

## Public awareness, attitude and understanding toward epilepsy among Myanmar people

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### Abstract

**Objectives:** To determine the public awareness, attitude and understanding among Myanmar people toward epilepsy and to compare this with similar surveys in the region. **Methods:** The survey was conducted in Yangon (urban), Hlegu, Taikyí and Ngaputaw (rural), Myanmar in 2002. **Results:** Of the 296 respondents, 82% had read or heard about epilepsy, 78% had seen a seizure and 25% knew someone with epilepsy. Forty-four percent objected to their children associating with epilepsy sufferers, 71% objected to their children marrying an epilepsy sufferer, 86% thought that persons with epilepsy should not be employed in jobs, 74% objected to employing an epilepsy sufferer even though the seizure did not interfere with his job, and 25% thought that epilepsy was insanity. As in surveys from other countries, there was low awareness of non-convulsive form of epilepsy. Only 33% identified epilepsy as a brain disease or disorder. As for treatment, 74% recommended Western medicine while 46% advocated prayer.

**Conclusion:** The survey in Myanmar consisting of urban and rural areas showed that most respondents were aware of epilepsy but many had negative attitude towards persons with epilepsy, and poor understanding of its cause and treatment.

### INTRODUCTION

Public awareness, attitude and understanding toward epilepsy have been studied in the United States<sup>1</sup>, the Federal Republic of Germany<sup>2</sup>, Finland<sup>3</sup>, Italy<sup>4</sup>, and Denmark.<sup>5</sup> Some of Asian countries have also conducted similar study including China<sup>6</sup>, Taiwan<sup>7</sup>, India<sup>8,9</sup>, Pakistan<sup>10</sup>, Malaysia<sup>11,12</sup>, Thailand<sup>13</sup>, and Singapore.<sup>14</sup> In Myanmar, no previous study has been published. This is a study to determine the public awareness, attitude and understanding toward epilepsy among Myanmar people and to compare the results with similar surveys in the region.

### METHODS

The study was conducted in four areas representing the urban and rural population. The urban population survey was conducted in Thingangyun and Dagon Townships, an eastern suburb and town center of Yangon. The rural population survey was conducted in Hle-Gu and Taikyí, which were in Yangon Division, and Ngaputaw of Ayeyarwaddy Division, which was south of Yangon. The survey in Yangon was

conducted among visitors to in-patients, outpatients, hospital staffs from two hospitals and private clinics. The hospitals were: No. (2) Military Hospital in Dagon Township, San-Pya Hospital in Thingangyun Township. The survey in Hle-Gu, Taikyí and Ngaputaw were conducted by door-to-door visits.

To facilitate comparison, a 12-item questionnaire previously used in the Singapore survey by Pan & Lim<sup>14</sup> was used. One other question (# 13) was added. The questionnaire was translated into Myanmar and the Myanmar version of the questionnaire was given to the study subjects. These were self-filled with the terms being explained by a team comprising of the authors, medical officers and house officers. The survey was conducted in January and February of 2002. Persons with epilepsy or their family members were excluded. No two respondents were from the same family. The data was analyzed using Epi info version 6.4 with descriptive statistics and the level of significance was set at  $P < 0.05$ .

## RESULTS

Responses to the survey question are shown in Tables 1-7. There were a total of 296 respondents, consisting of 126 males and 170 females. The response rate was 97%. The male to female ratio was 1:1.35. The mean age was 31 years. One hundred and seventy five subjects were from the urban area (Yangon) and 121 subjects from the rural area (Hle-Gu, Taikyí and Ngaputaw). Most of the respondents were married (68%) and the others were single (32%). For the married subjects, the number of children was: none (25%), 1-2 children (7%), 3-5 children (38%), 6-10 children (26%) and 11-12 children (4%). The distribution of occupation was: students (10%), professionals (10%), retired persons (11%), housewives (21%) and other workers (48%). The level of education was: no formal education (8%) primary education (18%), secondary education (46%), and University education (28%).

### *Familiarity with epilepsy*

The responses to questions related to familiarity with epilepsy are listed in Table 1. Eighty-two percent of respondents had read about or heard of epilepsy, 25% knew someone who had epilepsy, and 78% had seen someone having a seizure. People younger than 50 years, medical professionals, and those who stayed in rural areas have a significantly better awareness of epilepsy. Levels of education, nature of jobs, or marital status were not statistically associated with the familiarity of epilepsy. Responses to question (#4) with regard to administering first aid to epilepsy sufferers are summarized in Table 2.

