

**SURVEY OF PARENTS OF CHILDREN WITH EPILEPSY IN YEREVAN,
ARMENIA**

KNOWLEDGE, ATTITUDE, COMPLIANCE WITH TREATMENT

(A cross-sectional study)

Master of Public Health Thesis Project Utilizing Professional Publication Framework

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Abstract

Background. Epilepsy is one of the most prevalent noncommunicable diseases worldwide. It has moved higher up in the world health agenda as the understanding of its physical and social burden has increased. According to the World Health Organization, in 2004 over 50 million people worldwide suffer from epilepsy. The burden of epilepsy for the year 2000 accounts for approximately 0.5% of the whole burden of diseases in the world. Prevalence of the disease in the world in the year 2004 was 8.2 per 1000 of the general population. Annual incidence of the epilepsy in the world is approximately 0.5-1.0 per 1000 of the general population. Ministry of Health of Armenia reported that the number of patients with epilepsy in Armenia increased during 2003-2004 years. Prevalence of epilepsy in Armenia in the year 2003 was 1.5 per 1000 of the general population, and 1.6 per 1000 child population.. Incidence of epilepsy in Armenia in the year 2003 was 0.19 per 1000 of the general population, and 0.25 per 1000 of child population. According to the literature review, there is lack of knowledge about epilepsy in parents of epileptic children, negative attitude towards the disease and epileptic child due to misunderstanding and wrong beliefs. There was still no research performed in this realm in Armenia. The current study assessed knowledge about epilepsy, attitudes towards the disease and an epileptic child, and compliance with treatment in parents of children with epilepsy in Armenia because parents take an important role in a decision –making about the treatment of epilepsy and its management.

Methodology. This study involved 63 parents and caregivers of epileptic children (0-18 y.o.) who attended the neurological and epileptology units of two hospitals in Yerevan for counseling or treatment for their children. The sample included all eligible parents who were willing to participate in the study after signing the consent form. The study was cross-sectional. Convenience sampling was chosen as a sampling methodology. The study instrument was a self-administered questionnaire including 39 items about demographic data, knowledge about epilepsy, and its management, attitudes towards the disease and an epileptic child, and compliance with treatment. The student-investigator of the study performed data entry and analysis. SPSS and STATA statistical packages were used for analysis of the data.

Results. About half of respondents (49.2%) were in the age group 31-40years and had high school education (47.6%). More than half of participants (50.8%) lived in Yerevan, and those remaining lived in other cities and villages of Armenia. Mean knowledge score was ranged from 5 to 25 points. Mean knowledge score of participants was found equal to 15.3 points from maximal calculated score equal to 28 points. About 68% of all participants had general knowledge about epilepsy. Only 22% participants had positive attitude towards the epilepsy and 40% -towards an epileptic child. Compliance with treatment was high (88%).

Significant association was found only between compliance with treatment and education level of participants (higher education connected with high compliance level). The study results indicated that stigma and a negative attitude towards epilepsy and an epileptic child exist in our society as well as unmet information needs in parents of epileptic children.

Conclusions. The study results showed that knowledge and compliance with treatment were not low but the information gap still exists, and parents need more supportive information about epilepsy and its management.

An educational program, distributing educational materials to parents of epileptic children not only in Yerevan but also in other cities and villages of Armenia might be helpful. It would decrease the information gap, and misunderstandings of the disease, and result in reducing stigma and the negative attitude towards epilepsy and the epileptic child, thus improving the quality of life of affected children and their families.

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1. Introduction

1.1 Background / Literature Review

Epilepsy is one of the common childhood neurological disorders. Epilepsy is characterized by recurrent seizures, which are the result of “sudden excessive electrical discharges in the brain cells”[1]. According to the World Health Organization (WHO) definition, “a diagnosis of epilepsy is reserved for those who have recurring seizures, at least two unprovoked ones”[1]. The seizures may result in loss of consciousness, bodily distortion, unusual frightening psychological experiences as well as urinary and bowel incontinence [2]. More than 20% of cases are discovered before a child is five years old. Birth injuries and congenital defects are primary causes of epilepsy in infants and they continue to be a main cause of epilepsy in children from 2 to 20 years of age. Additionally, genetic factors, infections and trauma are major contributing factors in this age group [3]. Epilepsy is one of the most prevalent noncommunicable diseases worldwide. Epilepsy is a universal problem involving all ages, races, social classes, and nations [4]. According to the WHO report published in 2004, over 50 million people worldwide suffer from epilepsy. In the USA in year 2000 about 2 million people suffered from epilepsy, and among them 300,000 were under the age of 14 [1]. The burden of epilepsy for the year 2000 accounted for approximately 0.5% of the whole burden of diseases in the world [4]. Prevalence of the disease around the world was approximately 8.2 per 1,000 of the general population. Annual incidence of the epilepsy in the world was approximately 0.5-1.0 per 1000 of the general population [1]. Incidence rates were slightly higher among men than women [5]. The incidence of epilepsy in children and adolescents seems relatively consistent across all populations studied, ranging from 0.5 to 1.0 per 1000 of the general population. [6]

According to the statistical report of Ministry of Health of Armenia (2005) number of patients with epilepsy in Armenia increased during 2003-2004 years. Data from the Ministry

of Health of Armenia showed that prevalence of epilepsy in Armenia in the year 2003 was 1.6 per 1000 of the general population of Armenia, and prevalence of epilepsy in children in Armenia in the year 2003 was 1.5 per 1000 of child population (0-18 years old). Incidence in Armenia in the year 2003 was 0.19 per 1000 of the general population, and incidence in children (0-18 years old) in the year 2003 was 0.25 per 1000 of child population. According to Armenian National League Against Epilepsy data, incidence of the disease in children in Armenia in the year 2002 accounted 1/3 of all patients with epilepsy in Armenia [7].

Epilepsy is characterized by episodic and chronic nature. The unpredictability of seizure recurrence is a constant threat to the patient with epilepsy and his/ her family. Every seizure is stressful for parents and may cause depression, frustration and fear for child's life (fear of swallowing the tongue during the seizures, fear of a future mental disease). Families of children with frequent seizures suffer more stress than families of children with infrequent seizures [2].

Although some people believe that epilepsy is linked with physical or mental disability, in fact most children with epilepsy have exactly the same range of intelligence and abilities as unaffected children [8]. They have a normal, active childhood and, with a few sensible safety precautions, are able to enjoy doing all the things their friends do, like swimming, sports and games and so on [8]. Although the prognosis is good for most children with epilepsy, some children have severe forms of the condition, which are difficult to control with drugs and seizures continue. Children with difficult to control epilepsy may have other problems, such as delayed development and learning difficulties. Fortunately, most learning difficulties are mild and can be overcome quite quickly, but sometimes they last longer and are more serious [8].

Appropriate management of epilepsy is based on timely referral and diagnosis, compliance with treatment regimen and appropriate life style changes in order to control the disease and to improve the quality of life of epileptic children and their families [9].

Epilepsy is treated mainly by antiepileptic drugs (AED-s). Like any drugs, AED-s have side effects in some children: memory affection, hyperactivity, mood or behavioral change [10]. If treatment with AED-s is stopped or taken irregularly, the level in the child's blood becomes too low to be effective and the child may have seizures again [10]. Unfortunately, with our present state of knowledge a complete cure of epilepsy is not possible in all cases of the disease. Depending on the type of epilepsy, seizures can be controlled and eliminated completely but in very small percentage of cases. Nowadays, advanced medical treatment of epilepsy helps to control seizures in about half of epileptic patients [11]. But some forms of epilepsy such as infantile spasms, Lennox - Gastaut syndrome, and other severe conditions are hard to control and may not react to current medications [11].

Supervising medical therapy with antiepileptic drugs is always an important aspect of the management of the disease. It is very important to keep treatment regimen in epilepsy. Noncompliance in patients with epilepsy is a serious hindrance to successful treatment. Noncompliance should be considered whenever a patient has an unexpected increase in the number or severity of seizures, and when serum levels of anticonvulsant medications are below the expected range [12]. Detection of serum level of anticonvulsants is very important and parents should know about this important point in the treatment

Parents take an important role in decision –making about the treatment and its success as almost always they keep treatment regimen and report about drug adverse effects. Norzila MZ et al. performed a descriptive study to assess parents' knowledge of epilepsy in Malaysia in 1997. This study revealed that the overall knowledge of parents of epileptic children was

poor, and 80.0% of parents were unaware of their children' medications. The parents' main source of information was friends and relatives [13]. Study in Finland showed that 85.0% of the respondents were unaware of the cause of epilepsy or had wrong beliefs; 18.0% thought that epilepsy is a hereditary disorder; about 60.0% of parents did not recognize the epileptic convulsion; 57.0% did not know what kind of first aid should be given during the epileptic attack, 90.7% did not carry out any intervention prior to getting the child to the hospital [14,17]. Many of parents do not have appropriate knowledge about epilepsy and have unmet information needs [15,16]

Prejudice and misunderstanding of the disease still exist, and families do not easily accept the disease and its treatment regimen. These “stigma” and misunderstanding are due to lack of information and understanding [11]. Study in Brazil (2001) showed that 95.0% of parents did not tell the truth about the epilepsy of their child to other people. However, 70.0% of parents attended the follow-up clinics hoped that their children's epilepsy would be cured [2].

Education and age have the greatest influence on awareness and knowledge of epilepsy and to a lesser extent, attitude towards it; the level of knowledge about epilepsy was low in younger age groups [18]. Better-educated people belonging to higher occupational groups were less prejudiced against social contact and schooling of their children with epileptic children compared with low educational and occupational groups [19, 20].

Data from recent studies showed that 71.0 % parents of epileptic children accurately listed their children' medications, but half of participants were not knowledgeable about side effects and did not keep a seizure diary [21]. Literature showed that parental adjustment is an important target for intervention; it can influence outcomes both for children with epilepsy and the family, and communication with the parent about medication regimens and the value of treatment is extremely important [17, 22]. Amount of information about the disease and

perception of parents of children with epilepsy may have an important role in management of the disease, and this issue becomes an important public health concern [21]

Many international associations such as Epilepsy Action carried surveys amongst teachers, parents of epileptic children and children suffering from epilepsy in order to establish educational issues and unmet needs related to epilepsy. Armenian National League Against Epilepsy (NGO) carried out similar project in Armenia in 2003 with teachers in Yerevan schools [7].

Al-Faris et al. (2002) at the University Hospital in Riyadh, Saudi Arabia performed the study to estimate the rate of epileptic patients' compliance with appointments and medications in a pediatric neurology clinic [23]. Eighty-six percent of the patients stated that they are complying with the medications. Compliers with appointments were more likely to comply with their medications too. Researchers concluded that failure to keep the clinic appointment is an indicator of poor compliance with medications. The study by Asadi-Pooya (2005) revealed significant influence of the family size of suffering children on compliance with treatment [24]. [

1 .2 Situation in Armenia

According to directives of the Ministry of Health of Armenia children suffering from epilepsy are managed mainly in two hospitals in Yerevan: Surb Grigor Lusavorich Medical Center, pediatric unit, and Institute of Child and Adolescence Health, pediatric epileptology center. These hospitals also take care of patients from rural areas of Armenia. Rural population has poor access to medical care (including epilepsy services). In some villages there are not even nurses for providing emergency medical care [25]. Thus, it is very important to educate parents of children with epilepsy (especially from rural areas) how to help their children in an emergency situation.

Literature review showed that knowledge about the epilepsy, attitude towards the disease and towards the epileptic child, and compliance with treatment are important issues in the management of epilepsy and decreasing of its burden [15, 20, 21].

