CHAPTER- V

DISCUSSION

This chapter deals with the discussion of the findings of the study.

The demographic variables depicted that with regards to age majority of the sample belonged to the age group of 21-40 years 134 (76.6%) in the study group and 119 (68%) in the control group. In relation to gender 97 (55.4%) in the study group and 106 (60.6%) in the control group were males. In education 82 (46.9%) and 76 (43.4%) had primary level of education in the study and control groups respectively.

In occupation 65 (37.1%) and 61 (34.9%) were in the category of daily wages. The family income in rupees per month revealed that 104 (59.4%) and 117 (66.9%) had an income of below Rs.2500 in the study group and control groups. This is similar to the findings of the study done by Varma et al. (2007) among PWE at Kerala, 58% of the PWE were unemployed and low education was cited as one of the causes for unemployment by 41% of the study subjects. Thomas et al. (1996) identified that among 100 PWE in Kerala 65% had a monthly income of less than Rs.1000/-.

Residence depicted that 145 (82.9%) in the study group and 126 (72%) in the control group belonged to the urban area. 106 (60.6%) in the study group and 108 (61.7%) in the control group were married.
Social variables showed that 144 (82.3%) in the study group and 143 (81.7%) in the control group belonged to the nuclear family. 103 (58.9%) in the study group and 97 (55.4%) in the control group were not accompanied by a care giver but 72 (41.1%) and 78 (44.6%) were accompanied by a caregiver. 53 (33.1%) were dependent on either the mother or father in the study group whereas in the control group 65 (37.1%) were not dependent. 117 (66.9%) in the study group and 113 (64.6%) in the control group were dependent on their family members to meet their medical expenses. These findings are similar to that by Sinha et al. (2012) where the family members were the main motivators in enabling health-care seeking behaviors among PWE.

The clinical variables depicted that both the groups were homogenous for all aspects as age at onset of seizures, duration of seizures and for the time of occurrence of seizures. The type of epilepsy revealed that in the study group 98 (56%) had generalized epilepsy and 96 (43.4%) in the control group belonged to the unclassified category respectively which was significant at p<0.05.

The study and control groups were similar in all aspects except the type of epilepsy and dependence on the caregiver.

The first objective of this study was to evaluate the effectiveness of a nurse executed Epilepsy Education Program on knowledge among patients with epilepsy. The mean knowledge score for the study group was 11.64 at pretest and increased to 12.80 at posttest I and to 13.29 at posttest II which was statistically significant at p = 0.005. The control group pretest mean was 10.82, posttest I mean was 11.25 and at posttest II it was 11.49. The control group also showed a mild
increase in the knowledge but the mean difference for the study group was higher between the pretest to the posttest II.

This finding is similar to that found in the MOSES study (2002) where the increase in knowledge was significant at p<0.001 and also in the study by Ridsdale (2000) that identified the impact of a nurse educator on the knowledge of newly diagnosed patients with epilepsy were the patients who belonged to the lowest quartile in the knowledge showed a significant improvement.

The level of knowledge was assessed to identify the changes between the two groups and it was found that in the pretest for the study group 41 (23.4%) had inadequate knowledge, 108 (61.7%) had moderately adequate knowledge and 26 (14.9%) had adequate knowledge. At posttest II the study group showed that 3 (1.8%) had inadequate knowledge, 127 (75.1%) had moderately adequate knowledge and 39 (23.1%) had adequate knowledge. This indicates that the number of PWE was improved in moderately adequate knowledge and adequate knowledge.

In the control group at pretest 67 (38.3%) had inadequate knowledge, 75 (42.9%) had moderate adequate knowledge and 33 (18.9%) had adequate knowledge. At posttest II 50 (29.9%) PWE had inadequate knowledge, 85 (50.9%) had inadequate knowledge, 85 (50.9%) had moderately adequate knowledge and 32 (19.2%) had adequate knowledge.

The improvement in the level of knowledge was more among the study group than the control group.
Since the type of epilepsy showed a significant difference between the study and control groups a stratified analysis was done to eliminate the effects of type of epilepsy on the knowledge. The chi-square analysis to determine the association between the level of knowledge and type of epilepsy showed that there was no significant association between the level of knowledge and type of epilepsy as focal, generalized and unclassified epilepsy between the study and control groups.

The study findings thus indicated that there was a statistically significant improvement in knowledge among the study group as compared to the control group hence the formulated alternative hypothesis $H_1$: There is a significant difference in the knowledge among patients with epilepsy who participate in the nurse executed epilepsy education program than those who do not was accepted.

The second objective of the study was to assess the effectiveness of a nurse executed Epilepsy Education Program on Self-management among patients with epilepsy.

At pretest the study group had a mean of 1.39 for IM, 4.62 for MM which was quite high against a total score of 5, 4.73 for SM, 2.48 for SeM and 1.59 for LM. The post testII showed an increase in the mean of 2.49 for IM, 4.71 for MM, 4.82 for SM, 4.11 for SeM and 2.82 for LM.