### *Attitude toward epilepsy*

The responses to questions related to attitude toward epilepsy are listed in Table 3. Forty-four percent of respondents did not like to have their children associating with epileptic persons in school or at play. This negative attitude was significantly associated with people in rural areas. Seventy-one percent objected to their children marrying a person who sometimes have seizure. This attitude was prevalent in all population groups although younger age group had significantly less negative attitude. Eighty-six percent held the view that epileptic persons should not be employed in jobs as other persons are. The negative attitude was significantly associated with older age, living in rural areas and being married. Seventy-four percent of the respondents still

objected to employing an epilepsy sufferer even though the seizure did not interfere with his job. Twenty-five percent of the respondents believed that epilepsy was a form of insanity (Table 4). This was significantly associated with those having more children, housewives, and those who had lower education.

### *Understanding of epilepsy*

The understanding of epilepsy elicited here were the cause, manifestations, treatment and activities permissible for persons with epilepsy. Table 4 lists the responses to question on the cause of epilepsy. Table 5 lists the clinical manifestations of epileptic seizure. There was no statistically significant difference between urban and rural populations regarding the understanding of the clinical manifestations. Table 6 lists the responses to question on treatment to suggest if their friends or relatives had epilepsy. There was no statistically significant difference between the responses from the rural and urban area. Table 7 lists the activities permissible for persons with epilepsy. Rural respondents objected more to running ( $P=0.001$ ) and going for picnic or excursion ( $P=0.001$ ) than those from the urban area.

## DISCUSSION

The main objectives of this study were to determine the public awareness, attitude and understanding towards epilepsy among Myanmar people, and to compare with other studies in this region. This study was done among the public, similar to most of the other studies.<sup>6-9,11,12,14</sup> Some of the studies were done among school teachers<sup>13</sup> and patients.<sup>10</sup> Tables 4-6 were the responses to questions on understanding of and attitude to epilepsy comparing with the other Asian studies among the Oriental Buddhist populations.<sup>6,7,11,14</sup> It should however be noted that there are significant differences in the demographic features of our study populations when compared with the other studies. There is a higher proportion of younger subjects when compared to the Chinese<sup>6</sup>, Taiwan<sup>7</sup>, Malaysian<sup>11</sup> and Singapore<sup>14</sup> studies, higher proportion of those receiving higher education when compared to the Taiwan<sup>7</sup> and Malaysian<sup>11</sup> studies, and higher proportion of female subjects than the Chinese<sup>6</sup> and Malaysian<sup>11</sup> studies. Age, level of education and sex are significant factors affecting the responses to the questionnaires.<sup>6,7,11,14</sup> Although the questions asked were fairly similar, there were some differences in administering the questionnaires. The Chinese<sup>6</sup>, Taiwan<sup>7</sup> and

**Table 1: Responses to questions about familiarity with epilepsy**

Parameter	No. of responders 296	Q1		Q2		Q3	
		Yes (%) 82	No (%) 18	Yes (%) 25	No (%) 75	Yes (%) 78	No (%) 22
Age (yr)							
15-29	98	81	19	15	85	73	27
30-49	143	85	15	31	69	80	20
>50	55	70	30	27	73	78	22
Sex							
Male	126	77	23	24	76	84	16
Female	170	85	15	25	75	73	27
Marital status							
Never married	92	82	18	27	73	76	24
Married	204	81	19	15	85	79	21
No of offspring							
0	23	72	28	26	74	80	20
1-2	101	90	10	33	67	80	20
>3	80	71	29	22	78	73	27
Education							
Never went to school	30	74	26	71	29	80	20
Primary	47	70	30	15	75	72	28
Secondary	135	82	18	23	77	73	27
University	84	76	24	30	70	83	17
Occupation							
Professional (Medical)	25	100	0	23	77	100	0
Professional(non-medical)	5	96	4	60	40	94	6
Student	30	72	28	27	73	80	20
Other workers	146	86	14	24	76	79	21
Retired	31	70	30	25	75	71	29
Housewives	59	76	24	27	73	68	32
Residence							
Urban	175	77	23	24	76	80	20
Rural	121	87	13	26	74	75	25

Three questions were asked. Q1. Have you ever heard or read about the disease called “epilepsy” or “convulsion”? Q2. Do you know anyone with epilepsy or fits? Q3. Have you seen anyone having a fit or seizure?

**Table 2: Responses to question # 4: “What would you do if you saw someone having a fit or seizure”? \***

Response	%
Apply pressure on body points and massage	54
Lie person on side, maintain airway and prevent harm	43
Put something in the mouth	31
Don't know what to do	18
Apply medicated oil	13
Pray	12
Not familiar with fits or seizure	12
Nothing can be done	11
Give water	6

\* Multiple answers were allowed.

