

ORIGINAL ARTICLE

Cross Sectional Study of Quality of Life and Personality Profile of Epileptic Patients in a Tertiary Care Hospital

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ABSTRACT

Introduction: Epilepsy extends beyond the occurrence of seizures, affecting individuals through a range of neurobiological, cognitive, psychological, and social comorbidities, all of which significantly influence quality of life (QOL) and personality traits. This study evaluates QOL and personality profile patterns in patients with seizure disorders, providing insights into their overall well-being. **Methods:** This cross-sectional study was conducted at Saveetha Medical College and Hospital, Chennai, involving patients from the Neurology outpatient department. The WHO-QOL BREF scale assessed QOL, while the NEO-FFI 3 scale evaluated personality profiles. Data analysis was performed using SPSS software, employing descriptive statistics, Pearson's correlation, and the chi-square test. **Results:** The mean QOL scores were 23.76 ± 3.77 (physical domain), 20.69 ± 3.73 (psychological domain), 9.36 ± 6.23 (social domain), and 28.44 ± 6.23 (environmental domain), indicating significantly lower QOL compared to previous studies. Among personality traits, 50% of participants exhibited conscientiousness, followed by 37.2% with neuroticism. **Conclusion:** This study highlights the substantial disparity in QOL among epilepsy patients and the prevalence of distinct personality traits. Early intervention strategies focusing on both QOL enhancement and personality-based psychological support are crucial for improving overall well-being.

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INTRODUCTION

Epilepsy is a neurological condition that not only causes seizures but also encompasses a variety of neurobiological, cognitive, psychological, and social comorbidities. In India, the prevalence of epilepsy is estimated at 49.3 per 100,000 individuals, with approximately half a million new cases diagnosed each year (1). Epilepsy affects quality of life more significantly than many other chronic illnesses. (2,3). The quality of life (QOL) for individuals with epilepsy is shaped by three main factors: a) Physical – including the frequency and intensity of seizures, as well as the side effects of medications; b) Mental – covering anxiety, depression, emotional health, and cognitive abilities; and c) Social well-being – involving participation in social activities, independence, perceived stigma, and relationships with family and friends. Personality reflects the physical, emotional, social, and mental characteristics of a person. (4). Research has shown that individuals experiencing epileptic seizures may develop maladaptive personality traits, affecting their overall personality development (5).

Furthermore, both epilepsy and associated psychiatric conditions can significantly impair disability, quality of life, and economic productivity. The evaluation of quality of life is a new measure to find out the outcome of epilepsy. Studies related to the assessment of quality of life are uncommon when compared to other chronic diseases like cardiovascular problems, cancer and diabetes (6). In India the community based studies among the epileptic patients evaluating QOL are few. In epilepsy, QOL is assessed by using the specific tools such as Quality of Life in Epilepsy Inventory-89 (QOLIE-89), Quality of Life in Epilepsy Inventory-31 (QOLIE-31) and Washington Psychosocial Seizure Inventory (WPSI), which are widely used among people with epilepsy(7,8,9). In our study we used WHO QOL-BREF19 to assess the QOL and NEO - FFI 3 scale for personality profile. We evaluated the quality of life and the factors contributing to reduced QOL among epilepsy patients in a tertiary hospital. This study aimed to highlight the impact of epilepsy on quality of life and personality profiles.

MATERIALS AND METHODS

Study design and setting

This was a hospital-based cross-sectional study conducted in the Department of Neurology at Saveetha

Medical College and Hospital, Chennai, a tertiary care teaching hospital. The study aimed to assess the quality of life and personality traits among patients diagnosed with seizure disorders attending the neurology outpatient department (OPD).

Study period

The study was carried out over a period of one year, from October 2020 to October 2021.

Study population

All adult patients diagnosed with seizure disorder, as per the International League Against Epilepsy (ILAE) classification, who attended the Neurology OPD during the study period were considered for inclusion.

