

## CHAPTER III

### RESEARCH METHODOLOGY

#### 3.1 Selection of Research Design

##### 3.1.1 Semi-structured / Face-to-face Interviews Method

This study adopted a semi-structured interview or face-to-face method to collect data. The semi-structured interview was used due to its flexibility, which allows participants to elaborate and explain more about certain issues in depth. According to Merriem (1998), a semi-structured interview would be able to collect precise information as socio-demographical information, ages, incomes, races and other information. While, Smith (1975) stated that semi structured interview is well suited to the exploration of attitudes, values, beliefs and motives. It also provides the opportunity to validate the respondent's answer by observing non-verbal indicators, which is particularly useful when discussing sensitive issues (Ford et al., 2009; Gordon, 1975). A semi-structured interview has lower probability of bias occurring because observations on the participant can be done during the interviews when compared to telephone surveys (Szolnoki & Hoffmann, 2013; Barriball, 1994).

The interviews were conducted in Bahasa Melayu, the national language for Malaysia. The researcher explained in detail the purpose and gave a description of the study (see Appendix B). Participants were given the opportunity to ask any questions if there was anything that was unclear before signing the consent form (see Appendix C). The interviews answered the ability of parents or caregivers in seeking medicines and treatment for their unwell children, especially in situations of high fever, asthma and epilepsy attacks. Medicines and treatment received by the children for specific a period of time were recorded. Any difficulty in obtaining medicines and treatments were also recorded.

Figure 3.1 shows the flow chart of conducting the research from the obtaining eKasih database approval until analysing the finding of research.