The aim of this research study was to assess current knowledge about epilepsy, attitude towards the disease and compliance with treatment in parents of children suffering from epilepsy in Armenia. Identifying critical gaps in general knowledge about epilepsy (which might lead to “stigmatization” of suffering children and their families) might help to develop educational program on epilepsy and recommendations that would help parents to manage of their children’ disease.

The study aimed to answer the following research questions:

1. What are knowledge about epilepsy, attitude towards the disease and an epileptic child, and compliance with treatment in parents of children with epilepsy in Armenia?
2. Are there associations between knowledge about epilepsy, attitude towards the disease and an epileptic child, compliance with treatment and demographic characteristics of participants?

The specific objectives of the study were:

1. To assess knowledge about epilepsy in parents of children from 0 to 18 years old with diagnosed epilepsy in two Yerevan hospitals from July to August 2005
2. To assess attitude towards epilepsy and an epileptic child in parents of children from 0 to 18 years old with diagnosed epilepsy in two Yerevan hospitals from July to August 2005
3. To determine compliance with prescribed treatment in parents of children from 0 to 18 years old with diagnosed epilepsy in two Yerevan hospitals from July to August 2005
4. To explore possible factors associated with knowledge, attitude and compliance with treatment for epilepsy

2. Methodology

2.1 Study design

The study design was analytical cross-sectional. This study design was used to have systematically collected data and assess current knowledge, attitudes and compliance with treatment in the study population during a certain period of time (July-August 2005). The current study was analytical because in addition to descriptive characteristics of a group of interest it explored the association between different variables (knowledge, attitude, and compliance and demographic variables).

2.2. Study population

Target population of the study included parents of epileptic children (0-18 years old) in Armenia. Study population included parents of epileptic children of 0-18 years who attended two selected hospitals in Yerevan (“Surb Grigor Lusavorich,” pediatric neurology unit and Institute of Child and Adolescents Health, epileptology center) for counseling or treatment for their children during July-August 2005.

Parents of children with epilepsy of 0-18 years old who attended this two selected hospitals in Yerevan for counseling or treatment for their children during data collection period (July-August 2005) were considered as eligible participants for this study.

2.3 Sample size

For sample size calculation proportion of 0.2 / 0.8 was assumed based on data from other countries [14, 23]; 80% of parents did not have knowledge about epilepsy (causes, management of the disease) and 20% of parents had knowledge about epilepsy.

The following formula was used for sample size calculation (considering 95% confidence interval, type I error $\alpha=0.05$ and $z=1.96$) [26].

$$n = \frac{Z^{2*} p * q}{d^2},$$

where $p=0.2$ (20%), $q=0.8$ (80%), and d is the level of precision (tolerable error).

To obtain a reasonable sample size, d was assumed equal to 10% (0.1), so:

$$n = \frac{1.96^2 * 0.2 * 0.8}{0.1^2} = 62$$

Taking into consideration approximate non-response and refusal rate=2%, the sample size was increased to 63.

2. 4 Sampling methodology

In order to include majority of parents of children with epilepsy in Yerevan, Armenia, two hospitals in Yerevan were chosen where parents of epileptic children attended both from Yerevan and other cities and villages of Armenia.

Convenience sampling was used because there was no strict list of parents who attended the selected hospitals during the data collection period. The sampling methodology was weak because it was not a probability sampling, however this method gave an opportunity to gain a sample of sufficient size.

2 .5 Study instrument

The study instrument was a self-administered questionnaire because of sensitivity of the topic. This questionnaire was developed based on an existing instruments and scientific literature [6, 9]. The questionnaire was pre-tested on 10 parents in two selected hospitals. After pre-test some corrections were made regarding questions type and sentences structure. A self-administered 39-item questionnaire was prepared in two languages (English and Armenian), and the Armenian version was provided to the study subjects (Appendix 1). The questionnaire included four domains: demographic information and history of the disease, knowledge about epilepsy and management of the disease, attitude towards the disease and an

epileptic child, and compliance with treatment (practice). Domain “demographic information and history of the disease” included questions about place of living; education level of parent; family size; number of children in the family; age of epileptic child, and age of onset of the disease. Domain “knowledge” included 18 items about causes, clinical features, and age of onset of epilepsy, treatment methods, and disease management and treatment duration. Domain “attitude” included 2 items about attitude towards the epilepsy and an epileptic child. Responses were binary (YES/NO) and checklist type. Domain “compliance with treatment” included 1 item about regular use of prescribed antiepileptic drugs and questions about reasons for not regular use of AED-s. In the questionnaire there were two open-ended, several close-ended and mixed type questions. Another types of questions were Likert scale, checklist, binary and ordinal.

2. 6. Study Variables

The study variables were: the mean knowledge score of participants, proportionate knowledge, attitude towards epilepsy, attitude towards an epileptic child, and compliance with treatment (dependent variables), and demographic variables: age of respondents, education level of respondents, place of living, family size, number of children in the family, age of an epileptic child, age of starting epilepsy in a child (independent variables) (Table 1).

Eleven questions from the questionnaire were knowledge related and were used to construct the mean knowledge score variable. Each correct answer weighted one point. There were 28 correct answers, and the maximal knowledge score was equal to 28 points. Fourteen points score was set as cut point (correct responses on 50% of questions). In order to measure the proportion of parents who have general knowledge about epilepsy a variable “proportionate knowledge” was created; parent with more than 14 points knowledge score was considered to have general knowledge about epilepsy, and parent’s knowledge about epilepsy was considered poor if his/her knowledge score was less than 14 points.

Attitude was measured by two variables: attitude towards epilepsy and attitude towards an epileptic child. Parent's attitude towards epilepsy was measured based on telling or not telling the truth about child's epilepsy to relatives/friends (the Q 33, Appendix 1). Being able to share this information with relatives/friends was considered as an indication of positive attitude towards epilepsy. Parent's attitude towards an epileptic child was measured based on mentioning about negative differences between an epileptic child and his/her peers (the Q 35 and the Q 36, Appendix 1). Not seeing negative differences was considered as an indication of positive attitude towards an epileptic child.

Compliance with treatment was measured based on receiving the prescribed treatment regularly (the Q 23, Appendix 1).

3. Ethical Considerations

The Institutional Review Board Committee on Human Research within the College of Health Sciences of the American University of Armenia reviewed and approved the study. The topic of the study was sensitive, therefore self –administered questionnaire was chosen as a study instrument. The written consent form was provided to each participant prior to the questionnaire administration (Appendix 2).

4. Analysis

Single data entry, range and contingency checking were performed using SPSS statistical package. Data were analyzed using SPSS and STATA statistical packages. Descriptive statistical analysis of demographic characteristics of the sample, knowledge about epilepsy, attitude towards epilepsy and an epileptic child, and compliance with treatment was performed and presented by frequency tables (Appendix 3). Each variable was analyzed and presented independently.

To assess the associations between variables (the mean knowledge score and independent (demographic) variables; attitude towards epilepsy and an epileptic child and demographic variables; compliance with treatment and demographic variables, the mean knowledge score and compliance with treatment; compliance with treatment and the mean knowledge score; compliance with treatment and attitude towards epilepsy and an epileptic child and; the mean knowledge score and, attitude towards epilepsy and an epileptic child ,and compliance with treatment) simple and multiple linear regressions analyses were performed with each of these variables (Appendix 3, Tables).

Results

5. 1 Demographic Data

The total number of participants was 63. The descriptive analysis provided the following results; from 63 participants 93.7% were parents and 6.3% were caregivers; 74.6% participants were from Institute of Child and Adolescents Health and 25.4% –from Surb Grigor Lusavorich Medical Center. About half of respondents (49.2%) were in the age group 31-40years, and only 3.2% were in the age group > 51years (Table 2, Graph 2). About half of respondents (47.6%) had high school education (Table 2, Graph 3). About 59.0% of respondents lived in Yerevan, and others lived in other cities and villages of Armenia (Table2). The other demographic characteristics of the study participants are presented in Table 3.

5 .2 Knowledge about epilepsy

From 63 participants about 82.5% heard about epilepsy. Among them 59.0% gained information from doctors; 35.1% -from media and publications; 21.3% - from neighbors, and 11.5% -from relatives (Table 4). About 52.0% parents thought that they had enough

information about epilepsy and about 76.0% of them would like to have more information about it.

Among causes of epilepsy 41.9% of parents and caregivers mentioned head injury and fear as main causes of epilepsy; other causes of epilepsy that parents mentioned were: hereditary causes (29.0%); injuries during pregnancy/delivery (27.4%); psychological stress (25.8%). Among main features of epilepsy 77.0% of parents and caregivers mentioned seizures with loss of consciousness (Table 4). About half (45.2%) of respondents mentioned child's age of 2-14 years as an age of onset of epilepsy, 40.3% of parents selected the answer "at any age" (Table 4). After the first episode of seizure 53.2% of participants went to a neurologist and 40.3% to a primary care physician (Table 5).

About fifty percent of parents knew about appropriate treatment for epilepsy, 77.0% knew about antiepileptic drugs (AED-s), and 51.3% knew about side effects of AED-s. Among all parents 80.0% mentioned treatment with only AED-s as the main treatment method (Table 4). About 80% of parents were able to list their child's medications. Among first aid procedures 67.7% of participants mentioned, "turning the child on the side and waiting for the end of convulsions" (Table 4). The majority of parents (87.5%) mentioned doctors as the priority source of information about first aid (Table 5). Parents who agreed and strongly agreed with learning (cognitive) difficulties in an epileptic child comprised 61.0% of all participants. About 74.0% of participants thought that epilepsy leads to behavioral changes. Majority of them knew about some main regimen and lifestyle limitations for their child, but as the first priority 89.2% of respondents mentioned regular sleep of child, 68.3% of them mentioned strict eating regimen; 58.5% - prevention of injuries and 48.8% of respondents mentioned stress prevention. Less than 38% of parents have preferred other ways of prevention (limited participation in sports (31.7%); safety control in swimming (31.7%), and prevention of fever (28.6%)).

Among all participants 26.7% thought that epilepsy could not be successfully cured, and main reasons were mentioned as seizures could not be controlled for long time (24.3%); complete control of seizures would depend on the type of epilepsy (29.7%); and a hereditary nature of epilepsy (10.8%). About 84% of participants thought that keeping drug regimen and life style limitations are important for treatment success. More than of participants (58.7%) did not know about the right duration of the treatment for epilepsy (Table 4).

Mean knowledge score of parents and caregivers in the study was equal to $15.33 \pm SD(4.1)$ and was approximately normally distributed (Graph 1). Knowledge score was ranged from 5 to 25. None of parents had maximal knowledge score (28 points). With the cut point of 14 points 68.3% of participants were estimated to have general knowledge about epilepsy.

The associations between the mean knowledge score and other variables in the study were not statistically significant (Table 6, 9, 10).

5.3 Attitude towards epilepsy and epileptic child

From all participants in the study only 21.7% would tell the truth about epilepsy in their children to their friends/relatives. Remaining part of respondents mentioned following reasons for not telling the truth to friend/relative: poor attitude of society (35.1%); an own secret of the family (40.5%); misunderstanding of epilepsy by most people (51.4%); telling the truth can lead to difficulties in relations with friends/relatives (37.8%).

About 58% of participants thought that epileptic child was differing from his/her peers and mentioned the following differences: low cognitive abilities in epileptic child (36.4%); low physical abilities (27.3%); poor behavior (27.3%), and early puberty (24.2%).

