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Knowledge, Attitude, and Practice of Parents of Children with Epilepsy

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ABSTRACT

Epilepsy is considered to be present when 2 or more unprovoked seizures occur in a time frame of longer than 24 hours. **Objectives:** To determine the knowledge, attitude, and practice of parents of children with epilepsy. **Methods:** This descriptive cross-sectional study was conducted at the Outpatient Department of Pediatric Neurology, National Institute of Child Health, Karachi, Pakistan, from January to June 2025. A total of 262 parents of children aged 1-12 years with epilepsy for ≥6 months were enrolled through non-probability consecutive sampling. A structured 15-item KAP questionnaire (7 knowledge, 5 attitudes, 3 practice) was developed, validated by experts, pilot tested on 20 parents, and showed good reliability (Cronbach's alpha 0.81). Scores ≥12/15 were classified as good KAP. Analysis was performed using SPSS version 26.0, with chi-square applied post-stratification, taking $p<0.05$ as significant. **Results:** In 262 parents, the mean age was 34.6 ± 7.8 years; 117 (44.7%) were fathers, and 145 (55.3%) were mothers. Good knowledge was noted in 209 (79.8%), favorable attitude in 142 (54.2%), and good practice in 122 (46.6%). Overall, a good KAP was observed in 138 (52.7%). Good KAP was associated with urban residence ($p=0.006$), higher education ($p<0.001$), and healthcare professionals as information source ($p=0.002$), but not with gender, age, or income. **Conclusions:** Most parents had adequate knowledge about epilepsy, while attitudes and practices were comparatively less satisfactory. Better knowledge, attitude, and practice were observed among parents with higher education, those living in urban areas, and those who received information from healthcare professionals.

INTRODUCTION

Epilepsy is among the most frequent neurological disorders seen in children [1]. According to the International League Against Epilepsy (ILAE), the condition is defined as the occurrence of two or more unprovoked seizures separated by at least 24 hours, a single unprovoked seizure with a recurrence risk exceeding 60%, or the presence of a recognized epilepsy syndrome [2]. Despite notable global progress in reducing idiopathic epilepsy-related deaths and disability-adjusted life years (DALYs), approximately 52 million individuals were living with active epilepsy in 2021, with more than 80% of the burden concentrated in low- and middle-income countries [3]. Early detection and consistent use of antiepileptic medications can achieve effective seizure control in roughly 70-80% of patients [4]. There has been increasing awareness regarding the effect of having a child with epilepsy has on parents and the reciprocal effect of parental knowledge and attitudes about epilepsy on the affected child [5, 6]. A parental attitude towards epilepsy is significantly related to child outcome, as are seizure history and epilepsy duration [7, 8]. The common misconceptions in epilepsy include the overprotection of epileptic children from their families by preventing them from going to school and participating in sports or social activities [9]. Misunderstandings and misinformation should be recognized and corrected for optimal care [10]. A study evaluating knowledge, attitude, and practice (KAP) of parents towards epilepsy reported poor KAP among 78.2% of parents and good KAP among 21.8% of parents [11]. Another study by Hassan et al reported that knowledge of

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most of the parents was adequate (68.2%), attitude was adequate among 76.4% of the parents, and practice was adequate among 72.5% of the parents [12]. Although global data have been pooled regarding KAP of parents with epileptic children, those data only depict assessments with respect to the local settings.

This study aimed to determine the KAP of parents of children with epilepsy.

