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

LILIT ARAMYAN, MD,

MPH Candidate

College of Health Sciences
American University of Armenia

Primary advisor: Varduhi Petrosyan, MS, PhD
Secondary Advisor: Grace Sullivan, APRN, BC PNP, PhD

Yerevan, Armenia
October 2005
Acknowledgments

I would like to express deep gratitude to my advisors Dr. Varduhi Petrosyan and Dr. Grace Sullivan for their great contribution in preparing this project, continuous support and helpful comments.

I am thankful to Teaching Associate Yelena Amirkhanyan for her useful advice and comments. I want to express my sincere gratitude to Teaching Associate Lusine Abrahamyan and Karine Sahakyan (CHSR) for their great support and help in analyses of the data, and helpful advices in using statistical packages (SPSS and STATA).

I am very thankful to my research team (medical staff of the pediatric neurology unit of Surb Grigor Lusavorich Medical Center and epileptology unit of Institute of Child and Adolescents Health).

I also want to express my gratitude to my classmates, MPH students, for their helpful advice and support, and parents who participated in the study for their support, serious approach and interest towards the study.
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 31-40 years 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.
# TABLE OF CONTENTS

Acknowledgments ................................................................. i

Abstract ...................................................................................... ii

1. Introduction ................................................................................ 1
   1.1 Background / Literature Review ........................................ 1
   1.2 Situation in Armenia ......................................................... 5

2. Methodology ................................................................................ 7
   2.1 Study design ........................................................................ 7
   2.2 Study population ............................................................. 7
   2.3 Sample size ......................................................................... 7
   2.4 Sampling methodology .................................................... 8
   2.5 Study instrument ............................................................. 8
   2.6 Study Variables ............................................................... 9

3. Ethical Considerations .............................................................. 10

4. Analysis ....................................................................................... 10

Results .......................................................................................... 11
   5.1 Demographic Data ........................................................... 11
   5.2 Knowledge about epilepsy ............................................... 11
   5.3 Attitude towards epilepsy and epileptic child ...................... 13
   5.4 Compliance with treatment .............................................. 14

6. Discussion ................................................................................. 14

7. Study limitations ................................................................. 16

8. Conclusions and recommendations ......................................... 17

References .................................................................................. 19

Appendices ................................................................................... 22
   Appendix 1. Questionnaire (English & Armenian) ..................... 23
   Appendix 2. Consent Form (English & Armenian) ..................... 43
   Appendix 3. Tables ................................................................. 49

Graphs ......................................................................................... 56
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].
\[ n = \frac{Z^2 \cdot p \cdot q}{d^2}, \]

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:

\[ n = \frac{1.96^2 \cdot 0.2 \cdot 0.8}{0.1^2} = 62 \]

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
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 31-40 years, and only 3.2% were in the age group > 51 years (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 (Table 2). 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 \(15.33 \pm 4.1\) 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 generalizibility 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.
References


4. Reynolds EH. The ILAE/IBE/WHO Global Campaign against Epilepsy:: Bringing Epilepsy "Out of the Shadows"; *Epilepsy and Behaviour* 2000; 1; S3-S8,


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 51 year 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?
   q Yes (go to question 10)
   q No (go to question 11)
   q Don’t know/Difficult to answer

10. From where/whom have you heard about epilepsy?
    q Child’s doctor
    q Relative
    q Neighbor
    q Media (newspapers, magazines, TV, radio, Internet)
    q Publications
    q Other--------------------- (specify)

11. How do you assess your information about epilepsy that you have?
    q I have enough information about epilepsy
    q I do not have enough information about epilepsy

12. Would you like to get more information about epilepsy?
    q Yes
    q No
    q Don’t know/Difficult to answer

13. In your opinion, what are the main causes of epilepsy? (Select all right answers)
    q Hereditary causes
    q Head injury
    q Fear
    q Psychological stress
    q Injuries during pregnancy/delivery
    q Other--------------------- (specify)
    q Don’t know/Difficult to answer

14. In your opinion, what are the main features of epilepsy? (Mark all correct answers)
    q Seizures with loss of consciousness
    q Seizures without loss of consciousness
    q Loss of consciousness without seizures
    q Night fears
    q Night urine incontinence (Enuresis)
    q Behavioral changes
    q Other--------------------- (specify)
    q Don’t know/Difficult to answer
15. Epilepsy can be developed in the following age periods: (Mark all correct answers)
- < than 1year 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 \(\checkmark\) symbol)

<table>
<thead>
<tr>
<th></th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree /nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Epilepsy leads to behavioral changes in children suffering from epilepsy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Children suffering from epilepsy have cognitive difficulties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 question 31)

