

Effect of Implementing Nursing Intervention based on Cognitive Behavioral Therapy on Social anxiety and Self-concept of Children with Epilepsy

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Abstract: "Epilepsy is a neurological condition - which means it affects the brain. It is also a physical condition because the body is affected when someone has a seizure and Cognitive behavioral therapy focuses on challenging and changing unhelpful cognitive behaviors and improving emotional regulation which can help children with epilepsy". **Aim:** The study aimed to evaluate the effect of nursing intervention based on cognitive behavioral therapy on social anxiety and self-concept of children with epilepsy. **Method:** A quasi-experimental research design (case/control) was utilized to achieve the aim of the study. **Setting:** This study was conducted at the outpatient (Nero- psychiatric clinic) at EL Mogamma EL Teby AL Shamal, Shebin El-Kom City. **Sample:** Purposive sample of 100 epileptic children from the previously mentioned setting. **Instruments:** Three instruments were used for data collection: A structured interview questionnaire to assess demographic characteristics, The Piers-Harris Children's Self-concept Scale and Screen for Child Anxiety Related Disorders (SCARED). **Results:** The study revealed that there was a highly statistically significant difference between the study and control groups regarding of total mean score of social anxiety and self-concept after post and follow up intervention. **Conclusion:** the cognitive behavioral therapy evidenced to be effective on decreasing social anxiety and improving self-concept of children with epilepsy. **Recommendations:** Integrating cognitive behavioral therapy into the nursing care of children with epilepsy. Provide continuous training for psychiatric , pediatric and all nurses regarding the application of cognitive behavioral therapy for children with epilepsy.

Keywords: Cognitive Behavioral Therapy, Social anxiety, Self-concept, Epilepsy.

I. INTRODUCTION

Epilepsy is a collection of neurological disorders defined by recurrent epileptic seizures. Epileptic seizures are periods that can vary from little and about undetectable intervals to long periods of vigorous quivering. These episodes can lead to physical damages, including sometimes broken bones. [1]. Epilepsy is a condition resulting either from the failure of the mechanisms accountable for seizure termination or from the beginning of a mechanism, which conducts to abnormally, prolonged seizures (for a while of 5 min or more). It is a disorder, which can have long-term consequences (especially if its duration is more than 30 min) including neuronal death, neuronal injury, and alteration of the neuronal network, depending on the type and duration of seizures [2].

Children with epilepsy have further emotional, social, behavioral, and academic difficulties than their healthy peers. Epilepsy can meddle with social functioning and had poor long-term social outcomes. There are numerous reported social

skills deficits, peer difficulties, and diminished social competence midst children with epilepsy .Poor social skills cause anxiety, depression and poor self-esteem [3]

Self-concept might be a multidimensional psychological construct that describes individuals' internal depiction of their social acceptance, conduct, athletic and scholastic capabilities, and physical appearance [4]. Poor self-concept in children has exhibited affiliations with tobacco dependence, the hazard for major depressive/anxiety disorders, Para suicidal behavior, aggression, and lower quality of life, dubious relationships with peers, increased criminal behavior, lower educational achievement, and lower-income [5]. In differentiate, positive self-concept has exhibited associations with better stress management and more productive adapting styles and related to more favorable consequences among adolescents with a chronic medical illness [6].

Anxiety disorder is the foremost common psychiatric comorbidity in with epilepsy. Studies have detailed that the predominance of anxiety disorders is 14.8%–25% in patients with epilepsy. Other psychiatric comorbidities and their predominance rates are as follows: panic disorder (5%–21%), generalized anxiety disorder (3%–12%), social anxiety disorder (3%–7%) [7]. untreated anxiety disorders have been connected to academic problems, low self-esteem, and peer relationship problems. The most broadly utilized treatments for social anxiety disorder are drug therapies and Cognitive behavioral therapy (CBT)[8].

CBT for the treatment of epilepsy may be compelling due in portion to coming about the way of life changes that decrease the impact of seizure triggers or enhance adherence to treatment, but also to a direct relationship between cognition and seizure activity [9].CBT analyzes the intuitive between convictions, feelings and real events (i.e. seizures). Children learn to recognize supplant maladaptive think designs with more beneficial cognitive and behavioral responses [10] .The method more often than not requires an examination of Psychological stressors which may lower the limit for seizures and Environmental acknowledgement and behavior. (e.g., behaviors that anticipate legitimate rest and pharmaceutical adherence) [11].