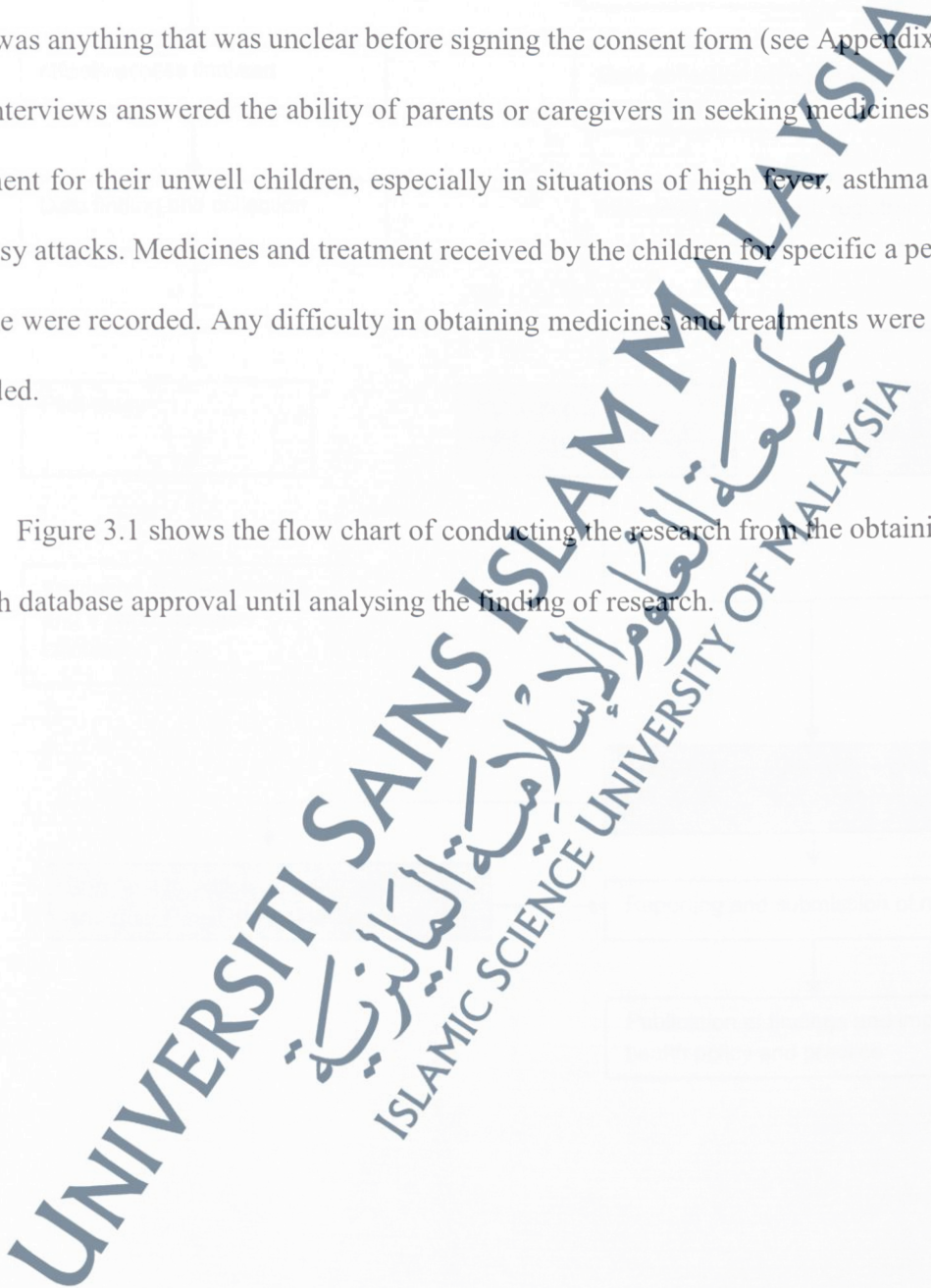
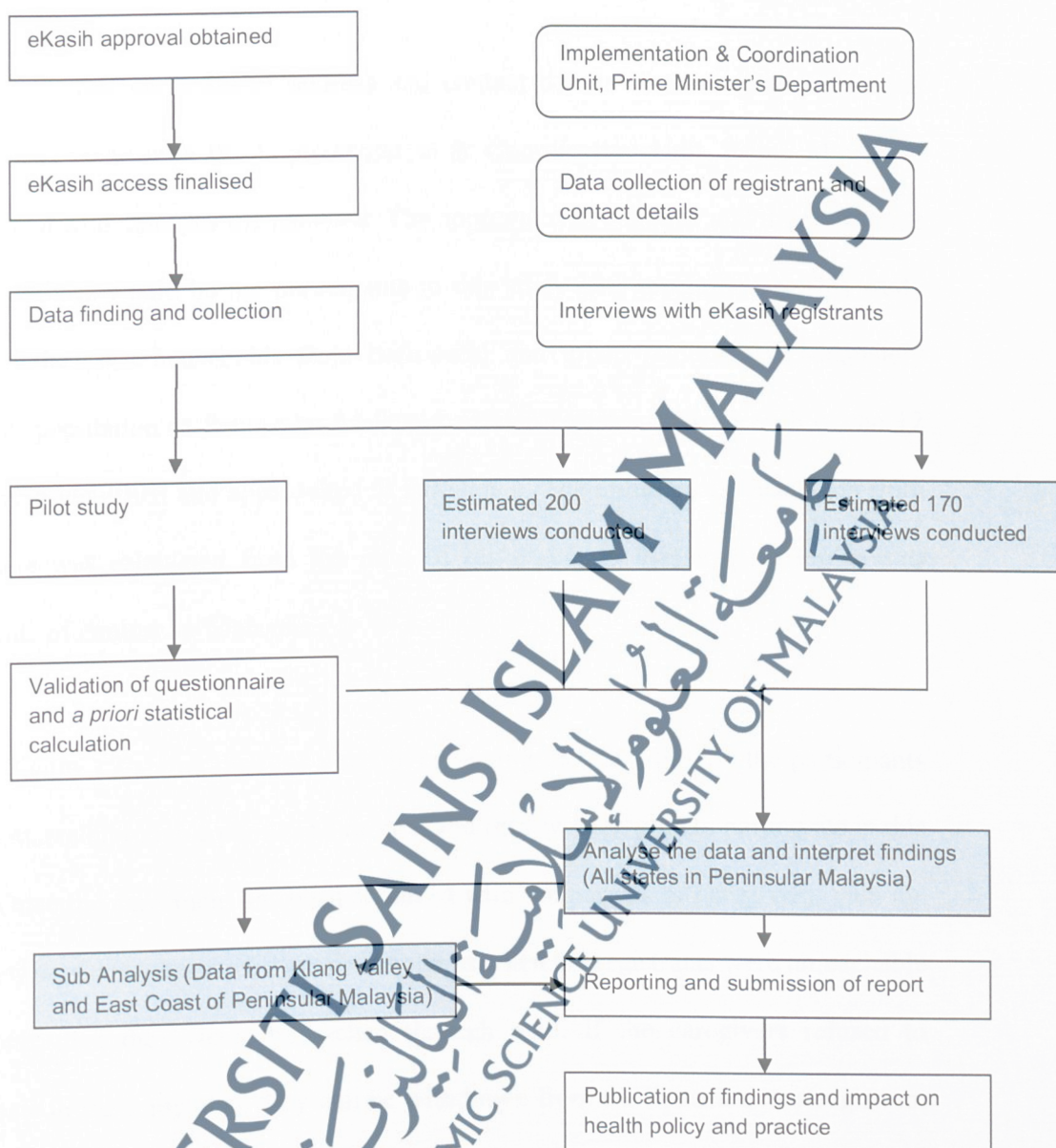