Sampling technique

Participants were recruited using a simple random sampling method to minimize selection bias and ensure representativeness of the outpatient population.

Inclusion and exclusion criteria

The study recruited participants aged 18 to 40 years with a confirmed diagnosis of seizure disorder who provided informed written consent. Exclusion criteria were applied to individuals who had been seizure-free for at least five years, those with severe or incapacitating medical illnesses, and patients with primary neurological disorders (other than epilepsy) or a history of head injury. Additionally, patients with a previously diagnosed psychiatric illness or any substance use disorder, including nicotine dependence, were excluded from the final sample.

Study procedure

Eligible patients were approached during their routine OPD visits. After obtaining informed consent, participants were interviewed and administered standardized tools. Each assessment session lasted approximately 90 minutes per participant.

The WHO-QOL BREF scale was used to assess the quality of life across four domains—physical health, psychological well-being, social relationships, and environment. The NEO-FFI-3 scale was used to assess personality traits across five domains—neuroticism, extraversion, openness, agreeableness, and conscientiousness.

All assessments were conducted in a private setting to maintain confidentiality. Participants who exhibited significant psychopathology or distress based on their scores were referred to the Department of Psychiatry or Neurology for further evaluation and management.

Data management and statistical analysis

All data were entered into Microsoft Excel and analyzed using SPSS version 21. Descriptive statistics such as mean, median, standard deviation, and proportions

were used to summarize the demographic and clinical variables.

Associations between quantitative variables were assessed using Pearson's correlation test, while associations between categorical variables were tested using the Chi-square test. A p-value < 0.05 was considered statistically significant.

Ethical considerations

Ethical approval for the study was obtained from the Institutional Ethics Committee of Saveetha Medical College and Hospital (Ref. No.: SMC/IEC/2020/09/034). All participants provided written informed consent before participation, and confidentiality of personal and medical data was strictly maintained throughout the study.

RESULTS

Socio-Demographic Characteristics

Table I shows that the majority of participants were in the age group of 31–40 years, with a mean age of 31.31 ± 7.44 years. The gender distribution was nearly equal, though males were slightly higher in number than females.

In terms of religion, more than half (53.2%) were Hindus, followed by participants from other religions. The most common occupation among the participants was agricultural work (23.45%).

Regarding socio-economic status, based on the Udai Pareek scale, the majority (41.5%) belonged to the middle class. Approximately two-thirds of the participants were married, and 41.5% lived in extended families.

Quality of Life (QOL) of the Study Participants

As shown in Table II, the Quality of Life (QOL) among patients with seizure disorder was assessed using the WHO-QOL BREF scale, which revealed a mean physical domain score of 23.76 ± 3.77 (range: 12–31) and a psychological domain score of 20.69 ± 3.73 (range: 9–30). Additionally, the social domain reported a mean of 9.36 ± 6.23 (range: 4–19), while the environmental domain showed a mean score of 28.44 ± 6.23 (range: 10–39).

These findings suggest that the physical and environmental domains scored relatively higher compared to the social and psychological domains, indicating that social and emotional well-being may be more affected among patients with seizure disorders.

Personality Profile of the Participants

According to the NEO-FFI 3 personality assessment, half of the participants (50%) exhibited dominant traits of conscientiousness, followed by neuroticism (37.2%). A smaller proportion showed agreeableness (6.4%),

Table 1: Socio-demographic characteristics of the study participants (n=94)

Demographical Variables	Frequency (n)	Percentage (%)
Age in years		
≤ 20 years	10	10.6
21 - 30	34	36.2
31 -40	43	45.7
41-50	7	7.5
Gender		
Male	48	51.1
Female	46	48.9
Occupation		
Unemployed	4	4.3
Unskilled worker	19	20.2
Skilled worker	16	17.0
Clerical/ shop owner	19	20.2
Executive	1	1.1
Agriculture worker	22	23.4
Self-employed	13	13.8
Socio-economic class		
Lower	21	22.3
Middle	39	41.5
Upper	34	36.2
Residence		
Urban	39	41.5
Rural	55	58.5

Table II: Quality of life (QOL) of the study participants with seizure disorder using WHO- QOL BREF scale (n=94).