METHODS

This descriptive cross-sectional study was conducted at the Outpatient Department of the Neurology Department, National Institute of Child Health (NICH), Karachi, Pakistan, from January 2025 to June 2025. Approval from the institutional ethical review committee was obtained before the study commencement (letter number: IERB-40/2024). A sample size of 262 was calculated using Good Calculators online sample size software [13], anticipated proportion of the parents with good KAP towards epilepsy as 21.8% (p) [11], setting the confidential level at 95% and z as 1.96, and the margin of error at 5% (e), using the formula: n=z2*p*(1 - p)/e2. The inclusion criteria were parents of children of any gender aged 1-12 years who were diagnosed with epilepsy at least six months before the study. Only those parents who were visiting the Neurology Clinic for the usual follow-up of epilepsy were included in the study. The exclusion criteria were those epileptic children who were accompanied by caregivers and not by parents. Epilepsy was defined according to ILAE as the presence of ≥ 2 unprovoked seizures separated by at least 24 hours or previously diagnosed children taking antiepileptic drugs (AEDs) [2]. A non-probability consecutive sampling was used for sample selection. Parents were briefed about the objectives of the study and data secrecy to obtain informed and written consent from them. All of the eligible parents went through complete documentation of their demographics, including gender, age, and residential status (rural/urban). Socioeconomic details such as monthly income and level of education were also documented. Parents were interviewed about their knowledge, attitude, and practice regarding epilepsy by using a questionnaire. This study utilized a structured KAP questionnaire that was specifically developed for this research after reviewing the literature and adapting elements from previously validated tools. The questionnaire comprised a total of 15 items distributed across three domains as seven questions on knowledge, five questions on attitude, and three questions on practices regarding epilepsy. The questionnaire underwent content validation by three subject experts in pediatric neurology, public health, and epidemiology. A pilot study was conducted on 20 parents, not included in the final analysis, to pretest the questionnaire for clarity, comprehension, and cultural appropriateness, and minor modifications in wording were made accordingly. Internal consistency and reliability were assessed using Cronbach's alpha, which yielded a value of 0.81, indicating good reliability. Construct validity was established through factor analysis, confirming the three-domain structure of knowledge, attitude, and practice. The questionnaire was also reviewed and approved by the institutional ethics committee as part of the study protocol. The questionnaire was originally developed in English, translated into Urdu, and back-translated for validation. During data collection, questions were administered in Urdu through interviews to ensure understanding among participants with different educational backgrounds. Scoring was performed by assigning one point for each correct response in the knowledge section and for positive or appropriate responses in the attitude and practice sections, with incorrect or inappropriate responses scored as zero. The maximum possible score was 15. Parents achieving a score of 12 or higher (≥80%) were categorized as having good KAP, while those scoring below 12 (<80%) were categorized as having poor KAP [14]. Monthly family income was categorized as low with PKR<30,000, middle as PKR 30,000-70,000, or high as PKR>70,000 [15]. The statistical analysis was performed using "IBM-SPSS Statistics" version 26.0. The qualitative data were expressed as frequency and percentage. The normal distribution of the quantitative data was checked using the Shapiro-Wilk test. For the representation of numeric variables, means and standard deviations or medians and interquartile ranges (IQR) were calculated. The effect modifiers, like gender, age in groups, residential status, socioeconomic status, level of education, and source of knowledge, were controlled through stratification. A post-stratification chi-square test was applied to see the effect of effect modifiers on the outcome (KAP level), by taking p-value <0.05 as significant.

RESULTS

In a total of 262 parents, the mean age was 34.6 ± 7.8 years, while 117 (44.7%) participants were fathers, and 145 (55.3%) were mothers. There were 160 (61.0%) patients who belonged to urban areas of residence. The main reported sources of knowledge about epilepsy were family or friends (95, 36.3%), media or internet (72, 27.5%), and healthcare professionals (68, 25.6%) (Table 1).

Table 1: Characteristics of Study Participants (n=262)

Characteristics		Frequency (%)
Gender	Male	117 (44.7%)
	Female	145 (55.3%)
Age (Years)	<30	81 (30.9%)
	30-40	110 (42.0%)
	>40	71 (27.1%)

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Residence	Urban	160 (61.0%)
	Rural	102 (38.9%)
Education	Illiterate	59 (22.5%)
	Primary to Middle	50 (19.1%)
	Matriculation to Intermediate	87 (33.2%)
	Graduate or above	66 (25.2%)
Monthly Family Income (PKR)	Low (<30,000)	125 (47.7%)
	Middle (30,000-70,000)	102 (38.9%)
	High (>70,000)	35 (13.4%)
Main Source of Knowledge About Epilepsy	Family / Friends	95 (36.3%)
	Media / Internet	72 (27.5%)
	Healthcare Professionals	68 (25.6%)

Overall, good knowledge was observed among 209 (79.8%) parents, while 53 (20.2%) had poor knowledge. There were 220 (84.0%) participants who had heard of epilepsy, and 193 (73.7%) knew that it is not contagious. Correct recognition that epilepsy can be treated with medications was seen in 180 (68.7%), although only 72 (27.5%) were aware that surgery is a treatment option. Misconceptions were common, with 154 (58.8%) acknowledging that epilepsy is not a mental illness and 152 (58.0%) recognizing a possible genetic contribution (Figure 1).