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 lifestyle 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 question 32)
   - 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 question 35)
   - 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 question 37)
   - 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 1 year
   - 1-2 years
   - 3-5 years
   - During whole life
   - Don’t know/Difficult to answer

Thank you very much for your participation.
3. ðó³ B³ ñ

1. áë³ ñ» ë³ ñÇ

2. ñó³ ñÇ

3. ðó³ ñó³ ñÇ
4. Õ»ñ µÝ³ ì áõÅ Ù Y í³ ÙÄ¹
   □ 9 ñ”³ Ý
   □ Æ³ Ù ë³ ³ÝÇ³ Ùù³ ÙÝ ùÝ»ñ
   □ Æ³ Ù ë³ ³ÝÇ· Ùù³ ³Ý Ùè³³ ÙÝ»ñ

5-8 Ñ² ñô»ñÇ à³ ì³ ëÉ³ ÙÝ»ñÁÝß»ù Àí »ñài :

5. Õ»ñ ÁÝï³ òÝÇùÇ³ ÙÝ»ñÇ ù³ ÙÝ ñ Ùù³ Ùì³ ñ Ù‍áñß»ù ÒÝ Ò»½ Ñô»ñ` `---------------

6. ÁÝï³ òÝÇûðñ Õ»ñ »ñ»Ë³Ý»ñÇ ù³Ý³ Ùì³ Ùì³ À`---------------

7. Õ»ñ ö³ Çë³ ñ³ ñì³ ÙÇ³ òÝ»ñÀ³ ÙÇ³ òÝ»ñÇù³ ÙÝ ñ Ùì³ À`---------------

8. Ù»ù, Æ³ ñ Ùç³ ñì³ Ùç³ ñì³ Ùëëì Ùì³ Ùëëì Çë³ òÝ»ñ À³ Ùì³ Ùì³ À`---------------

9. 9 ñù³ Çë³ ÒÉ»³»ù³ Ù³ Ùì³ Ùì³ Çë³ ñ³ ñì³ Ùç³ ñì³ Ùç³ òÝ»ñ À³ Ùì³ Ùì³ Çë³:
   □ 2 ÙÈ(² ÒÉ»ù Ù³ ÑôÇÝ)
   □ ÑÈ(² ÒÉ»ù Ù³ ÑôÇÝ)
   □ ÑÈ ÇÉ»ù À³ Ù³ ÙèõÁ ÒÉ»³ Ùëëì Ùì³ Ùì³ Ùì³ Çë³ ÒÉ
10. а нîì: "OCR'â à ÙÇ'ö »û ëë»ë£â Çêà ëëÇê  ŅÇï  Þ1 áäAÝ Ý Ù ëëÇY: (ÀÝî ñ»ù ùáëÝ xÇêî á î 3 ëE 3 ëY»ñÅ)

   3 ñ»E 3 ÙÇê ùëÁë Çô
   3 ñ»i 3 ÙÇôë
   Þ3 ñ ù 3 ÙÇôë
   3 Ý· i 3 ÙÇY ëë 3 í í áðAÝ Ý ÙÇçáôÝ»ñÇò (Ã»ñÅ»ñ,
   Þ3 ñ»ñ, ÙÇçáôÝ ÙÇêëí 3 í »ëáäÁêêê,
   ÙÇêëí »ëY»i )

   i à 3 · ñëë 3 í ÙÇêëí»ñÇò
   2 Ù<<<<<<<<<<<<<<<<<<<<<<<<<<<<(Ýë»ù)

=================================================================
==========

11. ÙÇêëí »ë 3 áëû í · Ý3 Ñö í »Çû Õ»ñ áðY»ô 3 í í »õíá áðAÝ ÙÇêëí»ñÇò Çêà ëëÇê  ŅÇï  Þ1 áäAÝ Ý

í »ñ3 ì»ñ å

   3 ë áðY»û ì 3 ñëë 3 ñëë »õíá áðAÝ ÙÇêëí»ñÇò Çêà ëëÇê  ŅÇï  Þ1 áäAÝ Ý Ù ëëÇY
   3 ë áðY»û ì 3 ñëë 3 ñëë »õíá áðAÝ ÙÇêëí»ñÇò Çêà ëëÇê  ŅÇï  Þ1 áäAÝ Ý Ù ëëÇY

12. Í áðY»Ý3 ÙÇ'ë 3 ñëë Ùì Õ»ñù ù»ñ »E3 í »ëC ì 3 í í »õíá áðAÝ ÁêêêêôÝ»ñ çê à Çêà ëëÇê  ÙÇ ù 3 ëëÇY