Variables	Mean ± SD	Pearson correlation	p value
Physical domain	23.76 ± 3.77	0.905	0.012
Psychological domain	20.69 ± 3.73	0.942	0.008
Social domain	9.36 ± 3.47	0.575	0.059
Environmental domain	28.44 ± 6.23	0.936	0.008
Total score	20.56 ± 5.34		

Table III: Personality profile of the participants using FFI 3 scale (n=94)

Interpretation of neo FFI	Frequency (n)	Percentage (%)
Neuroticism	35	37.2 %
Extraversion	3	3.2 %
Openness	3	3.2 %
Conscientiousness	47	50.0 %
Agreeableness	6	6.4 %
Total	94	100.0 %

while 3.2%each demonstrated traits of openness and extraversion.

This indicates that most participants with epilepsy tended to have organized, responsible, and goal-directed personality traits, while a notable proportion displayed emotional instability or anxiety-prone tendencies reflected by neuroticism.

DISCUSSION

Evaluating the quality of life (QOL) in individuals with epilepsy is crucial for enhancing health outcomes. Health is defined as a complete state of mental, physical, and social well-being, making QOL assessment particularly important in epilepsy. The lifestyle, goals, expectations, and living standards of epileptic patients are significantly impacted. Therefore, improving QOL is a key aspect of epilepsy management (10). In our study, we observed that only 4.3% of participants had an education level beyond PUC, while about a quarter had only primary education. Regarding socio-economic status, 41.5% were in the middle class and 22.3% were in the lower class. Buck D et al. identified education as a strong predictor of QOL in epilepsy patients (11). In this study, the lower education levels and socio-economic status of the patients may have contributed to their significantly lower QOL scores. Limited access to healthcare, poor medication adherence, and social stigma associated with epilepsy significantly contribute to the lower QOL observed in this study. Patients with lower education and socio-economic status may face challenges in seeking timely medical care, leading to poor seizure control and increased psychological distress. Previous research also indicates that younger age, marital status,

higher education, and employment levels are associated with better QOL (12). Recent studies have highlighted the role of socio-economic and educational factors in determining QOL in epilepsy, emphasizing that financial instability and lack of awareness contribute to reduced health outcomes. Similarly, a strong correlation between epilepsy duration and QOL impairment has been established in recent literature. These factors are essential for planning community programs for epileptic patients.

In our study, the majority of patients were married and part of extended families, a demographic trend also observed by Malik YK et al. (13). The social support from these extended families might mitigate some of the social isolation commonly seen in epilepsy patients. The study found that 46% of participants experienced seizure onset between the ages of 11-20, while 33% had onset between 21-30 years. Kaur et al. (14) similarly reported that adult-onset seizures are more common in young and middle-aged individuals. A recent study from Thailand linked depression and anxiety with poor QOL in epileptic patients .

According to the WHO-QOL BREF scale used to assess QOL, our study's mean scores for physical, psychological, social, and environmental domains were significantly lower compared to other studies. For example, Baniya et al. reported mean scores of physical (39.01 ± 4.61), psychological (43.93 ± 8.13), social (52.89 ± 10.44), and environmental (47.14 ± 6.99) domains (15). In contrast, our mean scores were much lower, indicating a compromised QOL in our study population. In contrast to studies conducted in Western populations, where QOL scores are relatively higher, our findings suggest that socio-cultural differences, healthcare access, and societal attitudes toward epilepsy play a significant role in shaping patient experiences . A similar study in another developing country reported comparable QOL scores, further reinforcing the impact of economic and social factors on epilepsy management. The QOL scores across all domains were significantly lower than reported in other studies, highlighting the need for targeted interventions to improve patient outcomes. The mean QOL BREF scores were also higher in other studies, 61.49 ± 12.56 , 53.9 ± 15.8 , and 56.43 ± 10.9 indicating that QOL in our study's epileptic patients is considerably lower(16). The correlation between QOL scores and epilepsy duration was statistically significant ($p < 0.05$), indicating that prolonged disease duration negatively affects patient well-being. Additionally, the association between neuroticism and lower QOL was significant ($p < 0.01$), suggesting a strong link between personality traits and psychological distress in epilepsy patients. These findings suggest that the lower QOL may be associated with factors such as socio-economic status, education, and family structure. All domains except the social domain showed a positive correlation with the duration of epilepsy, with a significant p-value. According to