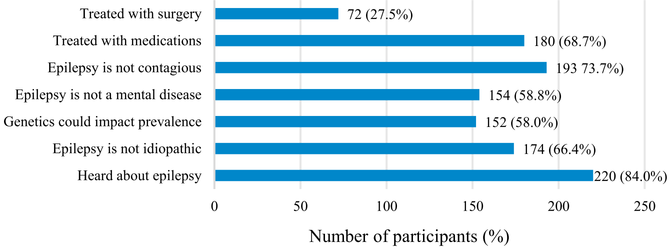

Figure 1: Correct Knowledge of Parents Regarding Epilepsy (n=262)

A favorable attitude towards epilepsy was noted in 142 (54.2%) parents, while 120 (45.8%) showed unfavorable responses. There were 161 (61.5%) participants who believed that persons with epilepsy can live equally in society, and 152 (58.0%) agreed they can perform daily activities (Figure 2).

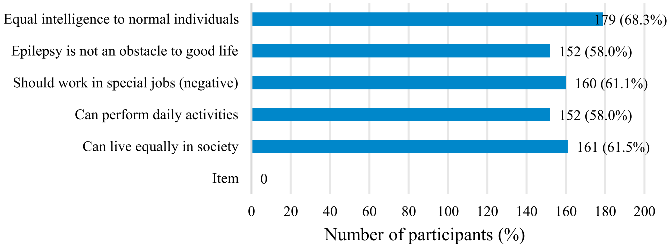

Figure 2: Favorable Attitude of Parents Regarding Epilepsy (n=262)

Good practices were reported by 122 (46.6%) parents, while 140 (53.4%) had poor practices. Appropriate responses to seizures (first aid or calling an ambulance) were reported by 117 (44.7%) parents, advising relatives or friends with epilepsy to follow medical care was reported by 150 (57.3%), whereas 166 (63.4%) stated they would act normally when interacting with individuals with epilepsy (Figure 3).

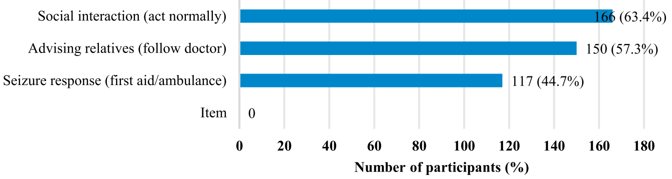

Figure 3: Good Practice of Parents Regarding Epilepsy (n=262)

When knowledge, attitude, and practice domains were combined, 138 (52.7%) parents demonstrated good overall KAP, while 124 (47.3%) had poor overall KAP. Good KAP was significantly more frequent among parents living in urban areas, compared with rural parents (68.8% vs. 31.2%, p=0.006). Increasing education showed a strong association with good KAP (p<0.001). Parents who identified healthcare professionals as their main source of information demonstrated significantly higher levels of good KAP compared with those relying on family or friends, or media/internet (p=0.002) (Table 2).

Table 2: Association of KAP with Demographic Characteristics of the Parents (n=262)

Characteristics		Good KAP, n (%)	Poor KAP, n (%)	p-value
Gender	Male	58 (42.0%)	59 (47.6%)	0.367
	Female	80 (58.0%)	65 (52.4%)	
Age (Years)	<30	37 (26.8%)	44 (35.5%)	0.290
	30-40	60 (43.5%)	50 (40.3%)	
	>40	41 (29.7%)	30 (24.2%)	
Residence	Urban	95 (68.8%)	65 (52.4%)	0.006*
	Rural	43 (31.2%)	59 (47.6%)	
Education	Illiterate	20 (14.5%)	39 (31.5%)	<0.001*
	Primary to Middle	23 (16.7%)	27 (21.8%)	
	Matriculation to Intermediate	48 (34.8%)	39 (31.5%)	
	Graduate or above	50 (36.2%)	16 (12.9%)	
Monthly Family Income (PKR)	Low (<30,000)	59 (42.8%)	66 (53.2%)	0.237
	Middle (30,000-70,000)	59 (42.8%)	43 (34.7%)	
	High (>70,000)	20 (14.4%)	15 (12.1%)	
Main Source of Knowledge About Epilepsy	Family / Friends	47 (34.1%)	48 (38.7%)	0.002*
	Media / Internet	35 (25.4%)	37 (29.8%)	
	Healthcare Professionals	68 (49.3%)	27 (21.8%)	

*p<0.05 (significant)