At pretest the control group had a mean of 1.43 for IM, 4.61 for MM, 4.83 which was high for SM, 4.04 for SeM and 2.35 for LM. The control group showed better self-management for components as IM, SM, SeM and LM than the study group. In MM both the groups have the same mean 4.62 and 4.61 respectively. The posttest II showed an increase in the mean of 1.55 for IM but all the other components
did not show any increase from the pretest mean as 4.53 for MM, 4.80 for SM, 4.03 for SeM and 2.38 for LM.

The individual components as IM, SM, SeM and LM showed a statistically significant difference at pretest. At posttest II the study group showed an increase for all the components and was statistically significant at p = 0.0005 for all components except for MM where both the groups were equal and it had the highest value of 4.82 and 4.80 for the study and control groups respectively.

These findings are similar to that of Kobau and DiIorio (2003) where the participants had higher self efficacy for medication management than for healthful lifestyle behaviours that may be enhanced by good self-management.

The overall self-management at pretest showed that the study group had a mean score of 2.97 and at posttest I it had increased to 3.39 with a mean difference of .420. The mean at posttest II was 3.79 with a mean difference of .825. The mean difference between posttest I and II was .405.

The control group had a mean of 3.46 at pretest, at posttest I it was 3.42, the mean difference being .034. At posttest II the mean was 3.46 with a mean difference of .005. The mean difference between posttest I and II was .039.

On comparison of the overall self-management mean score it was found that at pretest the study group had a lower mean of 2.97 as compared to that of 3.46 by the control group, but the study group showed an increase at posttest I to 3.39 which was nearly equal to the control group mean of 3.42. At posttest II the study group overall self-management score was 3.79 and higher than the control group mean of 3.46. The
study group showed an incremental increase in the self-management whereas the control group mean values remained the same. This was statistically significant at \( p = 0.0005 \).

McAuley, McFadden, Elliott & Shneker (2008) in order to characterize the self-management behaviors and to assess if the behaviors differed depending on the level of seizure control reported that among 50 patients the mean overall Epilepsy Self-Management Scale (ESMS) question score was 3.72 ± 0.41. The mean question scores on the ESMS subscales Medication Management, Information Management, Safety Management, Seizure Management, and Lifestyle Management were 4.4, 2.7, 3.9, 4.0, and 2.6, respectively. Information Management and Safety Management subscale scores were higher in the patients continuing to have seizures. The Morisky scale on medication-taking behavior revealed that patients fell into either the low (\( n = 2 \)), medium (\( n = 27 \)), or high (\( n = 21 \)) adherence category in medication intake. The researchers conclude that self-management skills are to be emphasized.

The ANOVA to determine the association of the self-management with the type of epilepsy showed that there was no significant association between the type of epilepsy and the self-management at pretest and posttest I for the study and control groups. The study group did not show any difference at posttest II but there was a significant difference in the self-management with the type of epilepsy for the control group at \( p = 0.040 \), the self-management among the focal and unclassified groups was better that the self-management among the PWE with generalized epilepsy.
The repeated measures of the overall self-management showed that the study group had improved in the self-management which was significant at $p = 0.0005$. The study findings thus supported the alternative hypothesis $H_2$: There is a significant difference in the self-management among patients with epilepsy who participate in the nurse executed epilepsy education program than those who do not.

The third objective of the study was to determine the effectiveness of a nurse executed Epilepsy Education Program on Quality of Life among patients with epilepsy.

The pretest mean for the different components of the QoLIE 31 scales for the study group were SW, QoL, EW, EF, CF, ME and SF (42.0, 42.1, 38.0, 45.7, 40.0, 45.8, 40.6) and control groups were (41.7, 42.0, 37.9, 45.7, 40.7, 45.8, 41.2) which showed that there was no significant difference in the QoL for both the groups.

The posttest I mean of the study group for SW, QoL, EW, EF, CF, ME and SF were 51.87, 49.96, 50.53, 54.82, 50.11, 54.57, 59.93 and the posttest II mean were 60.37, 56.36, 58.56, 62.31, 59.15, 60.61 and 56.05 respectively.

At pretest the lowest mean 38 was for Emotional well-being and the highest 45.8 was for medication effects. At posttest II the lowest mean of 56.05 was for social functioning and the highest mean 60.61 was for medication effects. This was similar to the findings of MOSES (2002) study. The tolerability to AED’s improved with communication and emphasis on medication management.

The pretest mean for the different components of the control group SW, PQL, EW, EF, CF, ME and SF were 41.76, 42.06, 37.96, 45.72, 40.71, 45.86, 41.20. The
posttest I mean were 41.88, 40.85, 31.99, 39.49, 38.08, 45.71, 39.22 and the posttest II mean were 42.16, 41.02, 31.41, 39.90, 38.54, 45.74, 39.86 respectively.