Malaysian<sup>11</sup> studies were conducted in streets, parks, markets and door to door visits with questionnaires filled by Physicians and medical students. Study in Singapore was conducted in a health fare with the questions being self-filled.<sup>14</sup> In our study, for urban population, it was conducted in by giving questionnaires to visitors of hospital in-patients, out-patients attending hospital and private clinics. For rural population, it was conducted by door-to-door visit by House officers and Medical officers. The questionnaires were self-filled. Iivanainen et al reported that people tended to answer differently in face-to-face interviews than self-administered questionnaires.<sup>3</sup>

Awareness of epilepsy is high in most of the Asian studies.<sup>6-9,11,12,14</sup> Eighty-two percent of the respondents in this study have heard of epilepsy as compared to 85% in Singapore<sup>14</sup>, 87% in Taiwan<sup>7</sup>, 93% in China<sup>8</sup> and 99% in Malaysia.<sup>11</sup> There was an association between younger age, higher level of education and professional occupation with having heard about epilepsy in the Singapore study.<sup>14</sup> In our study, people of <50 years, and medical professionals had a better awareness of epilepsy while level of education did not. The percentage of respondents who “knew someone with epilepsy” and “saw someone with epilepsy”, were 63% and 59% in United States<sup>1</sup>, 49% and 45% in Finland<sup>3</sup>, 61% and 52% in Italian<sup>4</sup> studies respectively. In the present study, 78% had seen someone with epilepsy, but only 25% knew someone with epilepsy, except those who never go to school (71%). Lai et al<sup>6</sup>

attributed the relatively high degree of awareness of epilepsy among the Chinese in Henan to overpopulated condition and close interpersonal relationship. The overpopulated condition and inadequate control of seizure may explain the high percentage of respondents who had witnessed a seizure in our study. The low percentage of respondents except those who never go to school, who knew someone with epilepsy may be related to social stigma for having epilepsy.

As for the attitude to epilepsy, it is similar to that in China and Taiwan, but more negative than Malaysia and Singapore. The percentage of respondents who “objected to playing”, “objected to marriage”, “objected to employment” and “thought epilepsy was a form of sanity” were 57, 87, 53, and 16% in China<sup>6</sup>, 18, 72, 31, and 7% in Taiwan<sup>7</sup>, 44, 71, 86 and 25% in Myanmar, as compared to 9, 43, 14, and 9% in Malaysia<sup>11</sup>, and 13, 36, 38, and 5% in Singapore.<sup>14</sup> Seventy-four percent of the respondents in the present study would object to employment of the epilepsy sufferers even if the seizures did not interfere with the jobs. Lim et al<sup>11</sup> attributed the favorable attitude among Malaysians as compared to China and Taiwan to greater Western influence and openness in the socioeconomic system in Malaysia.

As for the responses to questions on understanding of epilepsy, the answers were similar to elsewhere in Asia<sup>6-8,11,12,14</sup> with only 33% attributing the illness to a disorder of the brain. Forty-two percent thought that epilepsy was a birth defect, 36% thought that epilepsy was

**Table 3: Responses to questions about attitude toward epilepsy**

Parameter	Q5		Q6		Q7		Q8		
	No. of responders 296	Yes (%) 44	No (%) 56	Yes (%) 71	No (%) 29	Yes (%) 14	No (%) 86	Yes (%) 26	No (%) 74
Age (yr)									
15-29	98	43	57	63	37	13	87	30	70
30-49	143	43	57	75	25	18	88	28	72
>50	55	47	53	81	19	8	92	12	88
Sex									
Male	126	48	52	70	30	13	87	22	78
Female	170	41	59	72	28	15	85	29	71
Marital status									
Never married	92	41	59	66	34	19	81	21	79
Married	204	46	54	73	27	12	88	36	64
No of offspring									
0	23	32	68	60	40	26	74	30	70
1-2	101	49	51	78	22	4	96	12	88
>3	80	50	50	75	25	12	88	17	83
Education									
Never went to school	30	29	71	61	39	16	84	19	81
Primary	47	48	52	56	44	9	91	11	89
Secondary	135	47	53	73	27	13	87	26	74
University	84	33	67	70	30	17	83	32	68
Occupation									
Professional(medical)	25	45	55	73	27	12	88	23	77
Professional (non-medical)	5	20	80	60	40	20	80	20	80
Student	30	24	76	70	30	17	83	4	60
Other workers	146	49	51	73	27	18	82	29	71
Retired	31	50	50	36	63	13	87	13	87
Housewives	59	40	60	68	32	7	93	18	82
Residence									
Urban	175	35	65	71	29	16	84	32	68
Rural	121	55	45	72	28	11	89	16	84

Four questions were asked. Q5. If you had children would you object to them playing or associating with people who sometimes had seizures or fits? Q6. If you had children, would you object to having those married a person who sometimes had seizures? Q7. If you were an employer would you employ someone with epilepsy or fits? Q8. If you were or became an employer would you employ someone with epilepsy whose fits do not interfere with his job?

