Medical Science

pISSN 2321–7359; eISSN 2321–7367

Perception of Epilepsy among physiotherapy students and professionals: A cross sectional survey

Geeta Bhatt[1*], **Nalina Gupta**[2], **Hitav Someshwar**[3], **Priti Mehendale**[4], **Pankhuri Vairagade**[5]

To Cite:
Bhatt G, Gupta N, Someshwar H, Mehendale P, Vairagade P. Perception of Epilepsy among physiotherapy students and professionals: A cross sectional survey. *Medical Science* 2023; 27: e222ms2853.
doi: https://doi.org/10.54905/disssi/v27i135/e222ms2853

Authors' Affiliation:
[1]PhD Scholar, Department of Physiotherapy, Sumandeep Vidyapeeth Deemed to be University, Piparia, Vadodara, Gujarat, India
[2]PhD Guide and Professor, Sumandeep Vidyapeeth Deemed to be University, Piparia, Vadodara, Gujarat, India
[3]Physiotherapist, Department of Physiotherapy, BYL Nair Hospital, Mumbai, India
[4]Professor, Department of Kinesiotherapy and Physical Diagnosis, K J Somaiya College of Physiotherapy, Mumbai, Maharashtra, India
[5]Assistant Professor, Department of Neuro Physiotherapy, K J Somaiya College of Physiotherapy, Mumbai, Maharashtra, India

[*]**Corresponding author**
PhD Scholar, Department of Physiotherapy, Sumandeep Vidyapeeth Deemed to be University, Piparia, Vadodara, Gujarat, India
Email: geeta.bhatt@somaiya.edu

Peer-Review History
Received: 22 January 2023
Reviewed & Revised: 26/January/2023 to 05/May/2023
Accepted: 09 May 2023
Published: 12 May 2023

Peer-review Method
External peer-review was done through double-blind method.

URL: https://www.discoveryjournals.org/medicalscience

ABSTRACT

Background: In developing countries like India, epilepsy and its sequelae are often seen as a social stigma. Physiotherapists form a part of the team treating patients with epilepsy. Hence this survey was undertaken to assess their knowledge, attitude and perception about epilepsy. *Method:* This study was a cross sectional survey carried out in the urban, semi urban and rural areas of Maharashtra. The epilepsy perception questionnaire was administered to physiotherapists in the age group 18-60 years through Google forms. Responses obtained were analysed using statistical test. *Results:* A total of 585 responded. Out of the professionals, 38% were post graduates (n= 222) and 21% were graduates (n=122). Whereas amongst the student population, 13% were pursuing post-graduation (n=77) and 28% were pursuing under-graduation (n=164). Post graduate professionals scored higher in knowledge and perception of epilepsy as compared to the others. *Conclusion:* Post-graduate professionals scored the highest indicating that a post-graduate degree and the number of years of clinical practice made a difference in the awareness, perception and knowledge of epilepsy.

Keywords: Epilepsy, social stigma, urban, rural, physiotherapists, perception

1. INTRODUCTION

International League against Epilepsy defines Epilepsy as a condition unprovoked by any immediate identified cause which is characterized by two or more recurring epileptic seizures (Caixeta et al., 2007). In this condition, the patient is chronically susceptible to generating seizures and its physiological, mental as well as social consequences lead to an increase in stigma and social withdrawal (Ablon, 2002). Traditionally, clinical parameters have been used to exclusively evaluate the impact of the condition on an individual's life, including the frequency, type and intensity of seizures, as well as the response to medication and various treatment methods (Braga et al., 2020). Since social and cultural problems also interfere with the quality of life, the patient's own perception of the challenges brought by the condition has been taken into an account for the evaluation of success in recent times (Braga et al., 2020;

Abukanna et al., 2021). One of the biggest contributors to the stigma associated with epilepsy is probably a lack of education. Even today, it's common to hear questionable remarks about the causes, treatments and effects of epilepsy in many different contexts.