Associations between attitude towards epilepsy and an epileptic child and other variables in the study were not statistically significant (Table 7, 9,10)

5.4 Compliance with treatment

From 63 participants most parents (91.1%) mentioned that their children received the prescribed treatment currently, but only 88.0% of participants mentioned that their children receive prescribed treatment regularly and were considered as compliant. Among reasons for non-compliance 2.2% parents and caregivers mentioned financial difficulties and not finding the prescribed drug. Other reasons: like drugs not helping the child or seizures being uncontrolled were mentioned by 4.3% of participants. From all participants only 51.6% participants checked the drug level in the child's blood (an important point for treatment and its success).

Compliance with treatment had borderline significant association with the education level of participants (p -value=0.069) (Table 6). Thus, the level of compliance with treatment among parents with different education levels (> than 10 years of school and < than 10 years of school) was different, and parents who had > than 10 years of school education had higher compliance with treatment compared with parents who had < than 10 years of school education. Associations between compliance with treatment and other variables were not statistically significant (Table 8, 9, 10).

6. Discussion

Some findings of the current study were consistent with findings from previous studies. Majority of parents and caregivers (82.5%) heard about epilepsy comparing with data from other studies [7,18]. About 52.0% parents thought that they had enough information about epilepsy but about 76.0% of them would like to have more information about it and these results were consistent with results of other studies [15,16].

In this study 74.1% of respondents considered behavioral changes as a consequence of epilepsy, which was approximately the same comparing with results of previous studies [22]. About 80.0% of participants were able to list their child's antiepileptic drugs comparing with

70.8% from other studies, and 51.3% of parents knew about side effects of AED-s as also was similar with results of other studies [20, 21].

The study showed that 78.3% of parents and caregivers would not tell the truth about epilepsy in their children to their friends/relatives, which was not much different from the results of other studies [7]. As previous studies, this research revealed the evidence about hope of majority of parents in successful curing of epilepsy in their child [7]. In the current study compliance with treatment was high (88.0%) and similar with other study results [23].

In addition to similarities with the results of other studies, this study revealed some different findings. In the current study overall knowledge of participants was not poor (68.3% had knowledge about epilepsy) compared with other studies where overall knowledge of parents of epileptic children was poor [13]. In this study 29% of participants thought that epilepsy is a hereditary disorder comparing with 18% from previous studies [16]. About 68% of participants in this study knew about first aid procedures during seizures of the child compared with 12% from other studies. The majority of parents (87.5%) in this study mentioned doctors as their priority source of information about first aid in contrast with other studies, where friends and relatives were considered as the primary source of information [16].

Significant association between knowledge, attitude and demographic variables was not found in this study in contrast with results of other studies, where education and age were considered as having the greatest influence on knowledge and attitude of parents towards epilepsy and epileptic child [18, 19, 20]. This study found borderline significant association between compliance and education level of respondents, which could be the new achievement in this realm. In contrast, previous studies did not reveal significant association between these two variables [24].

Because the main purpose of the study was assessment of knowledge about epilepsy, attitude towards the disease and an epileptic child, and compliance with treatment in parents of epileptic children and association between these outcomes variables and demographic variables, it can be considered that objectives of the study were achieved.

7. Study limitations

Selection bias: Parents were chosen by convenience. It was not a probability sampling. To minimize this bias demographic characteristics of participants were explored in the questionnaire and this information was considered during the statistical analysis.

Recall bias: The study instrument was a self-administered questionnaire and any data collection method that relies on a self-report is subject to recall bias.

Instrument bias: This bias may be created by the questionnaire; questions or statements in the questionnaire might not be understood in a right way. Help of the research team and checking questionnaires for completeness after their completion by participants minimized this bias. Also this questionnaire was used the first time and was not validated.

Internal validity: History and maturation might not be threats to internal validity due to a short data collection period (one month). Attrition was not a threat because there were no dropouts in the study; only those parents participated in the study that agreed to participate. Pre-testing of the questionnaire and making appropriate changes after pre-testing minimized this threat. Testing was no a threat because pre-test had no effect on the outcome variables. Regression might be a threat due to non- probability (convenience) sampling and occurring outliers among participants.

External validity referred to the generalizability of findings. The external validity of the study was limited because demographic characteristics of the sample might be differ from those in all Armenian population of parents of epileptic children. This threat was minimized

because about half of participants were from Yerevan and another half – from other cities and villages of Armenia (based on descriptive statistics). Interaction of selection was a threat due to using non-probability sampling.

8. Conclusions and recommendations

The results of this study were consistent with results of previous studies and also revealed some interesting new patterns and predictors. General knowledge of Armenian parents participating in the study was not low, but an information gap still exists. Although the study participants had high compliance with treatment, they did not know about important regimen and life style limitations, and information about duration of the treatment for epilepsy that might be needed for their child. Moreover, stigma and misunderstanding of epilepsy still exists. However, it was important that the hope in curing of the child was high in the participants.

In order to improve the management of epilepsy, many organizations (Epilepsy Foundation, Epilepsy Action) propose to educate parents with reading materials and effective educational packages [15]. Providing parents with written information would apparently increase their disease and medication knowledge and probably enhance seizure control. Educational efforts and support for parents at the start of anticonvulsant treatment may help to overcome stigma, and create a friendly environment for parents of epileptic children and their families. Accurate information about epilepsy and its management will help parents and their children with epilepsy to enjoy her/his childhood [22].

Based on the current study results, additional educational programs could be proposed. Doctors could implement them. In the rural areas of Armenia doctors who practice in the existing Mobile Medical Teams could implement new educational programs on epilepsy.

However the study met the aimed objectives, additional studies with teachers and other community members might be suggested for the future.

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Appendices

Appendix 1. Questionnaire (English & Armenian)

Questionnaire

Purpose: to assess knowledge about epilepsy, attitude towards the disease and an epileptic child in parents of children with epilepsy from 0 to 18 years old and their compliance with treatment in neurological units of two Yerevan hospitals.

(Choose one answer for each question and mark by (?). Questions that require more than one answer have additional comments).

Demographic and disease history information:

1. You are
 - A parent
 - A caregiver

2. Your age:
 - < than 30 year old
 - 31-40 year old
 - 41-50 year old
 - > than 51year old

3. Your education level:
 - Graduate (Master's degree, PhD)
 - Undergraduate (Institute/University)
 - High school
 - Not complete high school
 - Special education (2 years college)
 - Have no education
 - Other----- (specify)

4. Your place of living:
 - Yerevan
 - Other cities of Armenia
 - Villages of Armenia

Answers to questions 5-8 fill in numbers.

5. Number of family members who live with you -----
6. Number of your children in the family-----
7. What is the age of your child suffering from epilepsy? -----

8. Please mention the age when your child started to suffer from epilepsy -----

9. Have you ever heard about epilepsy as a disease?

- Yes (go to question 10)
- No (go to question 11)
- Don't know/Difficult to answer

10. From where/whom have you heard about epilepsy?

- Child's doctor
- Relative
- Neighbor
- Media (newspapers, magazines, TV, radio, Internet)
- Publications
- Other----- (specify)

11. How do you assess your information about epilepsy that you have?

- I have enough information about epilepsy
- I do not have enough information about epilepsy

12. Would you like to get more information about epilepsy?

- Yes
- No
- Don't know/Difficult to answer

13. In your opinion, what are the main causes of epilepsy? (Select all right answers)

- Hereditary causes
- Head injury
- Fear
- Psychological stress
- Injuries during pregnancy/delivery
- Other----- (specify)
- Don't know/Difficult to answer

14. In your opinion, what are the main features of epilepsy? (Mark all correct answers)

- Seizures with loss of consciousness
- Seizures without loss of consciousness
- Loss of consciousness without seizures
- Night fears
- Night urine incontinence (Enuresis)
- Behavioral changes
- Other----- (specify)
- Don't know/Difficult to answer

15. Epilepsy can be developed in the following age periods: (Mark all correct answers)

- < than 1 year old
- From 2 to 14 years old
- Adolescence (from 15 to 18 years old)
- At any age
- Other----- (specify)
- Don't know/Difficult to answer

16. Mention your level of agreement with each of following statements:(Mark with Ú symbol)

	Strongly agree	Agree	Neither agree /nor disagree	Disagree	Strongly disagree
1.Epilepsy leads to behavioral changes in children suffering from epilepsy					
2 Children suffering from epilepsy have cognitive difficulties					

17. To whom/where did you go first for help and advice after the first episode of epilepsy (seizure) in your child? (Mark all that apply)

- A primary care physician
- A doctor that you know
- A neurologist
- A psychologist
- A psychiatrist
- To the brain examination unit
- To the diagnostic unit (blood and urine analyses)
- To a friend/relative
- Other----- (specify)
- Don't know/Difficult to answer

18. Do you know about the treatment for epilepsy?

- Yes (Go to question 19)
- No (Go to question 21)
- Don't know/Difficult to answer

19. Have you ever heard about antiepileptic (anticonvulsive) drugs as treatment for epilepsy?

- Yes (Go to question 20)
- No (Go to question 21)
- Don't know/Difficult to answer

20. Do you know about side effects of antiepileptic drugs?

- Yes
- No
- Don't know/Difficult to answer

21. Does your child with epilepsy currently receive the treatment for epilepsy prescribed by your doctor?

- Yes (Go to the question 23)
- No (Go to the question 22)
- Don't know/Difficult to answer

22. If no, what are the reasons of not receiving treatment for epilepsy prescribed by your child now? (Check all correct answers)

- Drugs don't help my child
- Child refuses to take drugs
- Drugs have dangerous side effects
- I cannot by drugs due to financial difficulties
- Other----- (specify)
- Don't know/Difficult to answer

23. Does your child receive the prescribed treatment for his/her epilepsy regularly?

- Yes (Go to the question 25)
- No (Go to question 24)
- Don't know/Difficult to answer

24. If not, what are the reasons of not receiving the prescribed treatment regularly? (Check all correct answers)

- I cannot find the prescribed drug
- I cannot buy the drug due to financial difficulties
- Other----- (specify)
- Don't know/Difficult to answer

25. Please (if you remember) mention the name of this/these antiepileptic drug/drugs.

26. Please, mention names of some antiepileptic drugs that you know about. (Separate names by comas)

27. In your opinion, what treatment/ treatments listed below is/are used for epilepsy?

(Check all correct answers)

- Treatment with only antiepileptic drugs
- Hypnosis
- Psychological help
- Treatment with special diet (ketogenic diet)
- Surgical treatment
- Other----- (specify)
- Don't know/Difficult to answer

28. What first aid procedures should be performed in the case of convulsions in the epileptic child? (Mark all correct answers)

- Artificial respiration
- Opening jaws and taking out the tongue
- Tilting the child on the side and waiting for the end of convulsions
- Injection of an anticonvulsive drug
- Electric shock therapy
- Other----- (specify)
- Don't know/Difficult to answer (Go to the question31)

29. Where did you receive information about the first aid in case of convulsions? (Mark all correct answers)

- Child's doctor
- Publications
- Media (newspapers, magazines, TV, radio, Internet)
- Friends/relatives
- Other----- (specify)
- Don't know/Difficult to answer

30. What regimen and life style limitations should a parent of a child with epilepsy guarantee for the child in a daily life? (Check all correct answers)

- Regular sleep of a child
- Strict eating regimen of child
- Some limitations in participation in sports
- Preventing falls, burns, cuts, broken bones or teeth, and shoulder dislocation in a child.
- Preventing conditions that can create a fever in child
- Preventing situations that can create emotional stress in a child
- Safety control during swimming of a child
- Other----- (specify)
- Don't know/Difficult to answer

31. Do you think that epilepsy cannot be successfully cured?

- Yes (Go to the question32)
- No (Go to question 33)
- Don't know/Difficult to answer