The epilepsy specialist nurse (ESN) role is complex, assorted and multifaceted, with nurses working with distinctive child collections in different settings [12]. The community nurses had a basic portion of a multidisciplinary group providing clinical and psychosocial data support for children with epilepsy and management and appraisal of children with multifaceted epilepsy. Specialist nursing intervention is felt to move forward the quality of care for the children with epilepsy, their family and careers [13].

A Psychiatric nurse has a significant role in immediate intervention for decreasing anxiety, stress, depression's symptoms, and making an instructive treatment program to the parents of epileptic children. The mental health nurse encourages parents of epileptic child to habit cognitive stress management training to help them identify factors that affecting anxiety and self-concept and gain insight to replace rational thoughts and incompetent and unreasoning thoughts. [14].

A Pediatric nurse plays a corner stone in the process of managing children with epilepsy. Nursing management of epilepsy focuses on preventing injury during seizures; administrating appropriate medication and treatments to prevent or reduce seizures, and monitoring neurologic status closely. Also, the nurse should provide education and support to the child and family to help them cope with the challenges of living with chronic epilepsy disorder [15].

Significance of the study

Epilepsy one of the most common neurological disorders and can have a major effect on a child's advancement. Epilepsy begins in childhood in 60% of cases and most of the clinically critical aspects of the disease occur during childhood. Epilepsy is a highly prevalent disorder around the world about four to eight cases per 1000 children. The predominance of epilepsy differs by nation, with rates changing from 0.9 to 58 per 1000 people. Estimates for children run from 5.1 to 7 cases per 1000 [16].

In **Egypt**, the prevalence of childhood and adolescent epilepsy (children <18 years of age) in Upper Egypt was 9.7/1000, with a higher prevalence among children< 12 years of age (10.8/1000) than adolescents (7.2/1000): the age-specific prevalence in early childhood (12.01/1000).More than half of the children have idiopathic epilepsy (59.4%) [17].

Epilepsy contains a major impact on children causing low self-concept, emotional distress, social anxiety, ill-adjustment, adverse psychosocial health effects and decreased quality of life. In expansion, by lessening educational occasions,

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employability, and interpersonal connections, cognitive impedances [18]. So the study aimed to evaluate the effect of nursing intervention based on cognitive behavior therapy on social anxiety and self-concept of children with epilepsy.

1. Aim of the Study:

The study aims to evaluate the effect of nursing intervention based on cognitive behavioral therapy on social anxiety and self-concept of children with epilepsy.

1.2 Research Hypotheses:

Children with epilepsy who will receive nursing intervention based on Cognitive Behavioral Therapy will have reduction on social anxiety than children in the control group

Children with epilepsy who will receive nursing intervention based on Cognitive Behavioral Therapy will have improvement in self-concept than those in the control group.

II. METHODS

2.1 Research Design

Quasi-experimental design two groups (study and control group pre posttest) were used to achieve the aim of the study.

2.2 Research Setting

The study was conducted in the outpatient clinic (Nero- psychiatric clinic) at EL Mogamma EL Teby AL Shamal, Shebin El-Kom City. It follows the health insurance institution in Shebin El-kom district, at Menoufia governorate. This institution consisted of three floors, the second -floor service all children age groups from 0-18 years.

2.3 Sample

A purposive sample of 100 epileptic children from the previously mentioned setting was included in the study. A random assignment used to divide children equally into a study and control group (50 in the study group and 50 in the control group)

Group I: The study group consisted of 50 children with epileptic. This group enrolled in the intervention based on cognitive behavioral therapy

Group II: The control group consisted of 50 children with epileptic. This group received only normal and ordinary care of the center.

Inclusion criteria

- Children age 7-13 years
- No MRI abnormalities are other than atrophy.
- Willing to participate and complete the study.
- Diagnosis with epilepsy for a minimum of 6 months

Exclusion criteria

- Children receive treatment for anxiety disorder.
- Children have neurological disorders
- Children have developmental disabilities (e.g., intellectual disability or autism).