   2 ì
   à å

   à· Çî »Ü/, Àí 3 ñëë Yáðû »ù à 3 à 3 ëE 3 ëY»É
13. ǒnī³ ní Çuái, áná'Yu »Y ֵå ִÇÈå eÇ³ ŶÇ: ŶÈ³ í án å³ i ֵx³ eY»nÀ(AÝê nù mådeìh
xÇë³ a³ õ³ eÈ³ YÝ»nÀ)
  a³ é³ Y.³ õ³ Y å³ i ֵx³ eY»nÀ
  ŶÈÇíÝ³ éë³ I ùÀ
  i³ ÉÀ
  Êå: »µ³ Y³ õ³ Y eÄ»n»À
  1 ÝY³ ì³ nàãÀû Y ÷ NOÇðñàû Y nìi õ³ ¡i³ õ³ Y³ éë³ I ùY»nÀ
  2 Ú-------------------------------(ÝB»ù)
  â· Çì »ÚÌ, Áì³ ñ³ Yàáû »U â³ õ³ eÈ³ Y»É

14. ǒnī³ ní Çuái, án`áYu »Y ֵå ִÇÈå eÇ³ nÇÇí³ Y³ àðÀû Y ÷ÇU³ õ³ Y³ Éì³ YÇB»nÀ:
(AÝê nù mådeìh xÇë³ a³ õ³ eÈ³ ñY»nÀ)
  őYóâÀû»n· Çì³ àðÀû Y õáãëí ái
  őYóâÀû»n³ é³ Yå· Çì³ àðÀû Y õáãëí Ç
  1 Çì³ õáãÀû Y õáãëí ³ é³ Yå ôYóâÀû»nÇ
  1 ÇB»n³ ðÇÝ³ É »n
  1 ÇB»n³ ðÇÁãÀûÀ
  i³ nùÇ È³ Y³ àãÀû»nÀ
  2 Ú-------------------------------(ÝB»ù)
  â· Çì »ÚÌ, Áì³ ñ³ Yàáû »U â³ õ³ eÈ³ Y»É
15. ¾å ÇÈå ³ Ñç³ ³ Ý³ áðÄ Î³ÅäY³ä³ ³άõÖ åí åé »ÉNó³ "Ü Ê³ å ³ ÑçÈ³ ÙÇÝ Òåç³ ÝÝ»ñáôü

(Ü Ñu µáÉñ ×Ç³ä ³ i³ ³ ëÈ³ ÝÝ»ñA)

- Ø ÇÝä" 1³³ ñ»í³³ Ý
- 2-14 ñ³ ñ»í³³ Ý
- , »ë³ Ñ³ ë³³ ÑçÈäU (15-18 ñ³³ ñ»í³³ Ý)
- å³³ ÝI³ ³ó³ I³³ ÑçÈäU
- ² Ú---------------------------------(ÝB»ù)
- å· ÇÈ=² ÚI, Àí³ ñ³³ ÑáôU »U á³³ ñ³ ëÈ³ Ý»È

16. Ü Ñu Öñ Ñ³ Ù³ ÙáôU Ù³ ë³ ÇÈ³ Ñ³Ý»ë³ Ü Ê³ Æ³ åðUÝ»ñçÜ íë³³ û³³ Ùáôëç

Ñ³ Ù³ ñ (Ü Ñu v -áì)

<table>
<thead>
<tr>
<th>0 Ç³ Ý³³ U³³ A³ U³³ Y³³ U³³ Y³³</th>
<th>D³³ U³³ O³³ U³³ Y³³ U³³</th>
<th>Ê³³ U³³ Ñ³³ Ù³³ O³³ Ù³³ Y³³ U³³</th>
<th>D³³ U³³ O³³ U³³ Y³³ U³³</th>
<th>0 Ç³³ Ù³³ O³³ U³³ Y³³ U³³</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. ¾å ÇÈå ³ Ñç³ Ù³³ Ï»ñáôü i³³ ÑúÇ Ù³³ ÑáôUÝ»ñÇ á³³ ÑçÈ³ ß³³ ë³³ åáO »ñ»E³ Ý»ñçU³á³i</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ¾å ÇÈå ³ Ñç³ ß³³ ë³³ åáO »ñ»E³ Ý»ñáôü åÐÜ»Ý ÇÈ³ Ò³³ I³³ Ý³³ Àí³ ÑáôU³åðY³»ñÇ</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. à ðÜÏ ³ Ú áò« ü: ¹ ÇÚ»Éá· Yáâû Ý Ï ³ Ú E áñÑñ³ Ç Ñ³ Ú ³ Ú Ò«»ñ»ñ»É³ ÚÇ Ùáí

³ é³ ÇÇÝ ¿á ÇÈá øI ÓÝóU³ Ý ³ »á ùÇó Ñ»ë á: (Ü Ë»ù ùááñ ÒÇáâ³ ã ³ ù³ éÉ ³ Ý»ñÁ)