32. Why do you think that epilepsy cannot be successfully cured? (Choose all correct statements listed below)

- Because seizures in my child are not controlled for very long time
- Because epilepsy is a hereditary disease
- Complete control depends on a type of epilepsy
- Other----- (specify)
- Don't know/Difficult to answer

33. Would you tell your relative/friend about your child's epilepsy?
- Yes (Go to the question35)
 - No (Go to the question 34)
 - Don't know/Difficult to answer
34. What are the main reasons for not telling your relative/friend about epilepsy in your child? (Select all correct answers)
- Because society has a poor attitude towards peoples with epilepsy
 - Because it is the own secret of my family
 - Because the disease and its causes are being misunderstood by most of people
 - Because it can cause difficulties in relations with them for my child
 - Other----- (specify)
 - Don't know/Difficult to answer
35. Do you think that your epileptic child is different from his/her peers?
- Yes (Go to question 36)
 - No (Go to the question37)
 - Don't know/Difficult to answer
36. What differences are there between epileptic children and their peers? (Check all correct statements)
- Children with epilepsy have low cognitive abilities
 - Children with have low physical abilities
 - Children with epilepsy are characterized by their poor behavior
 - Children with epilepsy reach puberty earlier
 - Other----- (specify)
 - Don't know/Difficult to answer
37. Has the level of antiepileptic drug in your child's blood been checked?
- Yes
 - No
 - Don't know/Difficult to answer
38. Do you consider that keeping the drug regimen prescribed by the doctor and life style limitations is important for the success of the treatment?
- Yes
 - No
 - Don't know/difficult to answer
39. In your opinion, how long do you think the treatment of epilepsy will last? (Select one correct answer)
- Up to 1 month
 - Up to 6 months
 - Up to 1year
 - 1-2years
 - 3-5years
 - During whole life
 - Don't know/Difficult to answer

Thank you very much for your participation.

Đ³ ñó³ ß³ ñ

Ùá³ ì³ ÌÁ: ¼áçí»áèç³ ðáí ì³ é³ ááó »ñ»É³ Ý»ñç ÍÝáõÝ»ñç Ñçí³ Ý¹áóÃÙ³ Ý
 Û³ èçÝ · Çì »ÉçùÝ»ñç, Ñçí³ Ý¹áóÃÙ³ Ý Ýí³ ì³ Û³ Òµ í »ñ³ µ»ñÙáóÝùç ·· µáóÃÙ³ Ý Ñ»ì
 Ñ³ Û³ Ó³ ÕÝáóÃÙ³ Ý · Ý³ Ñ³ ì³ áóÙÁ °ñ³³ Ýç Ñçí³ Ý¹³ ÝáóÝ»ñç ÝÙ³ ñ¹³ µ³ Ý³ ì³ Ý
 µ³ Á³ ÝÙáóÝùÝ»ñáóÙ:

(Ùáóñ³ ù³ Ýááóñ Ñ³ ñóç Ñ³ Û³ ñ ÁÝí ñ»ù Û»Ì á³ ì³ èÉ³ Ý ·· Ýß»ù ² Ýß³ Ýáí: ² ÕÝ
 Ñ³ ñó»ñÁ , áñáÝù á³ Ñ³ ÝçáóÙ »Ý Û»Ìçó³ í »Éç á³ ì³ èÉ³ Ý áóÝ»ÝÉñ³ óáóóçá
 óáóóáóÙÝ»ñ)

1. áóù »ñ»É³ Òç
 - Ì ÝáõÝ »ù
 - ÊÝ³ Û³ ì³ ÉÝ »ù
2. Ò»ñ ì³ ñçùÁ`
 - ØçÝá`³0 ì³ ñ»Ì³ Ý
 - 31-40 ì³ ñ»Ì³ Ý
 - 41-50 ì³ ñ»Ì³ Ý
 - 51- ì³ ñ»Ì³ Ýçó µ³ ñÓñ
3. Ûß»ù Ó»ñ ÌñÃáóÃÙ³ Ý³ èì ç×³ ÝÁ`
 - Đ»ì µóñ³ ì³ Ý (Ù³ · Çèì ñ³ ì³ òñ³ , ³ èá»ñ³ Ýì áóñ³)
 - ¹³ ñÓñ³ · áóÝ (ÆÝèì Çì áóì , Đ³ Û³ Êè³ ñ³ Ý)
 - ØççÝ³ ì³ ñ·
 - Á»ñç ÛççÝ³ ì³ ñ·
 - ØççÝ³ ì³ ñ· Û³ èÝ³ · Çì³ ì³ Ý (áóèáóÙÝ³ ñ³ Ý)
 - ÍñÃáóÃÙáóÝ ááóÝ»Ù
 - ² ÒÉ----- (Ýß»ù)

4. Ó»ñ μÝ³ Í áóÃÙ³ Ý í³ ÙñÁ`

- °ñ´³Ý
- Ð³ Ù³ èí³ ÝÇ³ ÙÉ ù³ Ò³ ùÝ»ñ
- Ð³ Ù³ èí³ ÝÇ³ · ÙáóÕ³ Í³ Ý ßñÇ³ ÝÝ»ñ

5-8 Ñ³ ñó»ñÇ á³í³ ãË³ ÝÝ»ñÁ Ýß»ù Áí»ñáf :

5. Ó»ñ ÁÝí³ ÝÇùÇ³ Ý¹³ ÙÝ»ñÇ ù³ Ý³ ÍÁ, áñáÝù³ áñáóÙ »Ý Ó»½ Ñ»í´ -----

6. ÁÝí³ ÝÇùáóÙ Ó»ñ »ñ»Ë³ Ý»ñÇ ù³ Ý³ ÍÁ`-----

7. Ó»ñ çáÇÉ»áèÇ³ Ùáf ÑÇí³ Ý¹ »ñ»Ë³ ÙÇí³ ñÇùÁ`-----

8. Ùß»ù, á`ñ´í³ ñÇùáóÙ ç èí èí »É çáÇÉ»áèÇ³ Ý Ó»ñ »ñ»Ë³ ÙÇ Ùáf -----

9. °ñμ´Çóç Èè»É »ù³ ñ¹Ùáù çáÇÉ»áèÇ³ ÑÇí³ Ý¹ áóÃÙ³ Ý Ù³ èÇÝ:

- ² Ùá(² Ýó»ù 10 Ñ³ ñóÇÝ)
- àã(² Ýó»ù 11 Ñ³ ñóÇÝ)
- á· Çí »Ù/ , Áí³ ñ³ ÝáóÙ »Ù á³í³ ãË³ Ý»É

10. àñí »ÕÇ'ó/àòÙÇ`ó »ù Éè»É ¿àÇÉ»àèÇ³ ÑÇí³ Ý¹áòÃÙ³ Ý Ù³ èÇÝ: (ÀÝí ñ»ù μάέαñ ×Çβí
 à³ í³ èÈ³ ÝÝ»ñÁ)

- °ñ»È³ ÙÇè μÁβÍÇό
- ´³ ñ»í³ ÙÇóè
- Ð³ ñ³³ ÝÇóè
- ¼³ Ý· í³ Í³ ÙÇÝ Éñ³ í í áòÃÙ³ Ý ÙÇÇάóÝ»ñÇό (Ã»ñÃ»ñ,
 ³ Ùè³· ñ»ñ,Ñ»éάóèí³ í »éάòÃÙάóÝ,
 ΑÝí »éÝ»í)
- î à³· ñí³ Í ÝÙάòÃ»ñÇό
- ²ÙÉ----- (Ýβ»ù)

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11. ΑÝάà»`è¹áòù í· Ý³ Ñ³ í »Çù Ó»ñ áóÝ»ó³ Í í »Õ»Í áòÃÙάóÝ»ñÁ ¿àÇÉ»àèÇ³
 ÑÇí³ Ý¹áòÃÙ³ Ý

- í »ñ³ μ»ñÙ³ É:
- °è áóÝ»Ù μ³ í³ ñ³ ñ í »Õ»Í áòÃÙάóÝ»ñÁ ¿àÇÉ»àèÇ³ ÑÇí³ Ý¹áòÃÙ³ Ý Ù³ èÇÝ
 - °è áάóÝ»Ù μ³ í³ ñ³ ñ í »Õ»Í áòÃÙάóÝ»ñÁ ¿àÇÉ»àèÇ³ ÑÇí³ Ý¹áòÃÙ³ Ý Ù³ èÇÝ

12. Í áò½»Ý³ ÙÇ`ù³ ñ¹Ùáù Ó»ñù μ»ñ»É³ í »ÉÇ β³ í í »Õ»Í áòÃÙάóÝ»ñ ¿àÇÉ»àèÇ³ ÙÇ Ù³ èÇÝ

- ²lá
- àá
- á· Çí »Ù/ Άí³ ñ³ ÝάóÙ »Ù à³ í³ èÈ³ Ý»É

13. Ò»ñ Ì³ ñÍ Çuáí , áñá`Yù »Ý ¿âÇÉ»âèÇ³ ÌÇ · ÉÈ³ í áñ â³ ì³ ×³ éÝ»ñÁ (ÁÝì ñ»ù máÉáñ ×ÇBi á³ ì³ èÈ³ ÝÝ»ñÁ)

- Ä³ é³ Ý· Ì³ Ý á³ ì³ ×³ éÝ»ñÁ
- ¶ÉÈÇ í Ý³ èí³ ÍuÁ
- ì³ ÈÁ
- Ðá· »µ³ Ý³ Í³ Ý èÃñ»éÁ
- Ì ÝÝ¹³ µ»ñáóÃÛ³ Ý · ÑÓÇÌáóÃÛ³ Ý Ñ»ì Ì³ áí³ Í í Ý³ èí³ ÍuÝ»ñÁ
- ² ÌÉ----- (Ýß»ù)
- â· Çì »ù/ , Áí³ ñ³ ÝáóÙ »Ù á³ ì³ èÈ³ Ý»é

14. Ò»ñ Ì³ ñÍ Çuáí , áñ`áYù »Ý ¿âÇÉ»âèÇ³ ÑÇí³ Ý¹ áóÃÛ³ Ý ÑÇÙÝ³ Ì³ Ý³ Èì³ ÝÇßÝ»ñÁ: (ÁÝì ñ»ù máÉáñ ×ÇBi á³ ì³ èÈ³ ÝÑ»ñÁ)

- òÝóáóÙÝ»ñ · Çì³ ÍóáóÃÛ³ Ý Íáñèì áí
- òÝóáóÙÝ»ñ³ é³ Ýó· Çì³ ÍóáóÃÛ³ Ý Íáñèì Ç
- ¶Çì³ ÍóáóÃÛ³ Ý Íáñáóèì³ é³ Ýó óÝóáóÙÝ»ñÇ
- ¶Çß»ñ³ ÌÇÝ í³ È»ñ
- ¶Çß»ñ³ ÙÇ½áóÃÛáóÝ
- ì³ ñùÇ È³ Ý· Ì³ ñáóÙÝ»ñÁ
- ² ÌÉ----- (Ýß»ù)
- â· Çì »ù/ , Áí³ ñ³ ÝáóÙ »Ù á³ ì³ èÈ³ Ý»é

17. àò`Ù`İ`İ`³`Ù`áò`ñ`»ù`¹`Ç`Ù`»É`ù·`Ý`áò`Ã`Ù`³`Ý`İ`³`Ù`È`áñ`Ñ`ñ`¹`Ç`Ñ`³`Ù`³`ñ`Ó`ñ`»ñ`»É`³`Ù`Ç`Ù`áí`