DISCUSSIONS

The finding that 79.8% parents demonstrated good knowledge about epilepsy, while 21.2% with poor knowledge, reflects an encouraging level of awareness, yet a considerable gap persists. A study from Faisalabad documented that 80% of parents had fair knowledge, which is very closely aligned with the proportion seen in this study, indicating that awareness levels in Pakistan may be broadly consistent across tertiary centers [16]. In contrast, an Egyptian study by Elsakka *et al.* revealed a poor knowledge score among 89.7% of parents of children with epilepsy, demonstrating substantial regional variation [17]. The discrepancy may relate to differences in health education campaigns and the level of integration of epilepsy services within primary health care. In Jordan, Masri *et al.* reported that 90.3% of parents knew epilepsy is not psychiatric, which again suggests that in countries with stronger healthcare communication structures, knowledge tends to be better [8]. These comparisons illustrate that while knowledge in parents appears relatively strong, there are still cultural and informational gaps that need targeted educational strategies. Within the domain of specific knowledge items, the proportion of parents who believed epilepsy is not contagious was 73.7%, while 26.3% still perceived contagion risk. This is comparable to local data, where a quarter of respondents linked epilepsy with transmissibility [16]. A Nigerian study by Frank-Briggs and Alikor found that a significant number of parents attributed epilepsy to demonic possession or contagion, underscoring the persistence of myths in low-resource settings [18]. In this study, 68.7% recognized that epilepsy can be controlled with medications, yet only 27.5% were aware of the surgical option. AlQaisi *et al.* from Iraq, reported that 57.0% of parents had good knowledge overall, but did not specify surgical awareness, while in Saudi Arabia, Zainy *et al.* found that 70% of parents felt informed about different treatment modalities [19, 20]. The lower awareness of surgery in this study could stem from the limited availability of pediatric epilepsy surgery in Pakistan and fewer references to this option by treating physicians. The clinical implication is that caregivers may be less likely to seek referral to specialized centers even when children are candidates, thereby prolonging exposure to uncontrolled seizures. Future public health education should include awareness about surgical options where appropriate. Attitudinal responses in this study indicated that 54.2% of parents expressed a favourable attitude, while 45.8% remained unfavorable. This mirrors the previously published local findings where 54.7% of parents held favourable attitudes, suggesting a consistent trend across Pakistani populations [16]. In Saudi Arabia, Zainy *et al.* observed that nearly half of parents considered epilepsy a mental disorder and over 40% linked it to evil, reflecting a more negative cultural perception [20]. In Ethiopia, Negussie *et al.* reported that 56.7% of caregivers doubted the cognitive abilities of epileptic children, and 39.1% felt they should not attend regular schools, demonstrating substantial unfavorable attitudes [21]. A striking finding in the attitude domain was that 61.1% of parents felt children with epilepsy should work in special jobs, and 58.0% considered epilepsy an obstacle to a good life. In North India, Sinha *et al.* observed that over 70% of parents believed epilepsy hindered family life and affected school performance, closely paralleling the perceptions reported in this study [22]. Parental practices in this study were the weakest domain, with only 46.6% demonstrating good practices. The most concerning was that less than half of the parents reported providing first aid or calling an ambulance during seizures. In contrast, an Iraqi study reported a higher proportion of parents demonstrating good practices at 84.1% [19]. The differences could be explained by methodological variations in defining good practice or by greater exposure to structured seizure management education. In Ethiopia, the researchers showed that 70% of caregivers sought alternative treatments alongside medical care, reflecting both poor practices and mistrust of formal health systems [21]. When domains were combined, 52.7% parents achieved good overall KAP, leaving a substantial 47.3% classified as poor. There is no previously published study on view that combined domains, but similar patterns for each domain have been reported previously [16]. In contrast, the Iraqi cohort displayed higher overall practice levels, while the Egyptian study showed overwhelmingly poor knowledge and attitudes [17, 19]. Sociodemographic analysis revealed that higher education was strongly associated with good KAP, with 76.0% of graduates or postgraduates demonstrating good levels compared with only 34.5% of illiterate parents. In Saudi Arabia, Zainy *et al.* found that misconceptions were significantly less common among college-educated parents [20]. In Jordan, Masri *et al.* reported that higher parental education correlated with positive attitudes and behaviours, while in North India, Sinha *et al.* observed that perception of epilepsy as a psychiatric illness was significantly higher among less educated parents [8, 22]. These parallels indicate that education is the single most powerful determinant of accurate knowledge and supportive attitudes. The clinical implication is that structured health education programs should be integrated into routine pediatric neurology clinics, with emphasis on reaching families with lower literacy levels [23, 24]. Residence also showed a clear association, with 59.4% of urban parents having good KAP compared with 42.2% in rural settings. Chidambar et al., in coastal Karnataka, also reported that urban parents had significantly better practices [25]. Public health campaigns must therefore extend into rural communities through schools, primary health workers, and local media. Parents who cited healthcare professionals as their main source achieved a good KAP in 71.2% compared with 49.0% for family or friends and 48.6% for the media. Similar trends have been reported in local and international data previously, where reliance on health professionals

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correlated with better knowledge [8, 16]. This underscores the clinical responsibility of physicians and nurses to actively provide structured counselling and educational material during follow-up visits.