2.4 Tools of Data Collection:

Data were collected using the following tools:

Tool one: An Interviewing Questionnaire: **It was designed by the researchers in Arabic language after reviewing the related literature. It was divided into two parts.**

- 1- Part One: - Demographic data for epileptic child which included (age, sex, level of education, place of residence, the rank of the child)
- 2- Part two:-which included medical history for an epileptic child (medical diagnosis, the period of the disease, Time of an epileptic fit, Duration of epileptic fit).

Tool II:: The Piers-Harris Children's Self-concept Scale. It was developed by Piers-Harris, (2002) [19]. It was adopted and translated into Arabic and tested for content validity and reliability by the researcher's .This is self-report which consisted of 70 questions to assess self-concept in children. The scale Comprises of 70 questions and six domains as the following: Behavioral adjustment (17 questions), Intellectual and school status (10 questions), Physical appearance and attributes (9 questions), Freedom from anxiety (16 questions) ,Popularity (10 questions) & Happiness and satisfaction (8 questions). On all scales, higher scores indicate favorable self-concept (i.e., a high degree of self-esteem or self-regard), whereas lower scores are associated with more negative self-concept.

Scoring system:

The Scoring System for the questionnaire was as follow:

Score	Items
1	Never
2	Sometimes
3	Always

Total score

Score	Grads
70 – 127	Low Self-concept
128 – 158	Moderate Self-concept
158 – 210	High Self-concept

Tool III: Screen for Child Anxiety Related Disorders (SCARED)

It was developed by Boris Birmaher et al., 2012 [20]. It was adopted and translated into Arabic and tested for content validity and reliability by the researchers'. It is a 41- questions self-report questionnaire with a total score and a five – factor structure: (1) somatic/panic, (2) generalized anxiety, (3) separation anxiety, (4) social phobia/ social anxiety, and (5) school phobia. The SCARED utilize raw score cut points to indicate clinical elevation.

Scoring system:-

Score	Items
0	“Not True or Hardly Ever True
1	Somewhat True or Sometimes True
2	Very True or Often True

Total score:

Score	Status
≥ 25	Presence of an anxiety Disorder
<30	Free of anxiety Disorder

- 1- A score of 7 for items 1, 6, 9, 12, 15, 18, 19, 22, 24, 27, 30, 34, 38 may indicate Panic Disorder or Significant Somatic Symptoms.
- 2- A score of 9 for items 5, 7, 14, 21, 23, 28, 33, 35, 37 may indicate Generalized Anxiety Disorder.
- 3- A score of 5 for items 4, 8, 13, 16, 20, 25, 29, 31 may indicate Separation Anxiety Disorder.
- 4- A score of 8 for items 3, 10, 26, 32, 39, 40, 41 may indicate Social Anxiety Disorder.
- 5- A score of 3 for items 2, 11, 17, 36 may indicate Significant School Avoidance.

2.5 Reliability of the Tools

Reliability of The Piers-Harris Children's Self-concept Scale was applied by the researcher for testing the internal consistency of the tool, by administration of the same tools to the same subjects under similar conditions on one or more occasions. Answers from repeated testing were compared (Test-re-test reliability).

The reliability of the developed tools used was assessed through the internal consistency method. The tool reliability proved to be very good, with Cronbach alpha coefficient 0.86 for the Piers-Harris Children's Self-concept Scale. Internal consistency of Child Anxiety Related Disorders (SCARED) was confirmed by Cronbach's $\alpha=0.92$

2.6 Validity of the Tools: All the study tools were tested for content validity. The developed tools were reviewed by experts in nursing, pediatric, family and community health nursing for clarity, relevance, comprehensiveness, understanding, applicability and ease for implementation. Validation was through majority agreement.

2.7 Ethical Consideration: Oral consent was obtained from caregivers of epileptic children to participate in the study. During the initial interview, the purpose of the study and the procedures were explained and the oral consent was obtained from the children. The children were assured that all information would be confidential to assure the confidentiality of the children. Children were assured that their participation in the study was voluntary and that they could withdraw from the study or can refuse to participate in the study. It was explained that there were no costs to participate in the study. Also, oral approval was obtained from an ethic committee of the faculty of nursing, Menoufia University, Egypt. The questionnaire used in the study was administered by the researcher.