³`é`³`ç`Ç`Ý`¿`á`Ç`É`»`á`í`Ç`İ`ó`Ý`ó`Ù`³`Ý`¹`»`á`ù`Ç`ó`Ñ`»`í`á`:(`Ù`ß`»`ù`μ`á`É`á`ñ`×`Ç`ß`İ``á`³`İ`³`é`È`³`Ý`Ý`»`ñ`Á`)

- á`á`É`Ç`İ`É`Ç`Ý`Ç`İ`³`Ù`Ç`μ`Á`ß`İ`Ç`Ý`
- İ`³`Ý`á`Ã`μ`Á`İ`Ç`
- Ù`Ù`³`ñ`¹`³`μ`³`Ý`Ç`Ý`
- Đ`á`·`»μ`³`Ý`Ç`Ý`
- Đ`á`·`»μ`á`ó`Ù`Á`Ç`Ý`
- à`ò`Ò`»`Ò`Ç`Ñ`»`í`³`½`á`í`Ù`³`Ý`İ`³`μ`Ç`Ý`»`í`
- ¿`Ç`³`·`Ý`á`è`İ`Ç`İ`İ`³`μ`Ç`Ý`»`í`(`³`ñ`Ù`³`Ý`·`·`Ù`»`½`Ç`Ñ`»`í`³`½`á`í`á`ò`Ã`Ù`á`ó`Ý`)
- À`Ý`İ`»`ñ`á`ç`è`/`´`³`ñ`»`İ`³`Ù`Ç`è`
- ²`Ù`É`-----(`Ý`ß`»`ù`)
- á`·`Ç`İ`»`Ù`/`¿`Á`İ`³`ñ`³`Ý`á`ó`Ù`»`Ù`á`³`İ`³`é`È`³`Ý`»`É`

18. ²`ñ`¹`lá`·`ù`·`Ç`İ`»`ù`¿`á`Ç`É`»`á`è`Ç`³`Ñ`Ç`İ`³`Ý`¹`á`ò`Ã`Ù`³`Ý`μ`á`ó`Á`Ù`³`Ý`Ù`»`Ã`á`¹`Ý`»`ñ`Ç`Ù`³`è`Ç`Ý`:

- ²`Ù`á`(`²`Ý`ó`»`ù`19`Ñ`³`ñ`ó`Ç`Ý`)
- à`á`(`²`Ý`ó`»`ù`21`Ñ`³`ñ`ó`Ç`Ý`)
- á`·`Ç`İ`»`Ù`/`¿`Á`İ`³`ñ`³`Ý`á`ó`Ù`»`Ù`á`³`İ`³`é`È`³`Ý`»`É`

19. 2^o ñ¹lá`ù »ñµ`¿ Èë»É »ù Ñ³ Í³ ¿áÇÉ»áí Çí (Ñ³ Í³ óÝóáóÙ³ ÌÇÝ) 1»Õ³ ÙÇçáóÝ»ñÇ Ù³ ëÇÝ
 áñá»ë ¿áÇÉ»áëÇ³ ÌÇ µáoÁÙ³ Ý Ñ³ Ù³ ñ ù· ì³ · áñí í áÕ¹ »Õ³ ÙÇçáóÝ»ñ:

- 2^o lá(2^o Ýó»ù 20 Ñ³ ñóÇÝ)
- àá(2^o Ýó»ù 21 Ñ³ ñóÇÝ)
- á· Çí »Ù/¿ Áí³ ñ³ ÝáoÙ »Ù á³ ì³ ëË³ Ý»É

20. 2^o ñ¹lá`ù · Çí »ù Ñ³ Í³ ¿áÇÉ»áí Çí 1»Õ³ ÙÇçáóÝ»ñÇ Í áÕÙÝ³ ÍÇ³ ½¹ »óáóÁláóÝÝ»ñÇ
 Ù³ ëÇÝ:

- 2^o lá
- àá
- á· Çí »Ù/¿ Áí³ ñ³ ÝáoÙ »Ù á³ ì³ ëË³ Ý»É

21. 2^o ñ¹lá`ù Ý»ñí³ láóÙë Ó»ñ ¿áÇÉ»áëÇ³ láí ÑÇí³ Ý¹ »ñ»Ë³ Ý ëí³ ÝáoÙ ¿ µÁbíÇ Í áÕÙÇó
 Ýß³ Ý³ Íí³ Í ¿áÇÉ»áëÇ³ ÌÇÝ Ñ³ Ù³ á³ ì³ ëË³ Ý µáoÁáoÙ:

- 2^o lá(2^o Ýó»ù 23 Ñ³ ñóÇÝ)
- àá(2^o Ýó»ù 22 Ñ³ ñóÇÝ)
- á· Çí »Ù/¿ Áí³ ñ³ ÝáoÙ »Ù á³ ì³ ëË³ Ý»É

22. °Ã» áá,³ á³ áñá`Ýù »Ý Ó»ñ »ñ»Ë³ ÌÇ µÁΒÍÇ ÍáÕÙÇό ÝΒ³ Ý³ Íí³ Í µáoÁáoÙÁ
 Ý»ñí³ ÌáoÙè äëí³ Ý³ Éáo

á³í³ ×³ eÝ»ñÁ:(ÁÝí ñ»ù µάÉañ ×ÇΒí á³í³ ãË³ ÝÝ»ñÁ)

- µ»Õ»ñÁ ä»Ýù· ÝáoÙ ÇÙ »ñ»Ë³ ÌÇÝ
- °ñ»Ë³ Ý Ññ³ Á³ ñí áóÙ ¿ ¹»Õ»ñ ÁÝ¹áoÝ»Éáoó
- Ð³ Í³ »áÇÉ»áí ÇÍ ¹»Õ»ñÁ áóÝ»Ý íí³ Ý·³ í añ ÍáÕÙÝ³ ÍÇ³ ½¹»óáoÁáoÝÝ»ñ
- °è ä»Ù Í³ ñáÕ· Ý»É ¹»Õ»ñÁ ýÇÝ³ Ýè³ Í³ Ý ¹Áí³ ñáoÁáoÝÝ»ñÇ á³í³ ×³ éáí
- ²Ë------(ÝΒ»ù)
- á·Çí »Ù/ µ Áí³ ñ³ ÝáoÙ »Ù á³í³ ãË³ Ý»É

23. ² ñ¹Ùá`ù Ó»ñ ¿áÇÉ»áèÇ³ Ìáí ÑÇí³ Ý¹ »ñ»Ë³ Ý Í³ ÝáÝ³ í añ ¿ ëí³ ÝáoÙ ¿ µÁΒÍÇ
 ÍáÕÙÇό ÝΒ³ Ý³ Íí³ Í

ÑÇí³ Ý¹áoÁó³ ÝÁ Ñ³ Ù³ á³í³ ãË³ Ý µáoÁáoÙÁ:

- ²Ëá(² Ýó»ù 25 Ñ³ ñóÇÝ)
- àá(² Ýó»ù 24 Ñ³ ñóÇÝ)
- á·Çí »Ù/ µ Áí³ ñ³ ÝáoÙ »Ù á³í³ ãË³ Ý»É

24. °Ã» áá,³ á³ áñá`Ýù »Ý Ó»ñ »ñ»Ë³ ÌÇÝ ÝΒ³ Ý³ Íí³ Í Í³ ÝáÝ³ í añ µáoÁáoÙÁ
 äëí³ Ý³ Éáo ÑÇÙÝ³ Í³ Ý á³í³ ×³ eÝ»ñÁ:(ÁÝí ñ»ù µάÉañ ×ÇΒí á³í³ ãË³ ÝÝ»ñÁ)

- °è ä»Ù Í³ ñáÕ³ ÝáoÙ ×³ ñ»É ÝΒ³ Ý³ Íí³ Í ¹»Õañ³ ÌùÁ
- °è ä»Ù Í³ ñáÕ· Ý»É ¹»Õañ³ ÌùÁ ýÇÝ³ Ýè³ Í³ Ý ¹Áí³ ñáoÁáoÝÝ»ñÇ á³í³ ×³ éáí
- ²Ë------(ÝΒ»ù)

□ á· Çi »Ù/ Áí³ ñ³ ÝáoÙ »Ù á³ i³ ëË³ Ý»É

25. ÊÝ¹ ñáoÙ »Ýù Ýß»É ,»Ã» ÑÇáoÙ »ù , ³ Ù¹ Ñ³ Í³ ¿áÇÉ»áí ÇÍ

¹»Õ³ ÙÇçáoÇ/¹»ó³ ÙÇçáoÝ»ñÇ ³ ÝáoÝÝ»ñÁ:

26. ÊÝ¹ ñáoÙ »Ýù Ýß»É Ó»½ Ñ³ Ùi ÝÇ áñáß Ñ³ Í³ ¿áÇÉ»áí ÇÍ ¹»ó³ ÙÇçáoÝ»ñÇ

³ ÝáoÝÝ»ñÁ:(² ÝáoÝÝ»ñÁ ³ é³ ÝÓÝ³ óñ»ù ëi áñ³ Í»i Ý»ñái)

27. Ò»ñ Í³ ñÍ Çuáí , Ç`Ýá µáoÁÙ³ Ý Ù»Ãá¹/Ù»Ãá¹Ý»ñ »Ý ù· i³ · áñÍ í áoÙ ¿áÇÉ»áí ÇÍ ³ ÙÇ

Á³ Ù³ Ý³ Í:

□ ´áoÁáoÙ ÙÇ³ ÙÝ Ñ³ Í³ ¿áÇÉ»áí ÇÍ ¹»Õ³ ÙÇçáoÝ»ñái

□ ĐÇáÝá½

□ Đá· »µ³ Ý³ Í³ Ý ù· ÝáoÁáoÝ

□ ´áoÁáoÙ Ñ³ i³ áoí ¹Ç»i³ Ùái (Í»i á· »ÝÇÍ ¹Ç»i³)

□ Ì Çñ³ Ñ³ i³ Í³ Ý µáoÁáoÙ

□ ²Ë----- (Ýß»ù)

□ á· Çi »Ù/ Áí³ ñ³ ÝáoÙ »Ù á³ i³ ëË³ Ý»É

28. ÆÝá³ é³ çÇÝ ù. ÝáóÁÛ³ Ý Û»Ãá¹Ý»ñ á»i ù ç ù. i³ . áñÍ í »Ý çáÇÉ»áëÇ³ Ûáí »ñ»É³ ÛÇ
Ùáí óÝóáóÙÝ»ñÇ

¹»áúáóÙ:(Ûß»ù μάφαñ ×Çßí á³ i³ ëÉ³ ÝÝ»ñÁ)

- ² ññ»ëi³ i³ Ý ßÝá³ éáóÁÛáóÝ
- ´³ ó»É Í Ýáí Ý»ñÁ ´ Ñ³ Ý»É É»½áóÝ
- Ã»ù»É »ñ»É³ ÛÇÝ Í áóùÇ ´ éá³ é»É ÛÇÝá´ Ýáá³ Ý³ i³ ñí í Ç
- Ð³ Í³ óÝóáóÙ³ ÛÇÝ ¹»Óáñ³ ÛùÇ Ý»ñ³ ñí áóÙ
- ´ áóÁáóÙ çÉ»Í i³ ñ³ i³ Ý Ñáë³ Ýúáí
- ² ÛÉ----- (Ýß»ù)
- â· Çi »Ù/ , Áí³ ñ³ ÝáóÙ »Ù á³ i³ ëÉ³ Ý»É

29. àñí »ÒÇ`ó »ù ëi³ ó»É í »Ó»Í áóÁÛáóÝÝ»ñ óÝóáóÙÝ»ñÇ Á³ Û³ Ý³ i³ é³ çÇÝ ù. Ýá óÁÛ³ Ý
Ù³ ëÇÝ:(ÁÝi ñ»ù