Tefera et al, a poor HRQOL score was strongly linked to factors such as being single, widowed, or divorced, having a lower education level, lower monthly income, presence of co-morbid conditions, uncontrolled seizures, and the use of multiple medications(17). In this study, Conscientiousness and Neuroticism were the most common personality profiles observed in epileptic patients, consistent with findings from Bonet et al. and Okazaki et al (18,19). This suggests that personality factors such as high levels of neuroticism may contribute to lower QOL, Neuroticism, characterized by emotional instability, has been consistently associated with higher psychological distress in epilepsy patients. Conscientiousness, on the other hand, may serve as a protective factor, promoting better disease management. Patients with high neuroticism scores may be more prone to anxiety, depression, and emotional distress, which could negatively impact seizure control and treatment adherence. Conversely, conscientious individuals may exhibit greater self-discipline and better compliance with medical recommendations, potentially leading to improved health outcomes.

CONCLUSION

We concluded that the Quality of Life (QOL) of the epileptic patients in this study is significantly lower compared to other studies, with a positive correlation between the duration of epilepsy and QOL. Conscientiousness was the predominant personality trait among the participants, suggesting a link between personality and QOL outcomes. This advocates for early treatment interventions for seizure disorder and frequent psychiatric screening to address the psychological and personality-related aspects of epilepsy.

REFERENCES

1. Reynolds EH. The ILAE/IBE/WHO Global Campaign against Epilepsy: Bringing Epilepsy "Out of the Shadows". *Epilepsy Behav.* 2000 Aug;1(4):S3-S8. doi: 10.1006/ebeh.2000.0104.
2. Pimpalkhute SA, Bajait CS, Dakhale GN, Sontakke SD, Jaiswal KM, Kinge P. Assessment of quality of life in epilepsy patients receiving anti-epileptic drugs in a tertiary care teaching hospital. *Indian J Pharmacol.* 2015 Sep-Oct;47(5):551-4. doi: 10.4103/0253-7613.165198.
3. Shetty PH, Naik RK, Saroja A, Punith K. Quality of life in patients with epilepsy in India. *J Neurosci Rural Pract.* 2011 Jan;2(1):33-8. doi: 10.4103/0976-3147.80092.
4. Yazici E, Yazici AB, Aydin N, Orhan A, Kirpinar I, Acemoglu H. Temperament and character traits in patients with epilepsy: epileptic personality. *J Nerv Ment Dis.* 2013 May; 201 (5): 365 –70. doi:10.1097/nmd.0b013e31828e0e3d
5. Devinsky O, Vickrey BG, Cramer J, Perrine K, Hermann B, Meador K, et al. Development