2.8 Procedure: Official approval was obtained from the directors of the EL Mogamma EL Teby AL Shamal, Shebin El-Kom district, Menoufia governorate, Egypt. Data collection for the study was carried out in the period from April 2019 to December 2019. The researcher collected the data during the morning at two days/week from 10 AM to 12 AM. The children were divided into 10 groups; each of them consisted of 5 children. The period of implementation was 9 months. Implementation of the study passed into three phases (assessment phase before the intervention, implementation phase and evaluation and follow up phase after 3 months).

The actual study carried out in three phases:

A- Assessment phase:

-A comfortable, private place was chosen for the interview. Orientation was done regarding the researcher name, purpose, significance, content. Children were interviewed individually at their rooms where pre- assessment was done using The Piers-Harris Children's Self-concept Scale and Screen for Child Anxiety Related Disorders (SCARED) scale.

-Each interview took from 30 minute to 45 minute according to the children's response and the students unable to read, the researcher read to them.

- The application of nursing interventions aimed to evaluate the effectiveness of nursing interventions on social anxiety and self-concept in children with epilepsy. The intervention groups met for nine consecutive weekly sessions that lasted approximately 2 hr. The researcher led the group and the co-leader recorded the sessions. This intervention has a set of specific objectives for each of the nine sessions. This was achieved through several teaching methods. **Such:** brain storming, lecture, discussion, data show, video, role play, pictures and booklet were used as media. At the end of each session summary, feedback and further clarification were done for vague items.

B. Implementation Phase: (Cognitive behavior therapy intervention):

-It is composed of nine sessions; in each session, the related content was discussed. Each session was held for one hour. It was performed as follows: In general, the session is about three parts, the first part contains techniques of anxiety management, the second part includes relaxation exercises and the third part includes practices to increase self-concept techniques.

- **Content of the sessions:** -

First Session: this session includes, the definition of epilepsy, factors contributing to it, signs and symptoms, needs of epilepsy Childs (physical and emotional) , types of epilepsy and how individual experience the symptoms of epilepsy methods of diagnosis and methods of treatments behavioral problems during children were discussed. Then the booklet was distributed to the children.

Second Session: this session contains awareness with anxiety describe the factors of causing anxiety, response to factors of causing anxiety, awareness of the physical effects of anxiety, its consequences on muscles groups and awareness of automatic thoughts and physical sensations. Identify the importance of social skills acquisition in their life.

Third Session: in this session the **first step** was, described the relationship between thoughts, emotions and behaviors. **Second step:** help children to identify negative irrational thinking and cognitive distortions by instructing the children to stop at least five times a day and write down his thoughts and how he's feeling at those moments. During this session, the researchers encourage the children to note those thoughts and discussed with them to help them to recognize negative thoughts. **Third step: help them to change and replace those thoughts into positive and logical ones and teach him** how to reframe negative thinking. For example, the child might say, "I've never done it before." The researcher would reframe that thought to, "It's a chance for you to learn something new."

Fourth Session: This session was concerned with teaching the children to deal effectively with anxiety and help them to identify the nature and importance of relaxation techniques on reducing anxiety.

Fifth session: it included the progressive muscle relaxation technique (active and passive progressive relaxation). Also steps of deep breathing. Teach the parents how to take a deep, healthful breath.

Sixth session: This session was included the guided imagery, meditation and visualization techniques and recognize the four major requirements of successful meditation include; a quiet place, a comfortable position, an object or thought to focus on and the use of imagination and positive thinking to reduce the body's response to anxiety through creating a positive mental picture. Encourage the children to know the difference between high and low self-concept.

Seventh session: This session also included the self- confident skills by helping the children learn how to tackle problems in healthy ways. Instead of denial and ignored it. The researchers teach the parent to make a list of steps to solve a large problem instead of becoming overwhelmed by it. Encourage the child to recognize the core components of the self-confident as (1) refocuses children's on their goals by using activity scheduling to encourage engagement in activities that they are avoiding and (2) analyze the function of cognitive processes that serve as a form of avoidance systematic desensitization.