μάφαñ ×Çßí á³ i³ ëÉ³ ÝÝ»ñÁ)

- °ñ»É³ ÛÇë μÁßÍ Çó
- î á³ · ñí³ Í ÝÛáóÃ»ñÇó
- ¼³ Ý. í³ í³ ÛÇÝ Éñ³ i³ í áóÁÛ³ Ý ÛÇçáóÝ»ñÇó (Ã»ñÃ»ñ, ³ Ûë³ · ñ»ñ,
Ñ»éáóëi³ i³ »éáóÁÛáóÝ,
ÆÝi »éÝ»i)
- ÀÝÍ»ñÝ»ñÇóë/´³ ñ»Í³ ÛÝ»ñÇóë
- ² ÛÉ----- (Ýß»ù)
- â· Çi »Ù/ , Áí³ ñ³ ÝáóÙ »Ù á³ i³ ëÉ³ Ý»É

30. 2 n1lã`ù· Çi »ù Æ» ÇÝã é»ÀÇÙ .. 3 eunl3 `l03 ÝùÇ è3 ÑÙ3 Ý3 à3 Í áoÙÝ»ñ à»i ù ¿
3 à3 Ñáí Ç

¿àÇÉ»àèÇ3 lãí ÑÇí 3 Ý1 »ñ»È3 lÇ Í ÝáÕÁ Çñ »ñ»È3 lÇ Ñ3 Ù3 ñ:(ÁÝí ñ»ù mãÉãñ ×ÇBi
à3 í 3 èÈ3 ÝÝ»ñA)

- °ñ»È3 lÇ Í 3 ÝáÝ3 í áñ ùÝÇ é»ÀÇÙÁ
- °ñ»È3 lÇ áoi »Éáo ×ÇBi é»ÀÇÙÁ
- àñáb è3 ÑÙ3 Ý3 à3 Í áoÙÝ»ñ »ñ»È3 lÇ èááñi áí ½µ3 Óí »Éáo· áñí áoÙ
- ¼»ñí à3 ÑÇ »ñ»È3 lÇ Ý ÁÝí Ý»Éáoó,3 lñí 3 Í ùÝ»ñÇó,Í áí ñí 3 Í ùÝ»ñÇó, áèí áñÝ»ñÇ
.. 3 í 3 ÙÝ»ñÇ í Ý3 èí »Éáoó .. Ñá13 È3 Èí »ñÇó
- Ä3 Ù3 Ý3 Í ÇÝ 1»Ù 3 éÝÇ 3 lÝ Çñ3 í Ç×3 Í Ý»ñÇÝ, áñáÝù Í 3 ñáÕ »Ý µ»ñ»É
»ñ»È3 lÇ Ç»ñÙáoÃl3 Ý µ3 ñÓñ3 óÙ3 ÝÁ
- Ä3 Ù3 Ý3 Í ÇÝ 1»Ù 3 éÝÇ 3 lÝ Çñ3 í Ç×3 Í Ý»ñÇÝ, áñáÝù Í 3 ñáÕ »Ý »ñ»È3 lÇ Ùáí
3 é3 Ç3 óÝ»É ¿ÙáoÇáÝ3 É èÄñ»è
- 2 à3 Ñáí Ç »ñ»È3 lÇ ÑèÍ áÕáoÃláoÝÁ Éáo3 Ý3 Éáo Ä3 Ù3 Ý3 Í
- 2 lÉ------(ÝB»ù)
- á· Çí »Ù/ ¿ Áí 3 ñ3 ÝáoÙ »Ù à3 í 3 èÈ3 Ý»É

31. 2 n1lãú Í 3 ñí áoÙ »`ù , áñ ¿àÇÉ»àèÇ3 ÑÇí 3 Ý1áoÃláoÝÁ 3 Ù mãÕÇáí ÇÝ áÇ mãóÁí áoÙ :

- 2 lã (2 Ýó»ù 32Ñ3 ñóÇÝ)
- àã (2 Ýó»ù 33 Ñ3 ñóÇÝ)
- á· Çí »Ù/ ¿ Áí 3 ñ3 ÝáoÙ »Ù à3 í 3 èÈ3 Ý»É

32. ΑΫάαο` »ù ι³ ηί άοÙ, άñ ζάÇÉ»άέÇ³ ΝÇί³ Ύ¹άοΆλáoΎΆ³ ÙμαΌçáί ÇΎ άç μαόΆί άοÙ
(ΆΎι η»ù Ύ»ηù` άοÙ ΎΒί³ ί μαέάñ ×ÇΒι άΎ¹άοÙΎ»ηΆ)

- άñάί Ν»ι `` ÇÙ »ñ»É³ ÙÇ óΎόάοÙΎ»ηΆ³ η¹»Ύ »ηί³ η Ά³ Ù³ Ύ³ ί ζ ά»Ύ ί »ñ³ Νεί ί άοÙ
- άñάί Ν»ι `` ζάÇÉ»άέÇ³ Ύ Ά³ έ³ Ύ.³ ί³ Ύ ΝÇί³ Ύ¹άοΆλáoΎ ζ
- òΎόάοÙΎ»ηÇ³ ÙμαΌçáί ÇΎ ί »ñ³ Νεί άοÙΆ ί³ άί³ ί ζ ζάÇÉ»άέÇ³ ÙÇ Ó`Ç Ν»ι
- ² ÙÉ----- (ΎΒ»ù)
- á· Çι »Ù/Ύ Άί³ η³ ΎάοÙ »Ù ά³ ι³ ³ έÉ³ Ύ»έ

33. ² η¹άού ί ά³ ι Ù»Ç`ù Ó»ñ μ³ η»ί³ ÙÇΎ/ΆΎί »ñάçÁ Ó»ñ »ñ»É³ ÙÇ ζάÇÉ»άέÇ³ ÙÇ
Ù³ έçΎ:

- ² lá (² Ύό»ù 35 Ν³ ηόÇΎ)
- άā (² Ύό»ù 34 Ν³ ηόÇΎ)
- á· Çι »Ù/Ύ Άί³ η³ ΎάοÙ »Ù ά³ ι³ ³ έÉ³ Ύ»έ

34. άñάΎù »Ύ μ³ η»ί³ ÙÇΎ/ΆΎί »ñάçÁ Ó»ñ »ñ»É³ ÙÇ ζάÇÉ»άέÇ³ ÙÇ Ù³ έçΎ άά³ ι Ù»έάο
ΝÇÙΎ³ ί³ Ύ ά³ ι ×³ έΎ»ηΆ: (ΆΎι η»ù μαέάñ ×ÇΒι ά³ ι³ ³ έÉ³ ΎΎ»ηΆ)

- άñάί Ν»ι `` Ν³ έ³ η³ ί άοΆλáoΎΆ άοΎÇ ί³ ι ί »ñ³ μ»ñÙάοΎù ζάÇÉ»άέÇ³ λάί ΝÇί³ Ύ¹
Ù³ η¹ί³ ΎόΎί³ ι Ù³ Ùμ
- άñάί Ν»ι `` ¹³ ÇÙ ΆΎι³ ΎΎçùç έ»÷³ ί³ Ύ.³ Õι ΎçùΎ ζ
- άñάί Ν»ι `` ΝÇί³ Ύ¹άοΆλáoΎΆ `` Ύñ³ ά³ ι ×³ έΎ»ηΆ έÉ³ É »Ύ ΆΎί³ έί άοÙ Ù³ η¹ί³ Ύό
Ù»ί³ Ù³ έΎάοΆλ³ Ύί άΌÙçό
- άñάί Ν»ι `` ¹³ ί³ ηάΌ ζ³ έ³ ç³ óΎ»É¹ Άί³ ηάοΆλáoΎΎ»ñ ÇÙ »ñ»É³ ÙÇ `` Ύñ³ Ύό Ν»ι
Β÷ί »έάο Ù»ç
- ² ÙÉ----- (ΎΒ»ù)
- á· Çι »Ù/Ύ Άί³ η³ ΎάοÙ »Ù ά³ ι³ ³ έÉ³ Ύ»έ

35. 2 ñ¹lá`ù Ì³ ñ¹áoÙ »ù, áñ Ó»ñ ¿áÇÉ»áëÇ³ láí ÑÇí³ Ý¹ »ñ»É³ Ý^í Ì³ ñμ»ñ¹áoÙ ¿Çñ Ñ³ ë³ Ì³ Ì³ÇóÝ»ñÇó:

- àã(2 Ýó»ù 36 Ñ³ ñóÇÝ)
- 2 lá(2 Ýó»ù 37 Ñ³ ñóÇÝ)
- á· Çí »Ù/ ¿ Áí³ ñ³ ÝáoÙ »Ù á³ Ì³ ëÉ³ Ý»É

36. Á· Ýá Ì³ ñμ»ñáoÁláóÝÝ»ñ Ì³ Ý Ó»ñ ¿áÇÉ»áëÇ³ láí ÑÇí³ Ý¹ »ñ»É³ ÙÇ` Çñ»Ý Ñ³ ë³ Ì³ Ì³ÇóÝ»ñÇ ÚÇÇ` : (Ùß»ù μáfáñ ×Çßí Ì³ ñμ»ñ³ Ì³Ý»ñÁ)

- ¾áÇÉ»áëÇ³ láí »ñ»É³ Ý»ñÁ áoÝ»Ý ó³ Í ñ Ùí³ Ì³ í áñ áoÝ³ ÍáoÁláóÝÝ»ñ
- ¾áÇÉ»áëÇ³ láí »ñ»É³ Ý»ñÁ áoÝ»Ý ó³ Í ñ ýÇ½Çí³ Ì³ ÝáoÝ³ ÍáoÁláóÝÝ»ñ
- ¾áÇÉ»áëÇ³ láí »ñ»É³ Ý»ñÁ μÝáñáßí áoÙ »Ý Çñ»Ýó í³ Ì³ ñúái
- ¾áÇÉ»áëÇ³ láí »ñ»É³ Ý»ñÁ Ì³ í »ÉÇ Báóí »Ý Ñ³ éáoÝ³ ÝáoÙ
- 2 Ì----- (Ýß»ù)
- á· Çí »Ù/ ¿ Áí³ ñ³ ÝáoÙ »Ù á³ Ì³ ëÉ³ Ý»É

37. 2 ñ¹lá`ù áñáßí »É ¿ Ñ³ Ì³ ¿áÇÉ»á Ì³ Çí¹ »0³ ÙÇÇáoÇ ù³ Ý³ ÍÁ Ó»ñ »ñ»É³ ÙÇ³ ñ³ Ý Ù»Ç:

- 2 lá
- àã
- á· Çí »Ù/ ¿ Áí³ ñ³ ÝáoÙ »Ù á³ Ì³ ëÉ³ Ý»É

38. Δ³ Û³ ñáõ Û » ù³ ñ¹láù áñ μÁβÍÇ Ì áÕÛÇó Ýβ³ Ý³ Ìí³ Ì¹ » Õáñ³ Ù³ ÙÇÝ μáõÁÛ³ Ý ËÇëí
 é»ÁÇÛÇ³³ éúñÛ³ ÌÛ³ ÝùÇ ë³ ÑÛ³ Ý³ á³ ÌáõÛÝ»ñÇ á³ Ñá³ ÝáõÛÁ β³ ì Ì³ ñ¹áñ³³
 ñ¹láõÝ³ ì » ì¹ » Ý ÷ áÇÉ»áëÇ³ ÙÇ μáõÁÛ³ Ý Ñ³ Û³ ñ:

- ² Ùá
- àã
- á· Çì » Ù/ ò Áí³ ñ³ ÝáõÛ » Ù á³ ì³ ëË³ Ý»É

39. Ò»ñ Ì³ ñÍÇ uáí, ÇÝáù³`Ý á»ì ù ÷ »ñÏ³ ñ³ Ó· ì Ç ÷ áÇÉ»áëÇ³ ÑÇí³ Ý¹áõÁÛ³ Ý μáõÁáõÛÁ
 (ÁÝì ñ»ù ÛÇ³ Ì ×Çβì ì³ ñμ»ñ³ ÌÁ)

- ØÇÝá³³ 1³ ÛÇë
- ØÇÝá³³ 6³ ÛÇë
- ØÇÝá³³ 1ì³ ñÇ
- 1-2ì³ ñÇ
- 3-5ì³ ñÇ
- ² ÙμáÕÇ ÌÛ³ ÝùÇ ÁÝÃ³ óúáõÛ
- á· Çì » Ù/ ò Áí³ ñ³ ÝáõÛ » Ù á³ ì³ ëË³ Ý»É

βÝùñÑ³ Ì³ ÉáõÁìáõÝ Û³ ëÝ³ Ì óáõÁÛ³ Ý Ñ³ Û³ ñ

Appendix 2. Consent Form (English & Armenian)

American University Of Armenia
Institutional Review Board # 1/Committee On Human Research
College Of Health Sciences Subcommittee For Student Theses

CONSENT FORM

Title of Research Project: Assessment of the knowledge about epilepsy, attitude towards the disease and an epileptic child, and compliance with treatment in the parents of children with epilepsy in Yerevan hospitals.