0. à áãëá ÒÇÇ³ ÚÇ, Úãë ÐY
0. ì ³ ÞáA ùáë Ç
0. Ú Ù ñ³ ³ ÝÇÝ
0. Ñá· »µ³ ÝÇÝ
0. Ñá· »µáñÄÇÝ
0. à ðó»ôÇ Ñ»ë ³ Ñàë Ú³ Ý Ï ³ ÝÇÝ»ë
0. Ç³ · Ÿáèè ÇI Ï Þ µÇÝ»ë (³ ÛÜ Ý Ü»ôÇ, Ñ»ë ³ Ñàë áòááùóè)
0. ÀÝI »ñàçë/ ³ Ñ»ë ÚÇë
0. ² Ù-------------------(Ýß»ù)
0. á ÇI »Ü/, Àí³ ñ³ Þáòû »Üà ³ ù³ éÉ ³ Ý»É

18. ² Ù³ Úì· ÇI »ù ¿á ÇÈá øI éÇ³ ÑÇI ³ Ý ³ áòáû Ú Úáá³ Þ ÚÜ»áÔ³ Ý»ñÇ Ú³ éÇÝ:

0. ² Ù(² Ýó»ù 19 Ì³ ßóÇÝ)
0. à à(² Ýó»ù 21 Ì³ ßóÇÝ)
0. á ÇI »Ü/, Àí³ ñ³ Þáòû »Üà ³ ù³ éÉ ³ Ý»É
19. ² ìú`ù »µì "ÉÈ«ù ñP ï³ ³ å Çëâ í Ç₁ (ñP ï³ ñÝôáäñ³ ÞìÝ) ¹ ô³ ÙÇçáòÝ»ñÇ Ù³ øÇý áññ »ë å Çëâ øÇý ÙÇûëÅáñ³ ñP Ù³ ñP ñÜ ï³ áñí í áö¹ "ô³ ÙÇçáòÝ»ñ:

- ² ì (² Ýó«ù 20 ñP ñóÇÝ)
- à å³ (² Ýó«ù 21 ñP ñóÇÝ)
- à Çî »ù/ Àí³ ñP Ùáðí»ù Ù³ ï³ ù ï³ ø³ ù ³ ù ù ³ ø³ ³ ù "³ ³ Y»ë

20. ² ìú`ù · Çî »ù ñP ï³ ³ å Çëâ í Ç₁ ³ ô³ ÙÇçáòÝ»ñÇ Ôåáóëü³ íÇ ³ ³/² »áäñºááòÝ»ñÇ Ù³ øÇý:

- ² ì
- à å
- à Çî »ù/ Àí³ ñP Ùáðí»ù Ù³ ï³ ù ï³ ø³ "³ ³ Y»ë

21. ² ìú`ù Ùë³ ì³ Ùáðí³ õ»ñ å Çëâ øÇý Ùë Àí³ ñÇí³ ³ Y»³ »ñ»ë³ ù ï³ ñáðí · Çî ááóëçó Ù³ Ù³ ñP ï³ ù ï³ "³ ³ ø³ "³ ù ñáðåáú:

- ² ì (² Ýó«ù 23 ñP ñóÇÝ)
- à å³ (² Ýó«ù 22 ñP ñóÇÝ)
- à Çî »ù/ Àí³ ñP Ùáðí»ù Ù³ ï³ ù ï³ ø³ "³ ³ Y»ë
22. 0 À a å 3 å 3 áñá Yù »Y O»ñ»ñ»È 3 ë Ç µÅß ã Ç í áOUÇó YÈ 3 Yì 3 ë í 3 í µáåá ä ã À áñá Yì 3 úåù á æí 3 Yì 3 éáåå å 3 í 3 éY»ñÀ(ÀÝïñ»ù ú áåá ñ Çé â å 3 í 3 éÈ 3 Yì 3 »ñ»É)

23. 2 ñì ì «Ô»ñÀ»ì ì Yáå ã Çé 3 úì ÑÇì 3 Yì 1 »ñ»È 3 Yì 3 Yì 3 ëñ ë íë 3 Yáå ë áåá ã Ç í áOUÇó YÈ 3 Yì 3 í 3 í

à Çì »ù, À í 3 ñì Yáå »ù å 3 í 3 éÈ 3 Yì É

24. À a å 3 å 3 áñá Yù »Y O»ñ»ñ»È 3 ë Ç YÈ Yì 3 Yì 3 ëñ ë íë 3 Yáå ë áåá ã Ç í áOUÇó YÈ 3 Yì 3 í 3 í áåá ñ Çé å 3 í 3 éY»ñÀ(ÀÝïñ»ù ú áåá ñ Çé å 3 í 3 éÈ 3 YY»ñÀ)