CONCLUSIONS

The study found that most parents had adequate knowledge about epilepsy, while attitudes and practices were comparatively less satisfactory. Better knowledge, attitude, and practice were observed among parents with higher education, those living in urban areas, and those who received information from healthcare professionals.

Authors Contribution

Conceptualization: SK
Methodology: LK, SK, WH
Formal analysis: LK
Writing review and editing: LK

All authors have read and agreed to the published version of the manuscript

Conflicts of Interest

All the authors declare no conflict of interest.

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REFERENCES

[1] Minardi C, Minacapelli R, Valastro P, Vasile F, Pitino S, Pavone P *et al.* Epilepsy in Children: From Diagnosis to Treatment with Focus on Emergency. Journal of Clinical Medicine. 2019 Jan; 8(1): 39. doi: 10.3390/jcm 8010039.

[2] Fisher RS, Acevedo C, Arzimanoglou A, Bogacz A, Cross JH, Elger CE *et al.* ILAE Official Report: A Practical Clinical Definition of Epilepsy. Epilepsia. 2014 Apr; 55(4): 475-82. doi: 10.1111/epi.12550.

[3] Feigin VL, Vos T, Nair BS, Hay SI, Abate YH, Abd Al Magied AH *et al.* Global, Regional, and National Burden of Epilepsy, 1990–2021: A Systematic Analysis for the Global Burden of Disease Study 2021. The Lancet Public Health. 2025 Mar; 10(3): e203-27.

[4] Huang Y, Li Q, Yang Q, Huang Z, Gao H, Xu Y *et al.* Early Prediction of Refractory Epilepsy in Children Under Artificial Intelligence Neural Network. Frontiers In Neurorobotics. 2021 Jun; 15: 690220. doi: 10.3389/f nbot.2021.690220.

[5] Hagemann A, Pfäfflin M, Nussbeck FW, May TW. The Efficacy of an Educational Program for Parents of Children with Epilepsy (FAMOSES): Results of A Controlled Multicenter Evaluation Study. Epilepsy and Behavior. 2016 Nov; 64: 143-51. doi: 10.1016/j. yebeh.2016.09.027.

[6] Dessalegen HM, Gedlu E, Moges A. Knowledge, Attitude and Practices of Parents and Guardians of Children with Epilepsy at Pediatric Neurology Clinic in A Tertiary Hospital in Ethiopia. Ethiopian Medical Journal. 2021 Jun; 59(03).

[7] Kinkar A, Alqarni D, Alghamdi A, Wali S, Alghamdi N, Saloom S *et al.* Parental Knowledge, Attitudes, and Behaviors Toward Their Epileptic Children at King Abdulaziz University Hospital: Cross-Sectional Study. Interactive Journal of Medical Research. 2020 Jan; 9(1): e12697. doi: 10.2196/12697.

[8] Masri A, Aburahma S, Khasawneh A, Qudah AA, Nafi O, Al Momani M *et al.* Parental Knowledge and Attitudes Towards Epilepsy–A Study from Jordan. Seizure. 2017 Dec; 53: 75-80. doi: 10.1016/j.seizure.2017.11.006.

[9] Osman MI, Bazie EA, Alamin AM. Knowledge, Attitude, and Practice of Caregivers among Epileptic Pediatric Patients in Jaafer Ibn Auf Hospital-Khartoum-Sudan. Journal of Pediatric and Neonatal. 2021; 3(2): 1-4. doi: 10.33425/2689-1085.1024.

[10] Yang H, Chi Y, Zhu Z, Huang K, Xiang L, Xiao B *et al.* Attitudes Toward Epilepsy among Parents of Children with Epilepsy in Southern China. Frontiers in Neurology. 2021 Feb; 11: 602000. doi: 10.3389/fneur. 2020.602000.

[11] Al Zubaidi MA, Alsudairy NM, Alzubaidi BA, Alsadi K, Abulela AA, AlQurashi SM. Assessment of Knowledge and Attitude and Practice of Parents Towards Epilepsy among Children in Jeddah City. The Egyptian Journal of Hospital Medicine. 2017 Oct; 69(6): 2685-9. doi: 10.12816/0042249.