At pretest the lowest man 37.96 was for emotional well-being and the highest mean 45.86 was for medication effects. At posttest II the lowest mean 31.41 was for emotional well-being and the highest 45.74 was for medication effects.

The highest mean difference of 20.657 was seen for the component EWB for the study group whereas the highest mean difference 6.497 was seen for EWB for the control group between pretest and posttest II.

The lowest mean difference for the study group was 14.420 for Quality of Life and for the control group it was for 0.323 for seizure worry between pretest and posttest II.

The study group showed a statistical significance for all the components of Quality of Life at $p= 0.0005$ whereas the control group did not show a significant mean difference for the components as seizure worry and medication effects.

The TQoL for the study group at pretest was 37.67, at posttest I it was 51.30 and at posttest II it was 62.09 whereas for the control group at pretest it was 37.46, posttest I 33.86 and posttest II it was 34.39.

On comparison of the study group TQoL with the control group at pretest both the groups had nearly the same TQoL and it was not significant, at posttest I and posttest II the study group had an increase in TQoL than the control group which was statistically significant at $p = 0.0005$. 


The repeated measures of the QoL showed a significance for all the components of SW, QoL, EW, E/F, CF, ME, SF and TQoL at \( p = 0.0005 \).

In a study to identify the QoL of PWE at Iraq, the mean TQoL score of epileptic patients was 47.9 ± 18.1 as compared to 71.2 ± 10.2 among normal healthy adults (Shakir, Al-Asadi, 2012).

The most affected domains of QoLIE among persons with epilepsy were seizure worry 29.77 (± 21.72) and effects of drugs 49.75 (± 28.58) (Renato, 2012).

Patients with good Awareness, Knowledge and Attitude levels experienced a good Quality of Life and cognitive functioning (Lua, Selamat, 2011).

The baseline seizure frequency reveals that both the groups are homogenous for the number of seizures in the last six months. The study group showed that 82 (46.9%) had 1-2 seizures, 67 (38.3%) had 3-5 seizures and 26 (14.9%) had > 6 seizures in the last six months which was similar to the control group 81 (46.3%) had 1-2 seizures, 63 (36%) had 3-5 seizures and 31 (17.7%) had > 6 seizures which showed that there was no statistically significant difference at baseline.

At posttest I the study group showed that 3 (1.8%) had no seizures, 121 (70.8%) had one seizure, 44 (25.7%) had two seizures, 3 (1.8%) had three seizures and none had four seizures whereas for the control group 35 (20.7%) had no seizures, 97 (57.4%) had one seizure, 34 (20.1%), had two seizures and 1 (.6%) had four seizures between the first day of the study to 90 days. This was statistically significant at \( p = 0.0005 \).
At posttest II the study group revealed that 108 (63.9%) had no seizures, 56 (33.1%) had one seizures 5 (3.0%) had two seizures and none were in the category of three or four seizures, whereas for the control group 76 (45.8%) had no seizures, 75 (44.6%) had one seizure, 14 (18.4%) had two seizures, 1 (.6%) had three seizures and 1 (.6%) had four seizures respectively between 90 days to 180 days of the study. This was statistically significant at 0.006.

Seizure frequency was identified as the most significant variable affecting the QoL (Senol et al., 2007).

Less frequent seizures better education and remission sustained for atleast 6 months were associated with better QoL (Auriel et al., 2009).

Seizure frequency was associated with all HRQoL domains, except medication effects and emotional well being (Melikyan et al., 2012).

The results of the current study enabled the researcher to accept the alternative hypothesis $H_3$: There is a significant difference in the Quality of Life among the patients with epilepsy who participate in the nurse executed epilepsy education program than those who do not.

The conceptual framework of the current study was based on the Wilson and Cleary model of patient outcomes in health related Quality of Life. This model illustrates the relationship between variables of the PWE as the biological, physiological and social variables, the symptom status of the person as the type duration and frequency of epilepsy. The functional status of the individual are affected by the characteristics of the environment which can be promoted by the EEP. This affects the General health perception, non medical factors as the Self
management and the Quality of Life which in turn would determine the capacity of
the person to adapt to the demands imposed by the condition. This is further
enhanced by the social and psychological supports and personal motivation. The
patient outcomes are therefore significant determining factors for healthcare
interventions.

LIMITATIONS

The limitations identified during the conduct of the study were:

• All the patients received medications free of cost from the Neurology OPD at
  Sri Ramachandra Hospital. The medications remained the same for most of the
  patients except for one or two patients who had a slight change in the dosage,
  hence medication dosage could not be taken into account

• The physical environment of the patient could not be taken into account as
  there was no control to exposure from other sources of information.

• Pregnant women were not included in the research as they have special needs
  and an imperative need for education. They cannot be compared with the
  general epileptic population.

• Driving, employment and Legalities regarding the same are still ambiguous in
  India hence only the general principles were included in the teaching.