25. ì # a ü å 3 å 3 áñá Yù »Y O»ñ»ñ»È 3 ë Ç YÈ Yì 3 Yì 3 ëñ ë íë 3 Yáå ë áåá ã Ç í áOUÇó YÈ 3 Yì 3 í 3 í áåá ñ Çé á å 3 í 3 éÈ 3 YY»ñÀ
25. ÆÝ¹ ñáðÝ »Yù ÝÉ»É,»A ÑÇÉåµÝ »ù , ³ Ú Ñ³ ³ ëÇÉå ë³ Çüï³ ë³

1 »Ô ÙÇçá³Ç¹ ë³ ÙÇçá³Ý»ñÇ ³ ÝååÝ»ñÁ

-------------------------------------------------------------------------------------------------

26. ÆÝ¹ ñáðÝ »Yù ÝÉ»É»½ë³ Û ÝÇ áñá³ Ñ³ ë³ ëÇÉå ë³ Çüï³ ë³ Çüï³ ë³ ÝååÝ»ñÁ Å³ Å³ ë³ Çüï:

₂ á³Áå³ ÙÇ³ Ý Ñ³ ³ ëÇÉå ë³ Çüï³ ë³ ÝååÝ»ñÁ

ocrates 

--------------------------------------------------------------------------------------------------

27. Ô»ñ ë³ Ñ³ Çüái , Ç’Ýµµá³Å Ñ»A² Ý Ú³Ä³ /Ú³Ä³ Ý»ñ Ý Ú³ ë³ ・áñí áó ñáðÝ áè Çüï³ Å³ ç³ ÙÇ

Å³ ë³ Çüï:

· á³Áå³ ÙÇ³ Ý Ñ³ ³ ëÇÉå ë³ Çüï³ ë³ ÝååÝ»ñÁ

ocrates 

--------------------------------------------------------------------------------------------------
28. ÆYã³ é³ çCY ū! YáôáU Y Ù»Áå³ Y»h á »i ū ã ü í³ áñí i »Y çêå åç³ ççê³ ūí »h»E³ ãç
úáï òÝôáôUÝ»hã

1 »ã ūáã:(U Òù ùµáêã ãÇçë a³ í³ éE³ YÝ»hA)

2. ãì³ ù³ ù³ ì³ Y òÝ³ ååôáïåê³

3. ô»Éi Yáï Y»hA” Í³ Y»EÉ½äò³

A »ù E»h»E³ ãçY ãáôçç ãé³ ã»éUEçYáê Yáå³ Y³ í³ ãí íç

D³ í³ ôÝôáãë³ ãçY ³ »éä³ áççY»h³ ãí áãñ

1. áôñáåéåÇ»É ãì³ ã³ Yáé³ Yúáí

2. Ù---------------------------------(YB»ù)

3. á Cí »U/, ãí³ ã³ YááU »Uá³ í³ éE³ Y»E

29. à ãí »OC’ó »ù ëí³ ô»Éi »Öê³ áôñáåáôUÝ»h³ ôÝôáôUÝ»hãçA³ Ù³ Y³ í³ é³ çCY ū! Yá ôáU Y
 Ù³ éçY (ÂÝì ã»ù

µáêã ãÇçë a³ í³ éE³ YÝ»hA)

9. ãì³ ãçê ãµÔêï Cò

1. á³ í³ ãí ì³ Yúôë»hãç

å³ Y·í³ í³ ãçY áë³ í íáôáU Y ÙççáôY»hçÇ (Â»ñA»h, ³ Ùé³ · ã»h,

âñ»æëë³ í³ »éáôáïåê³,

ÆYí »éY»i )

ÁYí »hÝ»hçöë’³ ã»í³ UY»hçöë

2. Ù---------------------------------(YB»ù)

3. á Cí »U/, ãí³ ã³ YááU »Uá³ í³ éE³ Y»E
30. ²ñ¹Ûáù ·Çï»Ù û ÇÝã é»ÅÇÙ ¨ ³éûñÛ³ ÏÛ³ÝùÇ ë³Ñٳݳå³ÏáõÙÝ»ñ å»ïù ¿
³ å³ Ñái Ç

³å³ÑáíÇ Ċé³ üí ÑÇì³ ³É¹ »ñ»Ë³ÛÇ ÑëÏáÕáõÃÛáõÝÁ ÉáՃݳÉáõ Å³Ù³Ý³Ï
³ å³ ëÉ³ ÿY»ñÅ)

  ²å³ÑáíÇ »ñ»Ë³ÛÇ ÑëÏáÕáõÃÛáõÝÁ ÉáՃݳÉáõ Å³Ù³Ý³Ï

31. ²ñ¹Ûáù Îí á pudo »ù , an ¿³ ÇÉ=³ äE³ ÑÇì³ ³É¹ áðA=ðy³ Â³ ñmáOçáí ÇY äç máóáí ádu :