Eighth Session: Anxiety and Fear Relieve Session:

-Each child was required to create a list of fears or fear hierarchy and listed on average 21 fears. Each child completed an average of 12 exposures or skill application tasks included asking for help or directions, calling a child from the ward, performing in front of an audience, having a picture taken. Followed by relaxation session "same technique from the previous session".

-Revision and clarification for the previous sessions and repetition for any procedure needed. The researchers encouraged children to ask questions about the information given in the previous sessions and asked them to give their feedback about the program and its benefits to them.

Nine session: respectively Behavioral activation which refocuses children on their goals by using activity scheduling to encourage engagement in activities that they are avoiding and analyzes the function of cognitive processes that serve as a form of avoidance systematic desensitization The patient is exposed to progressively more anxiety-provoking stimuli and taught relaxation techniques to counteract the negative emotions ("habituation training"); may be applied to the anxiety elicited by seizure onsets or seizure provoking conditions.

III: Evaluation phase:-

-An Evaluation was done using the Piers-Harris Children's Self-concept Scale and Screen for Child Anxiety Related Disorders (SCARED) scale. Follow up the children and reassess after 3 months.

Data Processing and Analysis

Data were collected, tabulated, statistically analyzed using an IBM personal computer with Statistical Package of Social Science (SPSS) version 22. Data were presented using descriptive statistics in the form of mean, standard deviation (SD), range, and qualitative data were presented in the form numbers and percentages. Chi-square test (χ^2), Fischer exact test,

Student t-test, Paired t-test, Wilcoxon signed rank test (nonparametric test) and Spearman’s correlation (r) were used tests of significance. P value of >0.05 was considered statistically non-significant, value of <0.05 was considered statistically significant and value of <0.001 was considered statistically highly significant.

III. RESULTS

Table (1) Reveals that the majority of children in both studied groups ranging from 8-13 years old. More than half of them are male. Majority of studied children in both groups have a duration of the disease ≥ 2 years. The majority of the studied children take medication regularly, there is a minority of co-morbidities in both groups, and the minority of them has negative family history of epilepsy. There is no statistically significant difference between the control group and study groups in terms of type of seizures, time of epileptic fit, and duration of epileptic fit and history of epileptic fit during last 2 months ($p > 0.05$).

Table (2): Shows that there is no statistically significant difference between study and control group in all subscale of anxiety disorders pre intervention. While there is highly statistically significant difference in post intervention and follow up intervention between study and control group ($p < 0.001$).

Table(3): Shows that there was no statistically significant difference between study and control group in all self-concept attributes pre intervention while there was highly statistically significant difference in post intervention and follow up intervention between study and control group ($p < 0.001$).

Table (4): This table shows that there was an improvement in total self- concept between study and control group, also, there was statistically improvement in self- concept in the study group as shown that, percentage of low self-concept was 62.0% at pre intervention, and become 14.0% at post intervention and still improved during follow up period.

Figure (1): This figure shows that there was a reduction of total anxiety from 28.6 ± 3.52 pre intervention to 23.0 ± 3.08 post intervention and to 20.7 ± 2.76 and after 3 months of follow-up in the study group. While, there was increasing of total anxiety score in the control group at post test and follow up. So, there is a highly statistically significant difference regarding total mean score of anxiety disorder in post and follow up intervention between the study and control group ($p < 0.001$).

Figure (2): This figure shows that there was an improvement of total mean scores of self-concept in the study group were increased from 126.3 ± 5.46 at pre intervention to 135.4 ± 7.74 post intervention, and 134.8 ± 21.0 at follow up. While, there was a reduction of the total mean score of self-concept in the control group at post test and follow up. So, there is highly statistically significant difference regarding total mean score of self- concept between study and control group ($p < 0.001$).

Table (5): Reflects that there was a significant negative correlation between anxiety and self-concept among study group post intervention and follow up. P value was 0.488 at pre intervention, 0.001 at post intervention, and 0.027 at follow up.