Over 50 million people across the world are suffering from Epilepsy, as per the World Health Organization, developing nations are home to 80% of epileptics out of which India is home to about one-fifth of the epileptic patient population (Min and Sander, 2003). The rural population has a greater incidence (1.9%) compared to the urban population (0.6%) (Min and Sander, 2003). Recent literature states the overall prevalence is 5.50-10 per 1000 People with epilepsy in India (Min and Sander, 2003). There's poor evidence on the incidence of epilepsy in India, in a previous study which demonstrated an age-standardized prevalence rate of 27.3/100,000 per year (Caixeta et al., 2007). In this study, we aim to evaluate the depth of knowledge that Physiotherapy students and Physiotherapy professionals possess on Epilepsy and their opinions regarding this condition.

The social, medical and economic consequences of this condition are significant public health issues (Ablon, 2002). This condition not only influences the ability of the individual to work but also influences the emotional behaviour and self-esteem of the patients. It may also cause intra-familial tension and social discrimination against epileptic patients may be more devastating than the condition itself (Jacoby, 2002). Not only the general population but also 40% of health staff share the fear and stigma associated with epilepsy (Mc-Lin and Boer, 1995). A lack of education and inadequate knowledge of the disease, especially regarding aspects of pathophysiology and treatment procedures of epilepsy among health staff directly influences the attitude of individuals toward epileptic patients (Min and Sander, 2003). Misconceptions that are affiliated with poor educational programs for epilepsy have led to the usage of some incorrect procedures while attending to a person that is having a seizure (Jacoby, 2002).

On the other hand, there is a positive correlation between higher levels of education with awareness, knowledge and attitude concerning epilepsy (Vancini et al., 2012). Unfortunately, these misunderstandings about epilepsy prevail not only among the general population but also among health professionals. Physiotherapists who are treating them must control their patients' epilepsy, taking this into consideration; improvements in epilepsy care/management could result from an evaluation of physiotherapists' and students' awareness of the condition. Thus, the present study was designed to evaluate epilepsy knowledge among them. Evaluating and assessing the knowledge, attitude, perception and prejudice of Epilepsy amongst physiotherapy students and qualified physiotherapists about the same was the aim of our study.

2. MATERIALS AND METHODS

After getting approval from the institutional review board and the institutional ethical committee with a reference number KJSCPT/770/19-20, a prospective survey study was conducted. The study was proposed in November 2019 with study duration of 3 years and was commenced in January 2020 to December 2022. Physiotherapists from urban, rural and semi-rural areas in Maharashtra were asked to fill out a pre-validated questionnaire (Caixeta et al., 2007). The samples were stratified into 4 groups, under-graduate students, post-graduate students, graduate practicing physiotherapists and post-graduate practicing physiotherapists. We included both genders of physiotherapists studying or practicing in Maharashtra who was above the age of 18 years and were well-versed in English. Electronic consent was obtained from the participants. A questionnaire on epilepsy consisting of 13 objective questions was pre-validated and it included questions related to information about epilepsy, attitudes and prejudice (stigma) towards people with epilepsy. Along with this, the demographics of the participants were also asked. This form was converted to a Google form and was tested among a group of 10 physiotherapists before rolling them out thru email and social media platforms. The data were assessed using descriptive analysis using Microsoft excel.