  ² ñ (² ÿó»ù ³²ñ³ nóÇY)
  ³ å (² ÿó»ù ³³ñ³ nóÇY)
  ³ å · Çì »ù/ , Ìí ³ ñ³ ñáðu »ù ³ å ³ ëE³ ÿ»È
35.² ñ¹ û` û i ³ ñí à û û »ù, âñ òò ñ ³ ñ ç á ë ô ë è ç î ñ ô í ³ ³ ñ í çò è ó ñ ý i á û ù ç ñ
ñ ó i ³ ³ í ç ó«û» ñ ç ó:

■ à a² ù ÷ó»ù 36 ñ³ ñô çô
■ ² û (² ù ÷ó»ù 37 ñ³ ñô çô)
■ à · çí »ù / ³ì ³ ñ³ ñ á û ù »ù á³ ³ i ³ ì ³ èë ³ ù ç é

36. Æ ¡ùì ³ ñ í ç ê ô ñ ô ì à ó ù ³ ñ í çò è ó ñ ý i á û ù ç ó ñ ó ç ó ç ù ç ç ó:

■ ³à ç ô à è ç î ñ á »ù ³ ñ ô î á à ô ÷ í ³ áàí à ô å ó â à ô ù »ù
■ ³à ç ô à è ç î ñ á »ù ³ ñ ô î á à ô ÷ í ³ áàí à ô å ó â à ô ù »ù
■ ³ô ç á à è ç î ñ á »ù ³ ñ ô î á à ô ÷ í ³ ñ ô ó è á à ô å ó â à ô ù »ù
■ ³ô ç á à è ç î ñ á »ù ³ ñ ô î á à ô ÷ í ³ èë ³ áàí à ô å ó â à ô ù »ù
■ ³ô ç á à è ç î ñ á »ù ³ ñ ô î á à ô ÷ í ³ èë ³ áàí à ô å ó â à ô ù »ù
■ ² û --------------------------------------------------------- (ù ù) ù
■ à · çí »ù / ³ì ³ ñ³ ñ á û ù »ù á³ ³ i ³ èë ³ ù ç é

37.² ñ¹ û` û à ñ á ô ò í ñ ç á ë ô à ç i çí ³ »ó ù ç á á ô ç ó³ ñ ó ç í á ó »ù »ù ³ ñ ô ó è æ ç ó ç ó
ó ç ó:

■ ² û
■ à á
■ à · çí »ù / ³ì ³ ñ³ ñ á û ù »ù á³ ³ i ³ èë ³ ù ç é
38. Я³ Ü³ ñáÔÜ »ù³ ñ¹ ñû á¼ ðè CÎ áûÇó Ý³ Ý³ Îî³ 1 »çÁ³ Ü³ ÜÇÝ µáõÂÜ³ Ý ÝÇéï
É»ÅÇÚÇ³ ë³ ë¼Ý Ýé ÇÓ Ý³ Ý³ ÎáéY»ëÇå³ ñ³ ÝáéÁ Â³ Ì³ ñ° ñå³
³ ñ¹ ñáóÝ³ î³î»³ »Ý Çó Çé³ ëÇ³ ÜÇµáõÂÜ³ Ý Ü³ Ý³ ñ:

☐ 2 Üå
☐ ñ ñ
☐ ã Çí »Ü/, A³ ñ³ Ýáé »Ü³ Ì³ ëÈ³ Ý»É
39. Ó»ñ³ ñ³ Ýáé, ÇÝá³ "Ý á îü õ ñ”³ ñ³ O· I Çó Çé³ ëÇ³ NÇ³ Ý³ áêÁ Üµ ïáõÂáá/Á
(ÁÝì ñ»ù ÜÇ³ Î· Çó³ î³ ñ»ì³ ÌÁ)

☐ ï ÇÝá³ 1³ ÜÇé
☐ ï ÇÝá³ 6³ ÜÇé
☐ ï ÇÝá³ 1³ ñÇ
☐ 1-2î³ ñÇ
☐ 3-5î³ ñÇ
☐ 2 ðµáõç ÎÜ ÇÝáÁ³ áûáá
☐ ã Çí »Ü/, A³ ñ³ Ýáé »Ü³ Ì³ ëÈ³ Ý»É

ßÝáóì³ Î³ ñáõÁóÝ Ù³ ëÝ³ ÙáóáÅ Ü³ Ý³ Ý³ 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 a 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*  