**Table 4: Responses to question #9 and #10: “What do you think is the cause of epilepsy”?\* and “Do you think epilepsy or fits is a form of insanity”?\*\***

Response	Myanmar 2002(%)	S'pore <sup>14</sup> 1999(%)	M'sia <sup>11</sup> 1998(%)	Taiwan <sup>7</sup> 1992(%)	China <sup>6</sup> 1988(%)
Not familiar with epilepsy or fits	16	16	12	14	13
Don't know	27	18	26	34	40
Brain disease, disorder, injury	33	30	12	20	25
Hereditary, inherited disease	23	32	25	28	17
Birth defect	42	16	24	14	12
Mental or emotional stress or disorder	36	15	8	8	17
Blood disorder	13	1	2	2	2
Insanity**	25	5	9	7	16

\*Multiple answers were allowed.

**Table 5: Response to question # 11:” What do you think is an epileptic attack”? \***

Response	Myanmar 2002(%)	S'pore <sup>14</sup> 1999(%)	M'sia <sup>11</sup> 1998(%)	Taiwan <sup>7</sup> 1992(%)	China <sup>6</sup> 1988(%)
Don't know	11	18	7	13	10
Convulsions, shaking	76	68	84	61	84
Loss of consciousness	60	29	35	52	59
Transient change of behaviour	39	15	12	19	7
Period of amnesia	40	13	10	10	15

\*Multiple answers were allowed.

**Table 6: Response to question # 12: “If your relatives or friends had epilepsy, what kind of treatment would you suggest”? \***

Response	Myanmar 2002(%)	S'pore <sup>14</sup> 1999(%)	M'sia <sup>11</sup> 1998(%)	Taiwan <sup>7</sup> 1992(%)	China <sup>6</sup> 1988(%)
Don't know what to recommend	16	22	9	18	17
No need to treat	4	1	1	3	1
Cannot be treated	9	4	4	4	1
Medicine from Western doctor	74	60	80	63	55
Surgery	2	6	-	4	-
Medicine or herbs from traditional doctor	27	15	11	15	25
Acupuncture	5	9	2	3	14
Ask for God's help	46	7	1	3	1
Get own medicine from the drugstore	4	1	-	-	-
Get health food	34	9	-	-	-

\*Multiple answers were allowed.

**Table 7: Response to question 13: “If your children or relatives had epilepsy, would you object to them doing following activities?” \***

Responses	%
Cycling	72
Climbing mountains/Hiking	66
Swimming alone	78
Bathing with no attendant nearby	62
Running	52
Going for picnic/excursion	46

\*Multiple answers were allowed.

a mental or emotional disorder and 13% attributed the illness to blood disorder. As in surveys from other countries, there was low awareness of the non-convulsive form of epilepsy.<sup>6-8,11,12,14</sup>

Regarding management during seizure attack, only 43% of respondents knew the proper first aid procedure, 54% would apply pressure on body points and massage (Table 2). Regarding treatment recommendation, the responses were similar to the other Asian studies (Table 6), with 74% recommending Western medicine. However, 46% recommended asking for God’s help, reflecting the high religiosity of Myanmar people. The other Asian showing similar high religiosity is that among the largely Muslim population in Kelantan, rural Malaysia.<sup>12</sup> The recommendation on traditional medicine, herbs and health food is likely to reflect persisting traditional medical belief and practice of the Myanmar people. As for activities that were permissible for epileptic persons, a large proportion of respondents objected to cycling (72%), hiking (66%), running (52%) and going for picnic or excursion (46%). This suggests that many epilepsy patients in Myanmar may suffer from unnecessary restrictions on their lives, with corresponding loss of independence.

This study was conducted in one city (Yangon) and three small rural towns (Hle-Gu, Taiky and Ngaputaw) with limited number of study subjects. The responses may not be a true reflection of the Myanmar people as a whole, which has over fifty million population, with diverse ethnic and cultural background. Further studies with the same questionnaires covering different geographic areas are necessary to have a more complete picture of awareness, attitude and understanding towards epilepsy among Myanmar people.

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