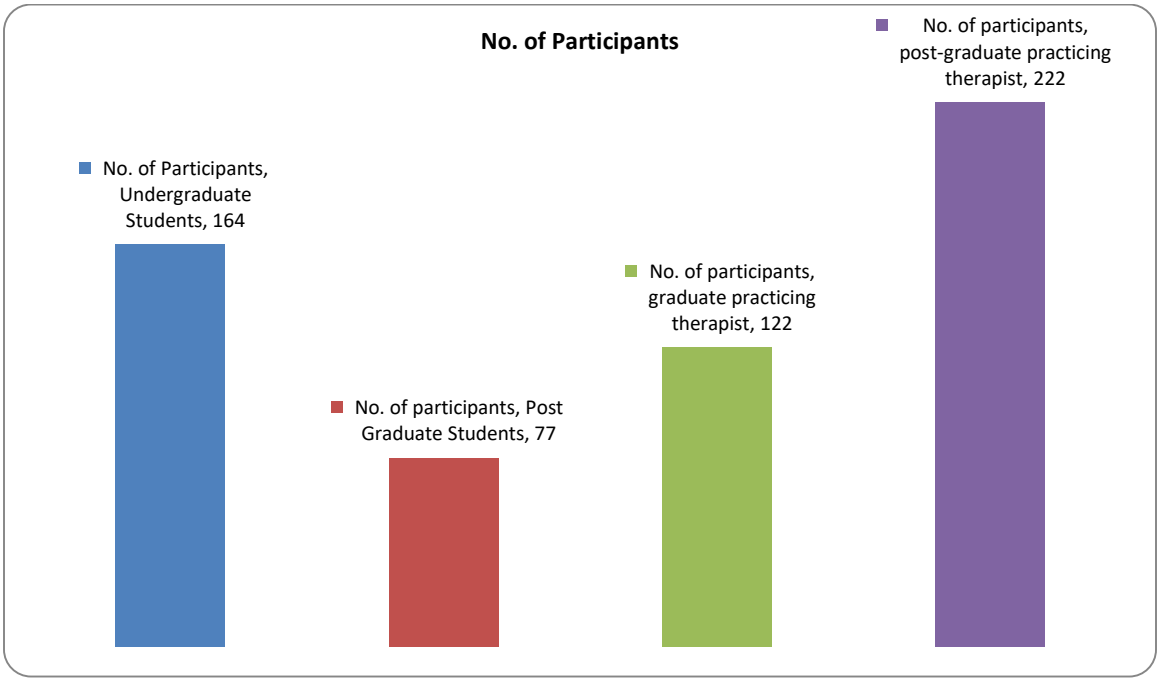
3. RESULTS

We received a total of 600 responses from physiotherapy students and physiotherapy practioners. We had to exclude 15 forms as they did not meet the criteria or they were incomplete. A total of 585 (97.5%) responses were analysed. Table 1 and Graph 1 show the number of participants in each group. Majority of the participants belonged to the post graduate practicing therapists (37.94%) followed by undergraduate students (28.03%). Table 2 and Graph 2 shows the demographic details of the participants of the study majority of participants were females.

Table 1 Distribution of participants based on the qualifications

Group	N %
Under-graduate Students (UGS)	28.03%
Post-graduate students (PGS)	13.16%
Graduate practicing therapist (GPT)	20.8%