______________________________
Signature of Investigator

Date

* Optional unless subject is illiterate, or unable to *sign.*
D² Ù e³ YČ² Ù»ńČÍ Ù Y D² Ù³ Ù³ n³ Y
D³ Yň³ ÙÇ² æáÖç³ æ³ NáÄÜ Y ü³ i áåá »î

D³ Ù³ Ù³ ÙáÄÜáñáì
Appendix 3. Tables

Table 1. The study variables

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Scale</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of respondents</td>
<td>Categorical</td>
<td>1= &lt;30 years old</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2=31-40 years old</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3=41-50 years old</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4= &gt;51 years old</td>
</tr>
<tr>
<td>2. Education level</td>
<td>Ordinal</td>
<td>3,4,6= &lt;10 years of school</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,2,5= &gt;10 years of school</td>
</tr>
<tr>
<td>3. Place of living</td>
<td>Nominal</td>
<td>0=Yerevan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=Others (other cities and villages of Armenia)</td>
</tr>
<tr>
<td>4. Number of family members</td>
<td>Continuous</td>
<td>Numbers corresponding to family size</td>
</tr>
<tr>
<td>5. Number of children</td>
<td>Continuous</td>
<td>Numbers corresponding to number of children in the family</td>
</tr>
<tr>
<td>6. Age of epileptic child</td>
<td>Continuous</td>
<td>Numbers corresponding to child’s age</td>
</tr>
<tr>
<td>7. Age of onset of epilepsy</td>
<td>Continuous</td>
<td>Numbers corresponding to age of onset of epilepsy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>Scale</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mean knowledge score</td>
<td>Continuous</td>
<td>Correct responses on 50% of questions min=14 points max=28 points</td>
</tr>
<tr>
<td>2. Proportionate knowledge</td>
<td>Binary</td>
<td>&lt; 14 points=No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt; 14 points=Yes</td>
</tr>
<tr>
<td>3. Attitude towards epilepsy</td>
<td>Binary</td>
<td>0=No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=Yes</td>
</tr>
<tr>
<td>4. Attitudes towards an epileptic child</td>
<td>Binary</td>
<td>0=No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=Yes</td>
</tr>
<tr>
<td>5. Compliance with treatment</td>
<td>Binary</td>
<td>0=No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1=Yes</td>
</tr>
</tbody>
</table>
Table 2. Demographic characteristics of the study participants (Univariate Analyses)

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

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

<table>
<thead>
<tr>
<th></th>
<th>Mean ± SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of family members</td>
<td>5.4 ± 2.1</td>
<td>3-14</td>
</tr>
<tr>
<td>Number of children in the family</td>
<td>2.4 ± 1.24</td>
<td>1-9</td>
</tr>
<tr>
<td>Age of epileptic child (in years)</td>
<td>9.5 ± 4.4</td>
<td>0.4-17</td>
</tr>
<tr>
<td>Age of onset of epilepsy (in years)</td>
<td>5.2 ± 4.1</td>
<td>0.3-14</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Frequency (n)</th>
<th>Percent(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizures with loss of consciousness</td>
<td>47</td>
</tr>
<tr>
<td>Seizures without loss of consciousness</td>
<td>23</td>
</tr>
<tr>
<td>Loss of consciousness without seizures</td>
<td>13</td>
</tr>
<tr>
<td>Night fears</td>
<td>17</td>
</tr>
<tr>
<td>Night urine incontinence</td>
<td>9</td>
</tr>
<tr>
<td>Behavioral changes</td>
<td>15</td>
</tr>
<tr>
<td>Treatment only with AED-s</td>
<td>36</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>1</td>
</tr>
<tr>
<td>Psychological help</td>
<td>7</td>
</tr>
<tr>
<td>Special diet</td>
<td>5</td>
</tr>
<tr>
<td>Surgical treatment</td>
<td>4</td>
</tr>
<tr>
<td>Artificial respiration</td>
<td>7</td>
</tr>
<tr>
<td>Tilting the child on the side and waiting for the end of convulsions</td>
<td>42</td>
</tr>
<tr>
<td>Injection of antiepileptic drug</td>
<td>14</td>
</tr>
<tr>
<td>Electric shock</td>
<td>1</td>
</tr>
<tr>
<td>Other (special points on the head)</td>
<td>1</td>
</tr>
<tr>
<td>Know about treatment</td>
<td>22</td>
</tr>
<tr>
<td>Know about AED-s</td>
<td>31</td>
</tr>
<tr>
<td>Know about drug side effects</td>
<td>20</td>
</tr>
<tr>
<td>Know the name of child’s drug</td>
<td>51</td>
</tr>
<tr>
<td>Know the names of AED-s</td>
<td>49</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency (n)</th>
<th>Percent(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s Doctor</td>
<td>36</td>
<td>59.0</td>
</tr>
<tr>
<td>Neighbor</td>
<td>13</td>
<td>21.3</td>
</tr>
<tr>
<td>Relative</td>
<td>7</td>
<td>11.5</td>
</tr>
<tr>
<td>Media, Publications</td>
<td>24</td>
<td>35.1</td>
</tr>
<tr>
<td>A primary care physician</td>
<td>25</td>
<td>40.3</td>
</tr>
<tr>
<td>A doctor that they know</td>
<td>15</td>
<td>24.2</td>
</tr>
<tr>
<td>Neurologist</td>
<td>33</td>
<td>53.2</td>
</tr>
<tr>
<td>Psychologist</td>
<td>81</td>
<td>2.9</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>7</td>
<td>11.3</td>
</tr>
<tr>
<td>Brain Examination Unit</td>
<td>16</td>
<td>25.6</td>
</tr>
<tr>
<td>Diagnostic Unit (blood, urine analysis)</td>
<td>6</td>
<td>9.7</td>
</tr>
<tr>
<td>Friend/Relative</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>Other (hospital, emergency)</td>
<td>2</td>
<td>3.2</td>
</tr>
<tr>
<td>Child’s doctor</td>
<td>49</td>
<td>87.5</td>
</tr>
<tr>
<td>Publications</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td>Media</td>
<td>9</td>
<td>16.1</td>
</tr>
<tr>
<td>Friend/relative</td>
<td>4</td>
<td>7.1</td>
</tr>
</tbody>
</table>
Table 6: Association between the mean knowledge score and independent variables