Figure 3.1: Flow chart of research methodology

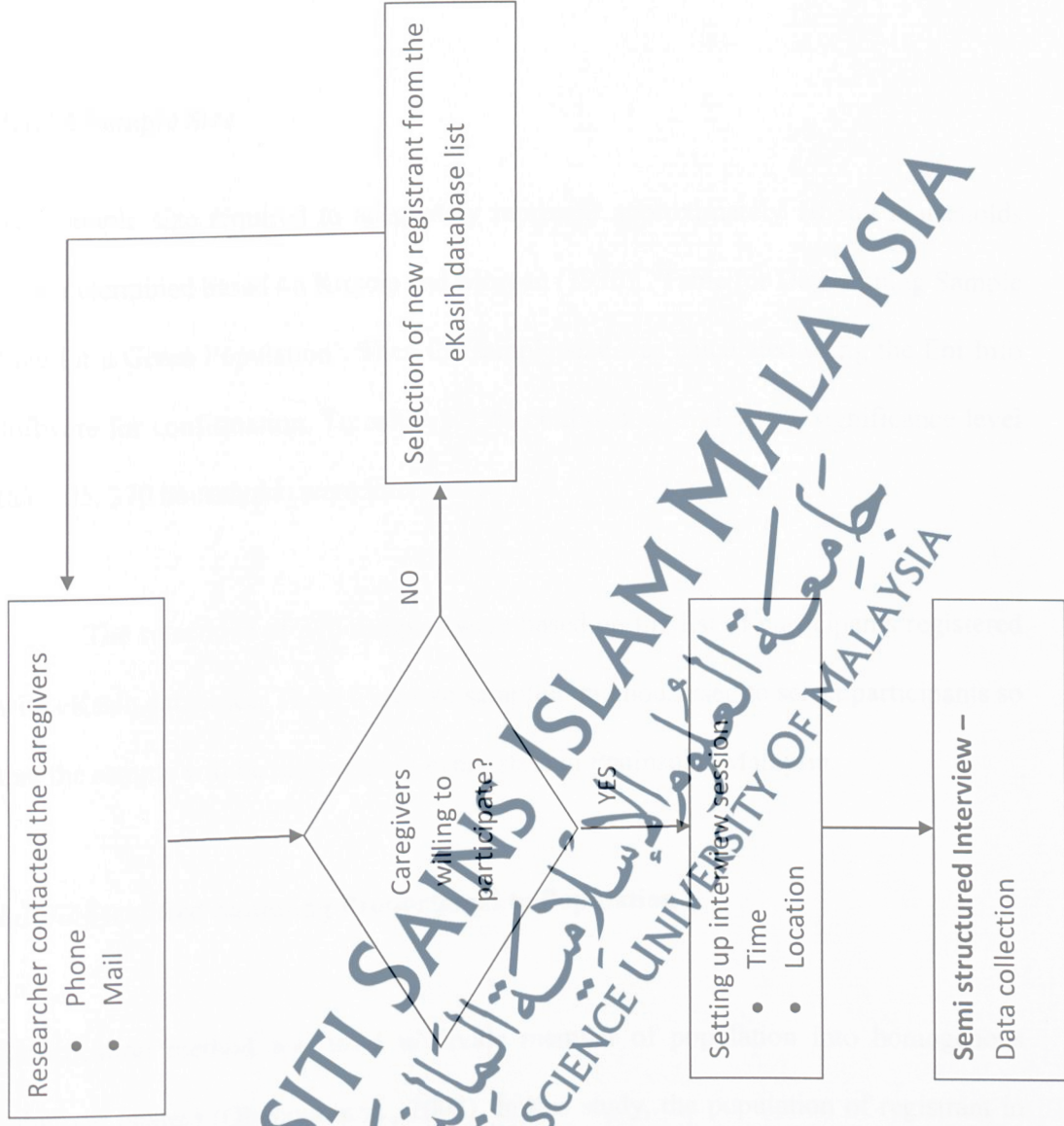


### 3.1.2 Setting Location / Interviews

The eKasih database contains address and contact details of the registrants. Initial contact was made with the Implementation & Coordination Unit, Prime Minister's Department who manages the database. The approval was obtained and the registrants in the database would be the participants in this study (see appendix D). This study involved the poor households from both rural and urban regions. To adequately represent population in Peninsular Malaysia, eKasih registrants from each of the 12 states were identified and approached to participate. The number of households from each state was calculated from the ratio of registrants in that state to the overall registrants of Peninsular Malaysia.

Figure 3.2 shows the flow chart in collecting the data. Firstly, the participants were contacted through a phone call or mail and they were invited to participate in this study. Once the agreement has been achieved with the parents or caregivers, then the interview sessions were carried out. In any cases when the registrants were unreachable by phone, then they were approached through mail. If the caregivers refused to participate in the study, then they will be withdrawn from the list and a new registrant were selected accordingly.

Figure 3.2: Flow chart of collecting data



### 3.1.3 Selection of Sample / Participants

#### 3.1.3.1 Sample Size

The sample size required to adequately represent approximately 10,369 households were determined based on Krejcie and Morgan (1970), 'Table for Determining Sample Size for a Given Population'. Then the sample size was calculated using the Epi Info software for confirmation. To achieve 95% confidence level at 5% significance level ( $\alpha$ ) - .05, 370 households were interviewed.

The selections of 370 samples were based on the list of participants registered with eKasih databases. There were two sampling methods used to select participants so that the sample will be representing every state in Peninsular Malaysia.