Postgraduate practicing therapist (PPT)	37.94%

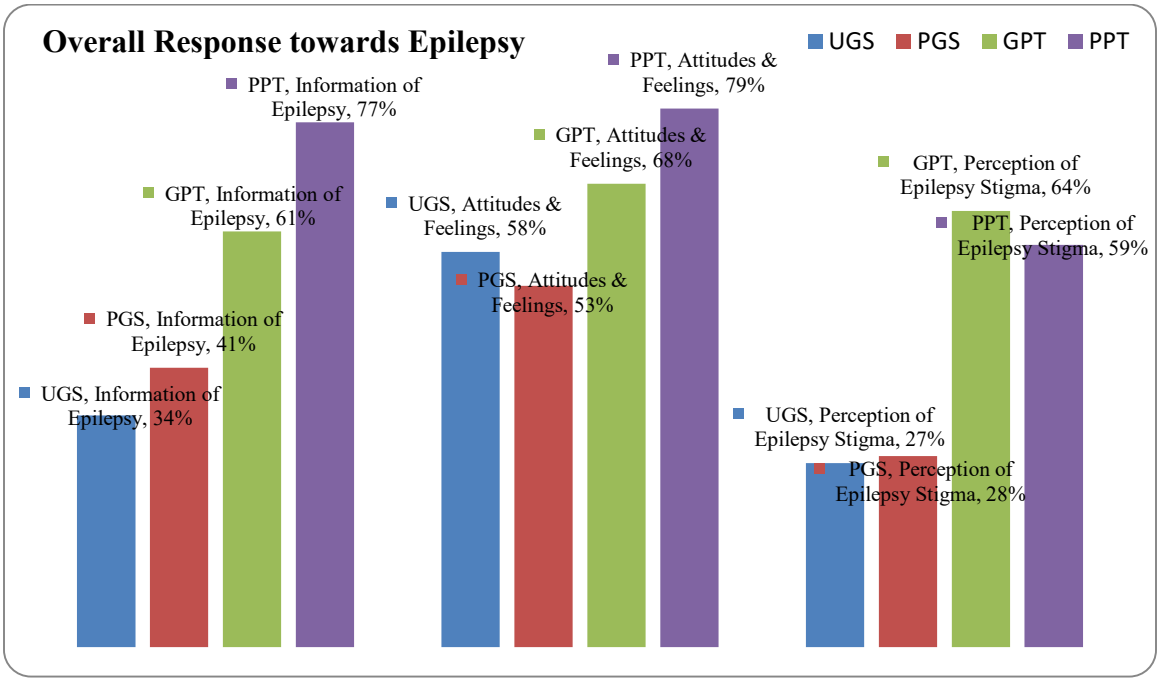


Graph 1 Distribution of participants based on the qualifications

Table 2 Demographics of Participants based on the qualifications

	UGS	PGS	GPT	PPT
Age (years)	20.4	24.2	25.8	31.7
Male (n)	31	14	47	83
Female (n)	133	63	75	139

UGS=Under-graduate students; PGS= Post graduate students;
GPT=Graduate practicing therapists; PPT= Post graduate practicing therapists.



Graph 2 Average perception of epilepsy amongst the participants

Table 3 and Graph 2 shows how the four groups perceived the level of information they had regarding epilepsy, the postgraduate practicing therapist are more informed compared to others and the information with the undergraduate students is poor.

Table 3 Different groups responses to the questions based on level of information regarding Epilepsy

	UGS (n=164)	PGS (n=77)	GPT (n=122)	PPT (n=222)
Perceived level of information				
Average	58(51.82%)	50 (64.93%)	74 (60.65%)	157(70.72%)
Insufficient	29(17.68%)	11 (14.28%)	20 (16.39%)	7 (3.15%)
Origin of Epilepsy				
Neurological	75 (45.73%)	54 (70.12%)	115 (94.26%)	215 (96.84%)
Psychological	23 (14.02%)	9 (11.68%)	2 (1.63%)	4 (1.80%)
Psychiatric	19 (11.58%)	3 (3.89%)	1 (0.8%)	3 (1.35%)
Causes of Epilepsy				
Toxic Substance	9 (5.4%)	2 (2.59%)	4 (3.27%)	3 (1.35%)
Fever	78 (47.56%)	45 (58.44%)	74 (60.65%)	144 (64.86%)
Trauma	52 (31.70%)	21 (27.27%)	37 (30.32%)	69 (31.08%)
Treatment				
Psychiatric	65 (39.63%)	8 (10.38%)	13 (10.65%)	4 (1.80%)
Psychological	19 (11.58%)	14 (18.81%)	19 (15.57%)	15 (6.75%)
Medication	69 (42.07%)	50 (64.93%)	73 (59.83%)	166 (74.77%)
Surgery	7 (4.26%)	6 (7.79%)	8 (6.55%)	23 (10.36%)
Information received from				
Television	62 (37.8%)	11 (14.28%)	5 (4.09%)	17 (7.65%)
Books	33 (20.12%)	29 (37.66%)	34 (27.86%)	118 (53.15%)
Physicians	53 (32.31%)	27 (35.06%)	51 (41.80%)	79 (35.58%)
Relatives and Friends	13 (7.92%)	9 (11.68%)	6 (4.91%)	7 (3.15%)

UGS=Undergraduate students; PGS= Post graduate students; GPT=Graduate practicing therapists;
PPT= Post graduate practicing therapists

Table 4 and Graph 2 shows the attitude of the participants towards a person with epilepsy; again, the post graduate practicing therapist had a positive and helping attitude towards a person with epilepsy.

Table 4 Different groups responses to the questions based on attitude towards patients with Epilepsy

Attitude	UGS (n=164)	PGS (n=77)	GPT (n=122)	PPT (n=222)
Action during a seizure				
Protect the head	101 (61.58%)	56 (72.72%)	107 (87.7%)	204 (91.89%)
Place the head sideways	95 (57.92%)	59 (76.62%)	108 (88.52%)	208 (93.69%)
Restrict Movement	76 (46.34%)	24 (31.16%)	14 (11.47%)	7 (3.15%)
Pull the tongue	81 (49.39%)	16 (20.77%)	22 (18.03%)	15 (6.75%)
Feelings				
Willing to help	73 (44.51%)	37 (48.05%)	78 (63.93%)	164 (73.87%)
Worried	52 (31.70%)	22 (28.57%)	15 (12.29%)	20 (9.09%)
Impotent	13 (7.92%)	3 (3.89%)	8 (6.55%)	7 (3.15%)
Fearful	23 (14.02%)	9 (11.68%)	13 (10.65%)	14 (6.3%)

UGS=Under-graduate students; PGS= Post graduate students;
GPT=Graduate practicing therapists; PPT= Post graduate practicing therapists.