- of the quality of life in epilepsy inventory. *Epilepsia* 1995;36:1089–104. <https://doi.org/10.1111/j.1528-1157.1995.tb00467.x>
6. Cramer JA, Perrine K, Devinsky O, Bryant-Comstock L, Meador K, Hermann B. Development and cross-cultural translations of a 31-item quality of life in epilepsy inventory. *Epilepsia* 1998;39:81–8. doi:10.1111/j.1528-1157.1998.tb01278.x
 7. Dodrill CB, Batzel LW, Queisser HR, Temkin NR. An objective method for the assessment of psychological and social problems among epileptics. *Epilepsia* 1980;21:123–35. doi:10.1111/j.1528-1157.1980.tb04053.x
 8. Skevington SM, Lotfy M, O'Connell KA, WHOQOL Group. The World Health Organization's WHOQOL -BREF quality of life assessment: psychometric properties and results of the international field trial. A report from the WHOQOL group. *Qual Life Res Int J Qual Life Asp Treat Care Rehabil.* 2004 Mar;13 (2):299 – 310. doi:10.18203/2320-1770.ijrcog20205755
 9. Riemann R, Angleitner A, Strelau J. Genetic and Environmental Influences on Personality: A Study of Twins Reared Together Using the Self- and Peer Report NEO- FFI Scales. *J Pers.* 2006 Apr 28;65: 449 –75. doi:10.1111/j.1467-6494.1997.tb00324.x
 10. Jacoby A, Baker GA. Quality-of-life trajectories in epilepsy: A review of the literature. *Epilepsy Behav* 2008;12:557–71 doi:10.1016/j.yebeh.2007.11.013
 11. Buck D, Jacoby A, Baker GA, Ley H, Steen N. Cross-cultural differences in health-related quality of life of people with epilepsy: Findings from a European study. *Qual Life Res* 1999;8:675–85. doi:10.1023/a:1008916326411
 12. Mrabet H, Mrabet A, Zouari B, Ghachem R. Health-related quality of life of people with epilepsy compared with a general reference population: A Tunisian study. *Epilepsia* 2004;45:838–43. doi:10.1111/j.0013-9580.2004.56903.x
 13. Malik, Yogender & Grover, Sandeep & Mattoo, Surender & Kharbanda, Paramjit. (2022). Psychiatric Morbidity and its Impact on Quality of Life in Patients with Epilepsy-A Cross-Sectional-Study.10.4103/jmhbb.jmhbb_132_21. doi:10.4103/jmhbb.jmhbb_132_21
 14. Kaur S, Garg R, Aggarwal S, Chawla SPS, Pal R. Adult onset seizures: Clinical, etiological, and radiological profile. *J Family Med Prim Care.* 2018 Jan-Feb;7(1):191- 197. doi:10.4103%2Fjfmprc.jfmprc_322_16
 15. Baniya GC, Verma K. Prevalence of depression, risk factors, and quality of life in patients with epilepsy in a remote area of western Rajasthan. *Epilepsy & Behavior [Internet].* 2022; 127:108488. doi:10.1016/j.yebeh.2021.108488
 16. Anu M, Suresh K, Basavanna PL. A Cross-Sectional Study of Quality of Life among Subjects with Epilepsy Attending a Tertiary Care Hospital. *Journal of Clinical and Diagnostic Research [Internet].* 2016 Jan 1; doi:10.7860/jcdr/2016/23151.8979
 17. Tefera GM, Megersa WA, Gadisa DA. Health-related quality of life and its determinants among ambulatory patients with epilepsy at Ambo General Hospital, Ethiopia: Using WHOQOL-BREF. *PLOS ONE [Internet].* 2020 Jan 21;15(1):e0227858. doi:10.1371/journal.pone.0227858.
 18. Bonet CNR, Hermann BP, Cook CJ, Hwang G, Dabbs K, Nair VA, et al. Neuroanatomical correlates of personality traits in temporal lobe epilepsy: Findings from the Epilepsy Connectome Project. *Epilepsy & Behavior [Internet].* 2019 Sep 1;98:220–7. doi:10.1016/j.yebeh.2019.07.025
 19. Okazaki M, Ito M, Adachi N, Sunaga A, Shimimitsu N, Muramatsu R. Evaluation of Personality Traits of Patients with Epilepsy Using Revised NEO Personality Inventory (NEO-PI-R). *Journal of the Japan Epilepsy Society [Internet].* 2018 Jan 1;35(3):675– 83. doi:10.3805/jjes.35.675