#### 3.1.3.2 Stratified Sampling Proportional to Population

Stratification method was used to divide member of population into homogenous subgroup (states) (Ohyama et al., 2008). In this study, the population of registrant in eKasih database were divided into 12 states. They were Selangor, Wilayah Persekutuan Kuala Lumpur (Putrajaya), Perak, Kedah, Perlis, Pulau Pinang, Kelantan, Terengganu, Pahang, Johor, Melaka and Negri Sembilan. A total number of 370 participants from 10 369 registrants were selected accordingly to the states.

The size in each stratum was taken in proportion to the size of the population (number of registrant in each state). Strata sample size was determined by the following equation:

$$n_h = (N_h / N) * n$$

where  $n_h$  was the sample size for stratum  $h$ ,  $N_h$  was the population size for stratum  $h$ ,  $N$  was total population size, and  $n$  was total sample size.

Example : Selangor with 1689 registrants

$$\begin{aligned} n_h &= (N_h / N) * n \\ &= (1689 / 10369) * 370 \\ &= 60 \text{ registrants} \end{aligned}$$

### 3.1.3.3 Systematic Random Sampling

This method was used to select the participants in each stratum (state). The participants were divided to the total number of the population with the sample size to obtain the sampling fraction. The sampling fraction was then used as the constant difference between subjects. The first participant was randomly picked from the list.

This method was used because of its simplicity (Kao et al., 2011). It allows the researcher to add a systematic element into the random selection of subjects. Another advantage of systematic sampling is that the researcher is guaranteed that the population

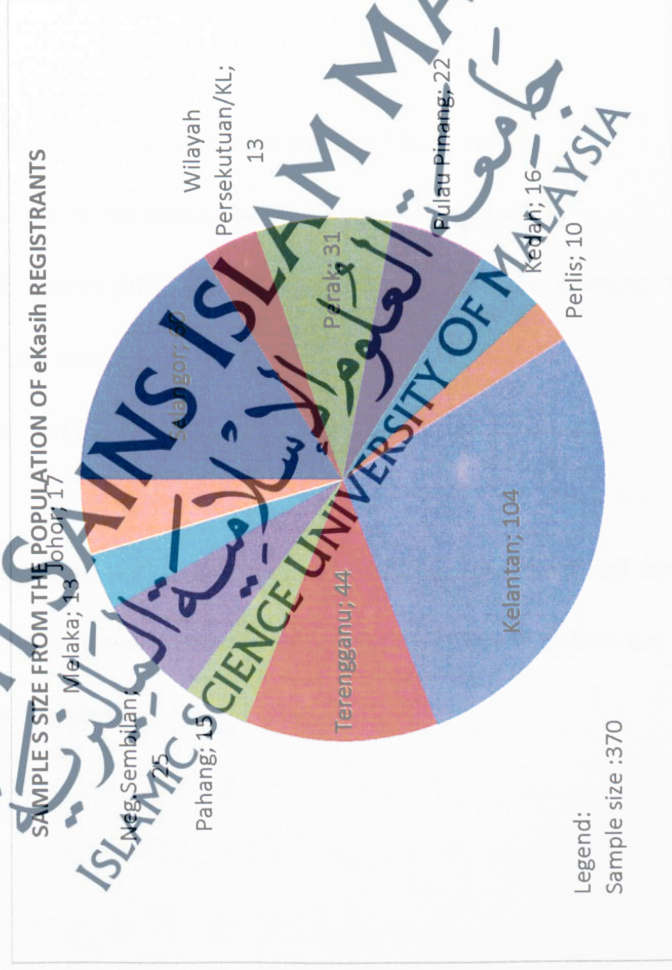
will be evenly sampled. Table 3.1 and Figure 3.3 show the total number of participants in each state to represent the eKasih population.