Table 5 and Graph 2 shows the perception of Stigma among the participants, there was mixed response among the participants which highlighted that there were myths and misconceptions regarding epilepsy among physiotherapy students and professionals.

Table 5 Different groups responses to the questions based on perception of stigma towards patients with Epilepsy

Perception of Stigma	UGS (n=164)	PGS (n=77)	GPT (n=122)	PPT (n=222)
I would marry someone with epilepsy	95 (57.92%)	57 (74.02%)	111 (90.98%)	217 (97.74%)
I would employ someone with Epilepsy	101 (61.58%)	63 (81.81%)	116 (95.08%)	219 (98.64%)
People With Epilepsy				
Have poor cognitive capacity	67 (40.85%)	29 (37.66%)	41 (33.60%)	27 (12.16%)
Have a higher risk of Mental illness	58 (51.82%)	33 (42.85%)	53 (43.44%)	18 (8.1%)
Should be hospitalized	55 (33.53%)	9 (11.68%)	10 (8.19%)	11 (4.95%)
Should not be allowed to drive	95 (57.92%)	27 (35.05%)	67 (54.91%)	33 (14.86%)
Have greater chance of having children with malformations	51 (31.09%)	17 (22.07%)	36 (29.50%)	7 (3.15%)
Are Contagious	46 (28.04%)	9 (11.68%)	13 (10.65%)	5 (2 .25%)

UGS=Under-graduate students; PGS= Post graduate students;
GPT=Graduate practicing therapists; PPT= Post graduate practicing therapists

4. DISCUSSION

The above study was conducted in the state of Maharashtra to assess the perception of physiotherapy students and professionals towards person living with epilepsy. As a part of our professional and personal lives we as physiotherapist do encounter people living with epilepsy. In our study the perceived knowledge regarding epilepsy were judged to be inadequate for the under-graduate and post-graduate students, satisfactory for the graduate practising therapist and adequate for the post-graduate practicing therapists. The knowledge was received through physicians, family members, books, etc. Educating the under-graduate and post-graduate students about this condition both medically and socially is important as this group is going to be policy makers and future leaders in their field and society (Sander and Shorvon, 1987). This will help in curb the social stigma surrounding epilepsy. The care to be taken during a seizure episode is also alarming. Proper handling of a patient during the times of seizure must be taught as during day-to-day life as well as practice we might face people with epilepsy having a seizure episode (Schnabel et al., 2019). Proper care and attitude during and after the act help in preventing both medical as well as psychological complications of seizure (Saraceno, 2002).

The curriculum must be designed in a way where in the physiotherapist is carved in a more empathetic approach towards such conditions by making them aware of the myths and taboos in the society. The practicing therapists have a better understanding of the techniques to handle an episode of seizure. The study showed an improvement as per the experience of the physiotherapist in relation to the responses which were based on the attitude towards epilepsy. The student population also revealed a surprising higher level of stigma around this condition. It may be attributed to the source of information about the condition. This can be seen by the number of inappropriate responses given by the undergraduate and post graduate students. The responses from the practicing therapists were good but were yet not the best results accepted.

We cannot neglect the scenario where a particular response was given as it was right as social norms. May be because of this physiotherapy students and practitioners answered yes for the question for “will you employ someone with epilepsy?” and “will you marry someone with epilepsy?” surprisingly higher in all 4 groups. There was a strong correlation between participants responding yes for marriage and yes for if they thought that epileptic patients are more susceptible to developing psychological disorders or their infants were born with malformations. Previous research studied the awareness among local population and concluded that the knowledge and attitude towards epilepsy is relatively low even if with increased literacy, technology and communication devices (Braga et al., 2020). Campaigns to raise awareness and provide information are necessary to alter how epilepsy is seen and increase the likelihood that those who have it will seek treatment (Thijs et al., 2019). Similarly, there is an urgency to spread awareness among physiotherapy students and professionals as well. Awareness they say is the easiest, most efficient and cost-effective way to end the stigma associated with this condition (Fernandes et al., 2005).