Explanation of Research Project: This research project is conducted by American University of Armenia by second year MPH student, child neurologist, Lilit Aramyan. The research team also includes epilepsy experts and counseling physicians of neurological units in two hospitals in Yerevan. The project is a survey. The purpose of the survey is to assess the knowledge about epilepsy, attitude towards the disease and an epileptic child, and compliance with treatment in parents of children from 0-18 years old with epilepsy who attend for the counseling/ treatment to neurological units of these Yerevan hospitals during July-August 2005. About 63 parents from two hospitals would be included in this project.

You have been included in the project as the parent of child from 0-18 y. o. with epilepsy who attends the neurological unit of selected hospital during July-August 2005. After having the signed consent forms each parent of child with epilepsy who attend the hospital, would be provided with the questionnaires by physicians who would be open for any questions about filling the questionnaire by parents. Filling the questionnaire will be done once during the research and would take about 10-15 minutes. The questionnaire

includes some questions about demographic data and questions for assessing your knowledge about epilepsy, attitude towards the disease and an epileptic child, and your compliance with the treatment. We appreciate your time and participation in this study.

Risks/Discomforts:

There is no known risk for the participants of this survey. The research possesses risk, discomfort, or inconveniences the same as encountered in your daily life.

Benefits:

You will not receive monetary benefits for your participation in this survey but you will be provided with information about the results of the study after its completion. Your participation and the information that you will provide are valuable for our study and these data would be as a basis for developing of the further educational program regarding epilepsy.

Confidentiality:

Please, be assured that your names, addresses and telephone numbers will not be required; the information you conveyed during this survey will be used only for the research project. Only aggregate data will be provided to show the results of the survey. You are free not to tell anything that will relate to the information you will provide, so that its confidentiality is completely protected. Every effort will be made to protect the confidentiality of the information provided in so far as it is legally possible. Your responses will be accessible only for research team and the Public Health department of American University of Armenia.

Voluntariness:

Your participation is voluntary. You are not obliged to participate in this project and have the right to drop out anytime. Your refusal to participate in this study will not affect on you, quality of your child medical care.

You are welcomed to ask any questions regarding the study or about filling the questionnaire. You should ask the person in charge listed below any questions you may have about this research study. *You* should ask him/her questions in the future if you do not understand something about the study.

If you believe that you have not been treated fairly or have been hurt by joining the study you should call the person in charge of the study, Dr. Elena Amirkhanyan (3741) 5125 68, the American University of Armenia. If you want to talk to anyone about this research study you should contact the person in charge of the study Dr. Michael Thompson (3741) 512592). The person in charge of the study will answer your questions.

If you agree to be in this study, please sign your name below.

Subject's signature (including children, when applicable)-----

Thank you in advance for your participation.

Witness to Consent Procedures*

NOT VALID WITHOUT THE COMMITTEE
OF IRB STAMP OF CERTIFICATION

Signature of Investigator

Date

* Optional unless subject is illiterate, or unable to *sign*.

3 ÛçèÝ»ñÇÝ: Ð3 Û3 Ó3 ÙÝáóÃáóÝÁ èi áñ3 · ñ»Éáó Ñ»i á Ò»½ íµ3 Á3 Ýí »Ý Ñ3 ñó3 ß3 ñ»ñ:

Ð3 ñó3 ß3 ñ»ñÁ Èñ3 ói »Éáó »Ý Ù»í 3 Ý. 3 Ù · í á3 Ñ3 Ýç»Ý Ó»½ÝÇó 10-15 náá»:

Ð3 ñó3 ß3 ñ»ñÁ ÁÝ1. ñí áóÙ »Ý ÁáÓáí ñ13 · ñ3 í3 Ý í í Ù3 ÉÝ»ñÇÝ í »ñ3 µ»ñí áÓ Ñ3 ñó»ñ ·

Ñ3 ñó»ñ çáÇÉ»áèç3 ÑÇí3 Ý1áóÃáó Ý · çáÇÉ»áèç3 áí ÑÇí3 Ý1 »ñ»É3 ÙÇ Û3 èçÝ

· Çí »ÉÇùÝ»ñÇ ,í »ñ3 µ»ñÚáóÝùÇ Û3 èçÝ · µáóÁÙ3 Ý Ñ»i Ñ3 Û3 Ó3 ÙÝáóÃáó Ý Û3 èçÝ:Ø»Ýù

· Ý3 Ñ3 í áóÙ »Ýù Ò»ñ Á3 Û3 Ý3 íÁ ,áñÁ 1áóù í ñ3 Û3 1ñ»Éáó »ù Ñ3 ñóÙ3 ÝÁ:

Ð»í 3 ½áí áóÃáó ÝÁ Û3 èÝ3 íó»Éáí , áóù áá ÙÇ í í 3 Ý. Ç á»ù »ÝÁ3 ñí í áóÙ: àñ · ç

1ñ3 Û3 í3 Ý í3 Ù3 Ù3 èí »è3 íÇ ù. áóí , áóù á»ù èi 3 Ý3 Éáó, µ3 Ùó Ñ»i 3 ½áí áóÃáó Ý

3 í3 ñí Çó Ñ»i á Ó»½ í í ñ3 Û3 1ñí »Ý Ñ3 ñóÙ3 Ý í »ñçÝ3 í3 Ý3 ñ1áóÝùÝ»ñÁ: Ò»ñ

Ù3 èÝ3 íóáóÃáóÝÁ · í ñ3 Û3 1ñ3 í í »Ó»í áóÃáóÝ»ñÁ ß3 í 3 ñÁ»ù3 í áñ »Ý Ù»ñ

Ñ»i 3 ½áí áóÃáó Ý Ñ3 Û3 ñ: àá 3 ÝáóÝ ,áá Ñ3 éó» í3 Ù Ñ»é3 Éáèç Ñ3 Û3 ñ á»Ý

á3 Ñ3 Ýçí »Éáó Ò»½ ÝÇó Ñ3 ñó3 ß3 ñÁ Èñ3 óÝ»Éáóó: í »ñçÝ3 í3 Ý3 ñ1áóÝùÝ»ñÁ

Ý»ñí3 Ù3 ói »Éáó »Ý3 Ù÷ á÷ í3 í Ó· áí: í »Ó»í áóÃáóÝ»ñÇ · 3 Òí ÝÇáóÃáóÝÁ 3 á3 Ñáí í áóÙ

ç: , áóù Çñ3 í áóÝù áóÝ»ù áÙ3 èÝ3 íó»É í3 Ù ÁÝ1 Ñ3 í »É Ò»ñ Û3 èÝ3 íóáóÃáóÝÁ Ñ3 ñóÙ3 ÝÁ

ó3 Ýí3 ó3 í á3 ÑÇÝ: Ò»ñ Û3 èÝ3 íó»É/áÙ3 èÝ3 íó»Éáó Ñ3 Ý. 3 Ù3 ÝùÁ áñ · ç í »ñá áÇ

3 Ý1ñ3 13 èÝ3 Ò»ñ 3 ÝÓÇ í ñ3 í3 Ù Ò»ñ »ñ»É3 ÙÇ Ñ»i 3 · 3 µáóÁÙ3 Ý áñ3 íÇ í ñ3 :

, áóù í3 ñáÓ »ù í 3 É ó3 Ýí3 ó3 í Ñ3 ñó Ñ»i 3 ½áí áóÝ»ñÇ ÈÙµÇÝ Ñ3 ñóÙ3 Ý ·

Ñ3 ñó3 ß3 ñÇ í »ñ3 µ»ñÙ3 É: °Á» Èñ3 óáóóÇá í »Ó»í áóÃáó Ý í3 ñçù áóÝ»ù Ñ3 ñóÙ3 Ý Û3 èçÝ

· , áóù í3 ñáÓ »ù 1ÇÙ»É Ð3 Ù3 èi 3 ÝÇ 2 Ù»ñÇíÙ3 Ý Ð3 Û3 Èè3 ñ3 ÝÇ Ð3 Ýñ3 ÙÇÝ

2 éáÓç3 á3 ÑáóÃáó Ý 3 ÙµÇáÝ Ø3 Ùé ÁáÙéáÝÇÝ (3741)512592 Ñ3 Û3 ñáí : °Á»

Ñ3 Û3 ñáóÙ »ù, áñ Ò»½ Ñ»i 3 Ý3 ñ13 ñ »Ý í3 ñí »É ,í3 ñáÓ »ù 1ÇÙ»É 3 ÙµÇáÝÇ

3 èèçèi »Ýí °É»Ý3 2 ÙÇñÈ3 ÝÙ3 ÝÇÝ(3741)512668 Ñ»é3 Éáè3 Ñ3 Û3 ñáí :

ÞÝáñÑ3 í3 ÉáóÃáóÝ Û3 èÝ3 íóáóÃáó Ý Ñ3 Û3 ñ:

Ø3 èÝ3 íóáó í ÝáÓÇ èi áñ3 · ñáóÃáóÝÁ `----- 2 Ùè3 ÁÇí Á-----

Appendix 3. Tables

Table1. The study variables

Independent Variables	Scale	Measurement
Age of respondents	Categorical	1= <30 years old 2=31-40 years old 3=41-50 years old 4= >51 years old
2.Education level >10 years of school <10 years of school (reference group)	Ordinal	3,4,6= <10 years of school 1,2,5= >10 years of school
3.Place of living Yerevan-reference group Other-other cities and villages of Armenia	Nominal	0=Yerevan 1=Others (other cities and villages of Armenia)
4.Number of family members	Continuous	Numbers corresponding to family size
5.Number of children	Continuous	Numbers corresponding to number of children in the family
6.Age of epileptic child	Continuous	Numbers corresponding to child's age
7.Age of onset of epilepsy	Continuous	Numbers corresponding to age of onset of epilepsy
Dependent Variables	Scale	Measurement
1.Mean knowledge score	Continuous	Correct responses on 50% of questions min=14 points max=28 points
2.Proportionate knowledge	Binary	< 14 points=No > 14 points=Yes
3.Attitude towards epilepsy	Binary	0=No 1=Yes
4.Attitudes towards an epileptic child	Binary	0=No 1=Yes
5.Compliance with treatment	Binary	0=No 1=Yes