Simple Linear Regressions Analyses of the mean knowledge score and demographic variables

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

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)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Age categories</td>
<td>0.712; 1.861</td>
<td>0.911</td>
<td>-4.557-8.280</td>
</tr>
<tr>
<td>2. Education level</td>
<td>-2.265; 2.693</td>
<td>0.586</td>
<td>-21.921-17.390</td>
</tr>
<tr>
<td>&gt;10 years of school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10 years of school (reference group)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Place of living</td>
<td>1.938; 2.759</td>
<td>0.576</td>
<td>-17.720-21.596</td>
</tr>
<tr>
<td>Yerevan-reference group</td>
<td></td>
<td></td>
<td>-12.587-7.069</td>
</tr>
<tr>
<td>Other-other cities and villages of Armenia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Number of family members</td>
<td>-3.056; -0.998</td>
<td>0.324</td>
<td>-6.637-1.524</td>
</tr>
<tr>
<td>5. Number of children</td>
<td>-0.116; -0.664</td>
<td>0.696</td>
<td>-7.974-7.742</td>
</tr>
<tr>
<td>6. Age of epileptic child</td>
<td>-0.803; -0.457</td>
<td>0.344</td>
<td>-3.042-1.436</td>
</tr>
<tr>
<td>7. Age of onset of epilepsy</td>
<td>-0.791; -0.040</td>
<td>0.937</td>
<td>-3.175-1.592</td>
</tr>
</tbody>
</table>
Table 8. Association between compliance with treatment and demographic variables

Simple Linear Regression Analyses of compliance and demographic variables

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

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

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression coefficient</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Compliance with treatment</td>
<td>0.011</td>
<td>0.260</td>
<td>-0.009-0.032</td>
</tr>
<tr>
<td>2. Mean knowledge score</td>
<td>3.929</td>
<td>0.260</td>
<td>-3.068-10.926</td>
</tr>
<tr>
<td>3. Attitude towards epilepsy</td>
<td>-0.069</td>
<td>0.291</td>
<td>-0.199-0.060</td>
</tr>
<tr>
<td>4. Attitude towards an epileptic child</td>
<td>-0.046</td>
<td>0.723</td>
<td>-0.308-0.215</td>
</tr>
</tbody>
</table>
Table 10: Associations between the mean knowledge score, 1) attitude towards epilepsy and 2) an epileptic child and 3) compliance with treatment.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Regression coefficients</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attitude towards epilepsy</td>
<td>0.004</td>
<td>0.467</td>
<td>-0.007-0.017</td>
</tr>
<tr>
<td>2. Attitude towards an epileptic child</td>
<td>0.002</td>
<td>0.815</td>
<td>-0.020-0.025</td>
</tr>
<tr>
<td>3. Compliance with treatment</td>
<td>0.013</td>
<td>0.241</td>
<td>0.009-0.034</td>
</tr>
</tbody>
</table>
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

- Institute: 25.80%
- High School: 48.40%
- Special education: 22%
- No education: 3.20%

Graph 4. Knowledge about causes of epilepsy

- Hereditary causes: 29%
- Head injury: 41.3%
- Fear: 41.9%
- Psychological stress: 25.8%
- Injuries during pregnancy: 7.4%