5. CONCLUSION

The post graduate professionals had a better perception about the knowledge and stigma associated with epilepsy. This implies that with more experience there is better understanding about the condition as well as the myths and taboos associated with. Awareness programmes and practical demonstrations on how to manage a person with epilepsy when he suffers a seizure episode in the

undergraduate syllabus or in the earlier years will aid in curbing the stigma associated with epilepsy and prevent the social withdrawal by people with epilepsy and will also help curb the stigma associated with the condition.

Acknowledgements: We thank the participants who were all contributed samples to the study.

Author Contributions: All authors contributed equally to the manuscript.

Ethical approval

Approval from institutional ethical committee of KJ Somaiya College of Physiotherapy with a reference number KJSCPT/770/19-20 was obtained.

Informed consent

Informed consent from all the participants was received.

Funding

This study has not received any external funding.

Conflict of interest

The authors declare that there is no conflict of interests.

Data and materials availability

All data sets collected during this study are available upon reasonable request from the corresponding author.

REFERENCES AND NOTES

1. Ablon J. The nature of stigma and medical conditions. Epilepsy Behav 2002; 3(6S2):2–9. doi: 10.1016/s1525-5050(02)00543-7
2. Abukanna AMA, Alenazi MSN, Alenazi NSN, Alenezi MMM, Alanazi IA. Knowledge, attitude and practices of Saudi population in Arar regarding epilepsy and seizures. Medical Science 2021; 25(116):2718-2727
3. Braga P, Hosny H, Kakooza-Mwesige A, Rider F, Tripathi M, Guekht A. How to understand and address the cultural aspects and consequences of diagnosis of epilepsy, including stigma. Epileptic Disord 2020; 22(5):531–547. doi: 10.1684/epd.2020.1201
4. Caixeta J, Fernandes PT, Bell GS, Sander JW, Li LM. Epilepsy perception amongst university students: A survey. Arq Neuropsiquiatr 2007; 65 Suppl 1:43–48. doi: 10.1590/s0004-282x2007001000007
5. Fernandes PT, Souza RJD, Li LM. Relatório da III Semana Nacional de Epilepsia. J Epilepsy Clin Neurophysiol 2005; 1 1:205–207. doi: 10.1590/S1676-26492005000400010
6. Jacoby A. Stigma, epilepsy and quality of life. Epilepsy Behav 2002; 3(6S2):10–20. doi: 10.1016/s1525-5050(02)00545-0
7. Mc-Lin WM, Boer HMD. Public perceptions about epilepsy. Epilepsia 1995; 36(10):957-9. doi: 10.1111/j.1528-1157.1995.tb00952.x
8. Min LL, Sander JW. National demonstration project on epilepsy in Brazil. Projeto Demonstrativo em Epilepsia no Brasil. Arq Neuropsiquiatr 2003; 61(1):153-6. doi: 10.1590/S0004-282X2003000100033
9. Sander JW, Shorvon SD. Incidence and prevalence studies in epilepsy and their methodological problems: A review. J Neurol Neurosurg Psychiatry 1987; 50(7):829-39. doi: 10.1136/jnnp.50.7.829
10. Saraceno B. The WHO World Health Report 2001 on mental health. Epidemiol Psichiatr Soc 2002; 11(2):83-7. doi: 10.1017/s1121189x00005546
11. Schnabel S, Neininger MP, Bernhard MK, Merkenschlager A, Kiess W, Bertsche T, Bertsche A. Epilepsy: A cross-sectional study of paediatricians and general practitioners on their experiences, knowledge and handling of the disease. Epileptic Disord 2019; 21(2):197-205. doi: 10.1684/epd.2019.1048
12. Thijs RD, Surges R, O'Brien TJ, Sander JW. Epilepsy in adults. Lancet 2019; 393(10172):689-701. doi: 10.1016/S0140-6736(18)32596-0
13. Vancini RL, Benedito-Silva AA, Sousa BS, Da-Silva SG, Souza-Vancini MI, Vancini-Campanharo CR, Cabral FR, Lima CD, Lira CAD. Knowledge about epilepsy among health professionals: A cross-sectional survey in Sao Paulo, Brazil. BMJ Open 2012; 2(2):e000919. doi: 10.1136/bmjopen-2012-000919