Table 2. Demographic characteristics of the study participants (Univariate Analyses)

Variables	Categories	Frequencies (%)
Age of respondents	< 30 years	15 (23.8)
	31-40 years	32 (49.2)
	41-50 years	15 (23.8)
	>51 years	2 (3.2)
Education Level	Postgraduate Degree	0 (0)
	Institute/University	8 (25.8)
	High School	15 (48.4)
	Special Education	7 (22.6)
	No Education	1 (3.2)
Place of living	Yerevan	32 (50.8)
	Other cities of Armenia	15 (23.8)
	Villages of Armenia	16 (25.4)

Table 3. Description of family size, number of children, child's age, age of onset of epilepsy in the child (Univariate Analyses)

	Mean \pm SD	Range
Number of family members	5.4 \pm 2.1	3-14
Number of children in the family	2.4 \pm 1.24	1-9
Age of epileptic child (in years)	9.5 \pm 4.4	0.4-17
Age of onset of epilepsy (in years)	5.2 \pm 4.1	0.3-14

Table 4. Knowledge about features of epilepsy, the age of onset for epilepsy, treatment for epilepsy, first aid procedures and duration of treatment for epilepsy

	Frequency (n)	Percent(%)
Seizures with loss of consciousness	47	77.0
Seizures without loss of consciousness	23	37.7
Loss of consciousness without seizures	13	21.3
Night fears	17	27.9
Night urine incontinence	9	14.8
Behavioral changes	15	24.6
< 1year old	13	21.0
2-14 years	28	45.2
15-18years	11	17.7
At any age	25	40.3
Treatment only with AED-s	36	80.0
Hypnosis	1	2.2
Psychological help	7	15.6
Special diet	5	11.1
Surgical treatment	4	8.9
Artificial respiration	7	11.3
Tilting the child on the side and waiting for the end of convulsions	42	67.7
Injection of antiepileptic drug	14	22.6
Electric shock	1	1.6
Other (special points on the head)	1	1.6
Know about treatment	22	48.9
Know about AED-s	31	77.5
Know about drug side effects	20	51.3
Know the name of child's drug	51	80.0
Know the names of AED-s	49	78.0

Table 5. Sources of information about epilepsy; first source for help after first episode of seizure in the child; sources of information about the first aid mentioned by parents of epileptic children

	Frequency (n)	Percent(%)
Child's Doctor	36	59.0
Neighbor	13	21.3
Relative	7	11.5
Media, Publications	24	35.1
A primary care physician	25	40.3
A doctor that they know	15	24.2
Neurologist	33	53.2
Psychologist	81	2.9
Psychiatrist	7	11.3
Brain Examination Unit	16	25.6
Diagnostic Unit (blood, urine analysis)	6	9.7
Friend/Relative	2	3.2
Other (hospital, emergency)	2	3.2
Child's doctor	49	87.5
Publications	3	5.4
Media	9	16.1
Friend/relative	4	7.1

Table.6 Association between the mean knowledge score and independent variables**Simple Linear Regressions Analyses of the mean knowledge score and demographic variables**

Variables	Regression coefficient	p-value	95% Confidence Interval
1.Age categories	0.331	0.302	0.314-0.976
2.Education level: >10 years of school -	-0.358	0.407	-0.512-1.229
<10 years of school (reference group)			
3.Place of living Yerevan-reference group Other-other cities and villages of Armenia	0.042	0.923	-0.843- 0.927
4.Number of family members	0.120	0.309	0.117- 0.356
5.Number of children	0.196	0.213	-0.119-0.511
6.Age of epileptic child	-0.019	0.676	-0.113-0.074
7.Age of onset of epilepsy	-0.083	0.078	1.318-2.624

Table.7 Association between attitude towards epilepsy and an epileptic child and demographic variables**Simple Linear Regressions analyses of attitude and demographic variables**

(results for both attitude variables are presented in the table)

Variables	Regression coefficient	p-value	95% Confidence Interval
1.Age categories	0.712; 1.861	0, 911;0. 564;	-4.557- 8.280 -11.935-13.359
2.Education level >10 years of school <10 years of school (reference group)	-2.265; 2.693	0.818; 0.586	-21.921-17.390 -7.136-12.523
3.Place of living Yerevan-reference group Other-other cities and villages of Armenia	1.938; 2.759	0.844; 0.576	-17.720-21.596 -12.587- 7.069
4.Number of family members	-3.056;-0. 998	0.187 ;0. 324	-6.637-1.524 -3.005-1.009
5.Number of children	-0.116-0.664	0.977;0. 696	-7.974 -7.742 -4.058-2.727
6.Age of epileptic child	-0.803; -0.457	0.475 ;0. 344	-3.042-1.436 -1.418-0.503
7.Age of onset of epilepsy	-0.791;-0. 040	0.509;0. 937	-3.175-1.592

Table 8. Association between compliance with treatment and demographic variables**Simple Linear Regression Analyses of compliance and demographic variables**

Variables	Regression coefficient	p-value	95% Confidence Interval
1.Age categories	-0.283	0.928	-6.541-5.974
2.Education level	8.695	0.069	-0.694-18.086
>10 years of school			
<10 years of school (reference group)			
3.Place of living			
Yerevan-reference group	2.947	0.542	-6.678-12.573
Other-other cities and villages of Armenia			
4.Number of family members	0.583	0.631	-1.835-3.002
5.Number of children	-0.992	0.627	-5.057-3.072
6.Age of epileptic child	-0.265	0.637	-1.380-0.851
7.Age of onset of epilepsy	-0.638	0.290	-1.836-0.559

Table.9 Associations between the 1) mean knowledge score and compliance with treatment, 2) compliance and the mean knowledge score, 3) compliance and attitude towards epilepsy and 4) an epileptic child

Simple Linear Regression Analyses

Variable	Regression coefficient	p-value	95% Confidence Interval
1.Compliance with treatment	0.011	0.260	-0.009-0.032
2.Mean knowledge score	3.929	0.260	-3.068-10.926
3.Attitude towards epilepsy	-0.069	0.291	-0.199-0.060
4.Attitude towards an epileptic child	-0.046	0.723	-0.308-0.215

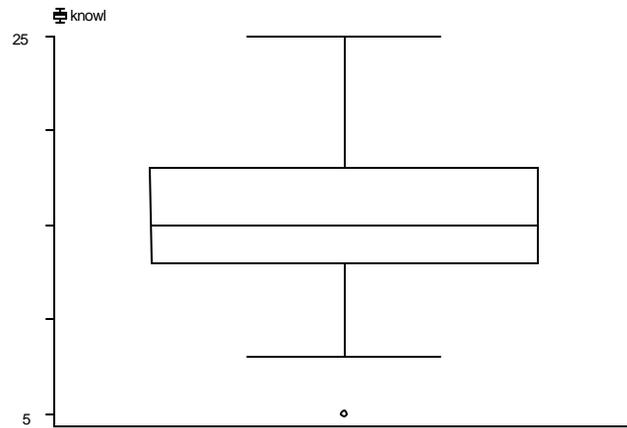
Table.10 Associations between the mean knowledge score, 1) attitude towards epilepsy and 2) an epileptic child and 3) compliance with treatment.

Multiple Linear Regression analyses

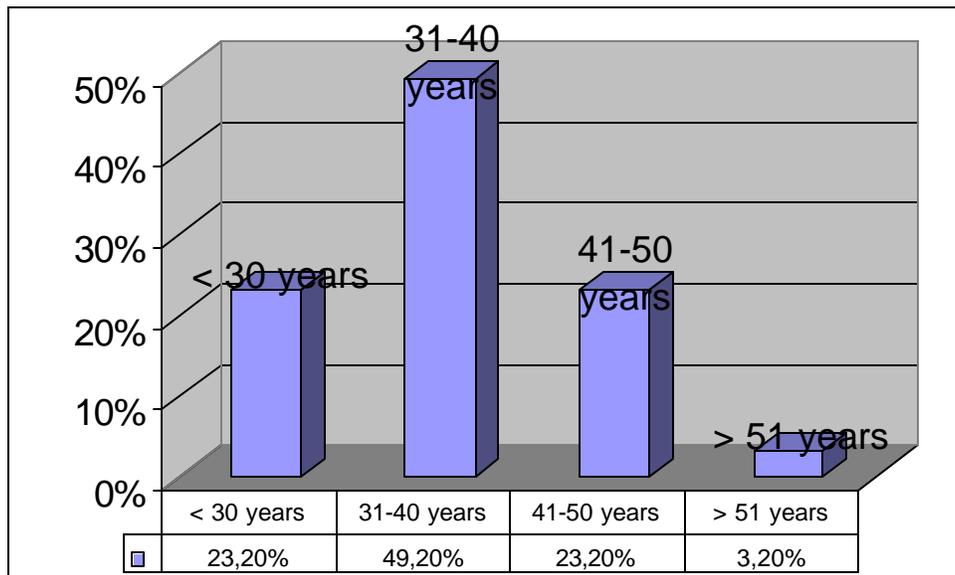
Variables	Regression coefficients	p-value	95% Confidence Interval
1.Attitude towards epilepsy	0.004	0.467	-0.007-0.017
2.Attitude towards an epileptic child	0.002	0.815	-0.020-0.025
3.Compliance with treatment	0.013	0.241	0.009-0.034

Graphs

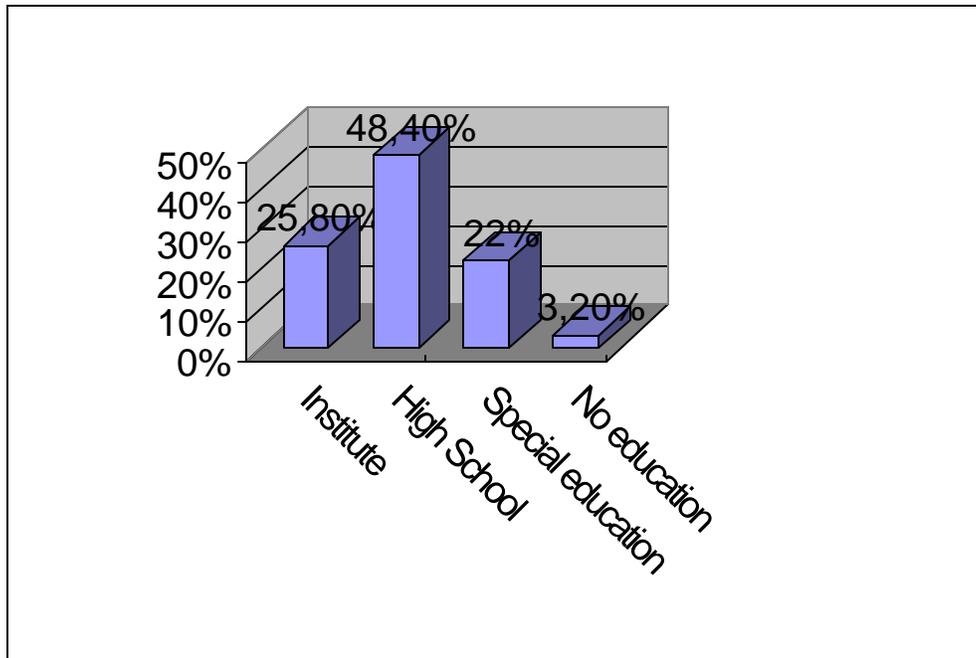
Graph 1. Mean knowledge score of parents of epileptic children (box plot)



Graph 2. Age group distribution of participants



Graph 3. Education level of participants



Graph 4. Knowledge about causes of epilepsy