[12] Hassan A AS, Yahya M AS, Tariq A AA, Hussamaldin Tariq A A. Assessment of Knowledge and Attitude and Practice of Parents Towards Epilepsy among Children in Abha City. The Egyptian Journal of Hospital Medicine. 2018 Jul; 72(3): 4060-3. doi: 10.216 08/ejhm.2018.9116.

[13] Sample Size Calculator. https://goodcalculators. com/sample-size-calculator/.

[14] Manju VM, Joshi P, Gulati S. A Study to Assess the Knowledge and Attitude of Parents of Children with Epilepsy. Indian Journal of Child Health. 2015 Jun; 2(2): 76-9. doi: 10.32677/IJCH.2015.v02.i02.009.

[15] Parveen T, Usmani SY, Nisa SU, Taj N. Impact of Maternal Obesity on Pregnancy Outcomes: A Hospital-Based Study: Impact of Maternal Obesity on Pregnancy Outcomes. Pakistan Journal of Health Sciences. 2025 Oct: 55-60. doi: 10.54393/pjhs.v6i10. 3407.

[16] Javed I, Sultana S, Anjum Zm FG, Shafique S, Iqbal F. Knowledge, Attitude and Practices of Parents and Guardians of Epileptic Children towards Epilepsy in a

Tertiary Care Hospital in Pakistan. Pakistan Pediatric Journal. 2024; 48(1): 26-32.

[17] Elsakka EE, El Said HG, Aly SM, Ibrahim EA, Abd Elmaksoud MS. Knowledge, Skills, and Attitudes Towards Children with Epilepsy among Egyptian Parents: A Comparative Cross-Sectional Study. Epilepsy Research. 2021 May; 172: 106573. doi: 10.1016/j.eplepsyres.2021.106573.

[18] Frank-Briggs AI and Alikor EA. Knowledge and Attitudes of Parents Toward Children with Epilepsy. Annals of African Medicine. 2011; 10(3). doi: 10.4103/1596-3519.84706.

[19] AlQaisi SA, Lami FH, Ali EM. Parental Knowledge, Attitudes, and Practices toward their Epileptic Children, Baghdad, Iraq, 2022. Journal of the Faculty of Medicine Baghdad. 2023; 65(4): 341-7. doi: 10.32007/jfacmedbagdad.2112.

[20] Zainy LE, Atteyah DM, Aldisi WM, Abdulkarim HA, Alhelo RF, Alhelali HA *et al.* Parents' Knowledge and Attitudes Toward Children with Epilepsy. Neurosciences Journal. 2013 Oct; 18(4): 345-8.

[21] Negussie AS, Dehan MF, Mekonnen SA, Zelleke TG. Knowledge, Attitudes, and Practices of Caregivers with Children Diagnosed with Epilepsy Attending a Pediatric Outpatient Clinic: A Descriptive, Cross-Sectional, Questionnaire-Based Study in Addis Ababa, Ethiopia. BioMed Central Neurology. 2024 Jul; 24(1): 252. doi: 10.1186/s12883-024-03766-1.

[22] Sinha R, Soneji D, Tewari VV, Singh S, Ojha PK, Patra A *et al.* Assessment of Knowledge, Attitude and Practice (KAP) of Parents/Caregivers Towards Epilepsy in Children-A Cross-Sectional Observational Study. Heliyon. 2023 Sep; 9(9). doi: 10.1016/j.heliyon.2023.e19849.

[23] Gotlieb EG, Blank L, Willis AW, Agarwal P, Jette N. Health Equity Integrated Epilepsy Care and Research: A Narrative Review. Epilepsia. 2023 Nov; 64(11): 2878-90. doi: 10.1111/epi.17728.

[24] Rantanen K, Mäntylä J, Kettunen E, Saunajoki A, Eriksson K. Academic Competence and Special Educational Needs as Outcomes of Early Onset Epilepsy: A Population-Based Prospective Follow-Up Study. Epilepsy and Behavior Reports. 2025 Apr: 100777. doi: 10.1016/j.ebr.2025.100777.

[25] Chidambar R, Shanbhag S, Avabratha KS, Haladi SP. Knowledge, Attitude, and Practices among Parents of Children with Seizures. Archives of Medicine and Health Sciences. 2025 May: 10-4103. doi: 10.4103/amhs.amhs_168_24.