**Table 3.1:** Number of participant in each states

Selangor	W/P – Kuala Lumpur	Perak	Pulau Pinang	Kedah	Perlis	Kelantan	Terengganu	Pahang	Neg.Sembilan	Melaka	Johor	TOTAL
1689	353	863	604	467	287	2940	1227	418	691	354	474	10369 (number of eKASih registrants)
60	13	31	22	16	10	104	44	15	25	13	17	370 (samples size from population)

**Figure 3.3:** Number of participant in each states



### 3.1.3.4 Inclusion Criteria

1. Registered with the eKasih database
2. Household contains a child from 0-12 years of age
3. Caregiver of the child is a named registrant
4. Household income of less than RM100 per capita/per month or classified as low by Prime Minister's Department.

### 3.1.3.5 Exclusion Criteria

1. eKasih registrants that live outside of peninsular Malaysia
2. Households consisting of members above 12 years of age solely
3. Households that no longer fulfil the criteria of low income, i.e. earning over RM100 per capita/per month
4. Households that are not Malaysian citizens or permanent residents

Parents or caregivers who did not meet the above criteria, were removed from the list of participants and re-selection was conducted accordingly to the following list of names in the list of eKasih registrant.

## 3.2 Sources of Data

All data and information were collected from two main sources. Primary data was collected from surveys or semi structured interviews and secondary data was taken from eKasih database.

### 3.2.1 Primary Data / Questionnaires

A questionnaire was used to obtain relevant information from the caregivers in the identified households. The questionnaire (see appendix A) was based on the one developed by group of researchers from University of Nottingham, United Kingdom (UK) Their studies were on children of the refugee and asylum seekers in United Kingdom (Al-Kahtani et al., 2012).

The interview was conducted in Bahasa Melayu as national language and can be understood by every race in Malaysia. The questionnaire was divided into five sections named Section A, B, C, D and E. Most of the questions were restructured to suit and adapt to be used in Malaysian situation.

Section A answered some demographic questions such as age, monthly household income, occupation, number of children in the households, age of children, race, and the duration of year living in the same home.

Section B consists of questions related to the health condition of participants. Questions related to awareness of the caregivers in seeking treatment when they get sick, their illness, medications taken and institution of being treated.

Section C consists of questions related to the health of the child, particularly children of aged under 12. Caregiver was questioned on their child diseases and medications taken, where to seek treatment, cost of treatment, alternative treatments and

difficulties that may arise that made it difficult to access health and medical systems in previous month.

Section D answered questions as in section C. This section collected data of medicines and treatment over the period of 6 months prior to the interview.

Section E consists of all the questions in relating of knowledge on diseases such as fever, asthma and epilepsy. Participant was asked on common practice used to treat their children. This section was determined their understanding of the disease that commonly in children.

### 3.2.2 Secondary Data

This data were obtained from eKasih database. The database contains details of participants registered in eKasih program such as name, address, contact number, name of children and ages.

### 3.2.3 Field Work Data Management

The entire information obtained from the interview session were recorded and also transcribed onto the questionnaire sheets as detailed above (see Appendix E). Quantitative data were analysed using the software *Social Package for Social Science* (SPSS) version 13.0 (Chicago, Ill).

### 3.2.4 Ethical Approval on Conducting Research

The ethical approval to conduct this research was made through the Ethical Committee of Universiti Kebangsaan Malaysia. However, due to certain issues the ethical approval was finally obtained from Ethical committee of Universiti Sains Islam Malaysia.

