsy compared to non-epileptic . These studies were considered to be theoretical and not offering any explanation of casual processes though they have contributed to our knowledge. This is because the epilepsy research has predominantly adapted a mechanist orientation. Hence, understanding psychosocial aspects of epilepsy should be based on a complex multicausal view of functioning in people with epilepsy. The study of epilepsy should integrate biological and psychosocial factors as contributing to functioning in epilepsy. In this connection Engle's (1982) biopsychosocial model would serve the purpose. Developing such a model would require theoretical formulations and bridging several disciplines.

Epilepsy shares many characteristics with other chronic disorders. sense of uncertainty may be acute in epilepsy because of the dramatic, unpleasant and unpredictable nature of seizures. Occurrence of seizures may be frequent, occurring for years and the individual has extensive experience with uncontrollable seizures. The seizures have physical and social consequences. They become important events in the individual's life. The seizures are negative and the inability to control seizures are psychologically threatening, and enduring. The experience of having uncontrollable, unpredictable seizures are likely to lead to the development of learned helplessness .

The development of learned helplessness is likely to lead to certain behavioral deficits to occur among people with epilepsy. They experience passivity, lack of motivation, depression and perform poorly on cognitive tasks. Authors have reported underachievement, (Milne 1974),non-competitiveness (Goldin and Margo line 1975) and depression (Betts 1974, 1981, Mittan and Locke 1982a).

Devellis and Devellis (1986) propose a tentative model of psychosocial functioning in epilepsy. They favor a multivariate view of epilepsy and provide examples of variables of potential relevance to epilepsy. This model gives an example of how the relationships among biological social and psychological variables lead to psychosocial functioning.

They conceive that in the case of TLE, it is related to perceived predictability, and uncontrollability of seizures. Early onset leads to learned helplessness. These in turn result in the type of psychosocial functioning.

This model emphasizes the importance of viewing epilepsy from multi determinate, theory-based conceptualization, It represents the time complexity of biological, psychological and social aspects of epilepsy.

CONCLUSION

In the case of chronic group, people with low income experience significant distress in the spheres of emotional adjustment, interpersonal adjustment, medicine and medical management. Type of epilepsy generalized epilepsy and partial complex epilepsy do not show difference in their manifestation of psychosocial problems and in their experience of quality of Life. The effect of frequent seizures on the people with epilepsy is felt in the areas of interpersonal adjustment, vocational adjustment, overall psychosocial functioning, cognitive functions and quality of life. The age at onset of epilepsy plays significant role. The people with early age of onset of epilepsy, experience significant problems on all the areas studied. People with adolescent onset experience more problems than adult onset epilepsy. The people with late onset, experience poor quality of life. Presence of aura leads to more vocational adjustment problems. No difference manifested in other areas. The presence of a psychotic episode results in increased distress in emotional adjustment, interpersonal adjustment, cognitive functions and overall psychosocial functioning. The effects of longer duration of epilepsy lead to more problems in the areas of vocational adjustment, finance and cognitive functions. The people who get the seizure at any time have more problems and experience poor quality of life compared to those who get the seizure during a specific period of time. The impact of irregularity of medication is felt in the areas of emotional adjustment, interpersonal adjustment and overall psychosocial functioning. The presence of family history of epilepsy causes increased problems in interpersonal adjustment. The primary variables which predict significantly the quality of life of people with chronic epilepsy are emotional adjustment, interpersonal adjustment, vocational adjustment and adjustment to seizure. With regard to the whole group, the variables which predict significantly the quality of life of people with epilepsy are financial status and emotional adjustment. In the case of recent onset group, no variable emerges as the predictor of quality of life, whereas for the seizure controlled group the significant predictor of quality of life is adjustment to seizure. Among the socio-demographic and certain epilepsy variables, the significant predictors of overall psychosocial functioning are frequency of seizures, income, age, education, nature of work, duration of illness and unemployment. The variables of psychosocial problems, cognitive functions and quality of life cluster into four independent factors.

REFERENCES

1. Arroyo S., Anhut H., Kugler A.R., Lee C.M., Knapp L.E., Garofalo E.A., et al. (2004) Pregabalin add-on treatment: A randomized, doubleblind, placebo-controlled, dose-response study in adults with partial seizures. *Epilepsia*, 45, 20–27
2. Artola, A., & Singer, W. (1993). Long term depression of excitatory synaptic transmission and its relationship to long term potentiation. *Trends in Neuroscience*, 16, 480-487.
3. Ashley, M.J., & Krych, D.K., (1995): Cognitive disorders: Diagnosis and treatment in the TBI patient. In: M.J. Ashley & D.K., Krych (Eds). *Traumatic brain injury rehabilitation*. Boca Raton: CRC Press.

4. Austin JK (1988). Childhood epilepsy child adaptation and family resources. *Journal of child and Adolescent psychiatric Mental Health nursing* 1(1), 18-24.
5. Austin (1998). *Quality of life in Epilepsy Beyond Seizure counts in assessment and treatment* Harwood academic publishers , Netherlands
6. B Dubashi, E Vidhubala, S Cyriac, TG Sagar (2010). Quality of life among young women with breast cancer: Study from a tertiary cancer institute in south India, 47,2 ,142-147
7. Baker and Associates (1997). *Quality of life in Epilepsy Beyond Seizure counts in assessment and treatment* Harwood academic publishers , Netherlands.
8. Baker and Jacoby (2000). *Quality of life in Epilepsy Beyond Seizure counts in assessment and treatment* Harwood academic publishers, Netherlands.
9. Baker, GA ., Smith D.F., Dewey, A., Chadwick, D.W. (1993). The initial development of a health- related quality of life model as an outcome measure in epilepsy. *Epilepsy Research* 16, 65-81.
10. Baker GA, Jacoby A, Buck D, Brooks J, Potts P, Chadwick DW (2001). The quality of life of older people with epilepsy: Findings from a UK community study. *Seizure*, 10, 92–99.
11. Batchelor, J., Marosszeky, J.e., Sandanam, J., & Shores, E.A. (1985). Computer assisted cognitive rehabilitation following severe closed head injury: Preliminary findings. In: V. Anderson, J. Ponsford& P. Snow (Eds). *Proceedings 10th Annual Brain Impairment Conference, Australia: The Australian Society for the Study of Brain impairment*, 229-241.
12. Bawden H.N. and the Canadian Study Group for childhood Epilepsy (1999) The cognitive and behavioural effects of clobazam and standard monotherapy are comparable. *Epilepsy Research*, 33, 133–143.
13. Bear, D.M., Freenan, R., &Geenberg, M., (1984). Behavioral alterations in patients with temporal lobe epilepsy. In: D. Blumer (Ed.), *Psychiatric aspects of epilepsy*. Washington, DC: American Psychiatric Press, 197-227.
14. Bear, D.M., &Fedio, P. (1977). Quantitative analysis of interictal behaviour in temporal lobe epilepsy. *Archives of Neurology*, 43, 454-467.
15. Beats BC, Sahakian BJ Levy R (1996). Cognitive performance in tests sensitive to frontal lobe dysfunction in the elderly depressed. *Psychological Medicine*,26,591-603.