### 3.3 Validity, Reliability and Pilot Test

Validity of the instrument means the extent to which the indicator constructs represent the construct (Burns & Groves, 1993). In other words, the researcher should make a pre-test before the questionnaire can be used to collect data to get the answer and any suggestions to improve the contents of questionnaire can be made simultaneously. This questionnaire was validated by Dr. Dzulkhairi Mohd Bani a senior lecturer in public health from the Universiti Sains Islam Malaysia to determine the validity of contents.

The triangulation technique was used to test the reliability of instrument. This technique was carried out during the interview. This technique involves in questionnaire where interviews and observations will be conducted simultaneously (Gordon, 1975). According to Merriem (1998), triangulation technique is a method to improve the reliability of qualitative research where the technique allow the researchers to confirm that the information given by the participant is correct and accurate.

A pilot study was done to pre-test the research questionnaire. One of the advantages of conducting a pilot study is that it might give advance warning about

where the main research project could fail, where research protocols may not be followed, or whether proposed methods or instruments are inappropriate or too complicated (Teijlingen & Hundley, 2001). In other words, it also allows us to know whether the questionnaire is reliable to answer the main objective of the study.

### 3.3.1 Pilot test

The sample was randomly selected from the list of participants registered with eKasih database. This study needed 30 participants to represent a total of 1689 people registered in Selangor.

Participants from Selangor were chosen because of logistic purposes where the locations are nearer compared to the others states. The healthcare facilities in Selangor either public or private sector were expected to be good. The Economic Census for Health Services and Social Work in 2011 has stated that, Selangor has the highest number of healthcare institutions compared to other states (Department of Statistic Malaysia, 2012). These healthcare services including the hospital services, maternity, general medical, dental care, dialysis centres, medical laboratories and traditional complimentary medicines. The findings of this pilot study will clarify whether further studies can be implemented or not.

### 3.4 Data Analysis

Data in section A, B, C and D were expressed using descriptive statistics. Meanwhile, the student's T-test was used in significance testing of sub analysis to compare the data from Klang Valley and East Coast of Peninsular Malaysia. Statistical significance was set at  $p < 0.05$ . Data were then transcribed onto table form for better reading and understanding.

Scoring method was used to compute the raw data in section E to a new variable to determine perception and knowledge of caregivers regarding medicines using the SPSS software. The perception in medical seeking behaviour of the caregiver for their unwell child was determined. The perceptions refer to the aspect of immunisation programme, their knowledge on epilepsy, asthma and epilepsy and their willingness to seek for treatment and medication for their children. The scoring scale used was 4.00 (> 4) showing a high level of awareness or knowledge, 3.00 – 3.99 score show medium level and score less than 3.00 (< 3) show low level of awareness or knowledge. The score given were based on the item description in Table 3.2 and Table 3.3. Score were given accordingly to the answer, 1 (disagree), 2 (unsure), 3 (depend on situation) and 4 (agree).

**Table 3.2:** KAP score in seeking medicine behaviour

Item Description
I believe that we need to immunise our children and follow the National Immunization Programme to make sure they stay healthy.
I will give my children paracetamol every time when they have fever.
I think children should be given “inhaler” when the asthma attack occur.
In my opinion, children should be given medicines to treat their epilepsy.
Budget for drug or medicine will affect my choice of medicine

**Table 3.3:** Item description on Epilepsy / Febrile Illness

Item Description
I know about epilepsy and was well informed on it.
I will agree with the doctor to treat my epilepsy’s child in the hospital.
I will agree with the doctor to treat my epilepsy’s child with modern medicines if the doctors suggested that way.
I have no problem to tell my relatives and friends if my children are diagnosed with epilepsy.
In my opinion, the school should be informed that my children have epilepsy.

Qualitative analysis was used to clarify the question on knowledge, attitudes and practices among participants in seeking for medicines for children in poor households.

Sub analysis from this study was to determine the access to medicines among children in poor households in urban areas (Klang Valley) with rural areas (East Coast of Peninsular Malaysia). The analysis included the demographical characteristics

analysis and perception in medical seeking behaviour of the caregiver for their unwell child. In this analysis, Klang Valley included Selangor and Wilayah Persekutuan Kuala Lumpur and Putrajaya while East Coast consisted of Terengganu and Kelantan.