Figure (3): Reflects that mean scores for anxiety were 28.7 ± 4.03 pre intervention and 23.0 ± 3.08 post intervention while scores for self-concept were 126.3 ± 5.46 , and 136.4 ± 7.74 at post intervention. There was a negative correlation between anxiety and self-concept post intervention in the study group.

Table (1): Demographic characters of both studied groups.

Demographic characters		Study group (N=50)		Control group (N=50)		Test of sig.	P value
		No.	%	No.	%		
Age / years	Mean \pm SD	10.2 \pm 1.46		10.3 \pm 1.66		t-test 0.320	0.749
	Range	8 - 13		8 - 13			
Sex	Male	26	52.0	34	68.0	χ^2 2.67	0.102
	Female	24	48.0	16	32.0		
Disease duration	Less than 2 years	13	26.0	22	44.0	χ^2 3.56	0.059
	≥ 2 years	37	74.0	28	56.0		

Type of seizures	Generalized	13	26.0	13	26.0	χ^2 0.57	0.752
	Partial	10	20.0	13	26.0		
	Mixed	27	54.0	24	48.0		
Time of epileptic fit	Diurnal	23	46.0	22	44.0	χ^2 0.04	0.752
	Diurnal and nocturnal	27	54.0	28	56.0		
Duration of epileptic fit	Less than 3 minutes	27	54.0	22	44.0	χ^2 1.00	0.317
	≥ 3 – 20 minutes	23	46.0	28	56.0		
History of epileptic fit during last 2 months	Yes	33	66.0	34	68.0	χ^2 0.01	0.944
	No	17	34.0	16	32.0		
Regular treatment	Yes	44	88.0	39	78.0	χ^2 1.77	0.183
	No	6	12.0	11	22.0		
Co-morbidities	Yes	7	14.0	11	22.0	χ^2 1.08	0.297
	No	43	86.0	39	78.0		
Family history of epilepsy	Yes	7	14.0	9	18.0	χ^2 0.30	0.585
	No	43	86.0	41	82.0		

Table (2): Means and standard deviation of anxiety subscales in both studied groups pre, post and follow up intervention

Anxiety disorders	Pre intervention		Mann Whitney Test sig. P1 value	Post intervention		Mann Whitney Test P2 value	Follow up		Mann Whitney Test P3 value
	Study group (N=50)	Control group (N=50)		Study group (N=50)	Control group (N=50)		Study group (N=50)	Control group (N=50)	
	Mean±SD	Mean±SD		Mean±SD	Mean±SD		Mean±SD	Mean±SD	
Somatic anxiety	7.08±2.9	6.56±2.37	0.705 0.481	5.72±2.34	6.78±2.26	3.65 0.001 **	4.90±1.85	7.02±2.14	6.23 0.001 **
Generalized anxiety	8.18±3.25	8.38±3.31	0.317 0.751	6.66±2.63	8.40±3.18	2.97 0.003 **	6.00±2.24	8.74±3.02	4.57 0.001 **
Separation anxiety	4.82±1.88	4.58±1.72	0.681 0.496	4.12±1.21	4.96±1.66	3.42 0.001 **	3.96±0.90	5.02±1.61	4.43 0.001 **
Social anxiety	6.96±2.05	6.66±1.99	0.660 0.509	5.56±1.50	7.02±1.72	4.27 0.001 **	4.90±1.09	7.08±1.74	6.13 0.001 **
School anxiety	1.62±1.25	1.76±1.17	1.21 0.223	0.94±0.73	1.84±1.25	4.96 0.001 **	0.86±0.53	1.94±1.28	5.79 0.001 **

Table (3): Means and standard deviation of self-concept attributes in both studied groups pre, post and follow up intervention

Self- concept	Pre intervention		t-test Test sig. P1 value	Post intervention		t-test Test P2 value	Follow up		t-test Test P3 value
	Study group (N=50)	Control group (N=50)		Study group (N=50)	Control group (N=50)		Study group (N=50)	Control group (N=50)	
	Mean±SD	Mean±SD		Mean±SD	Mean±SD		Mean±SD	Mean±SD	
Behavioral adjustment	33.4±5.07	32.4±4.94	1.05 0.292	29.6±4.69	30.5±4.67	0.944 0.348	28.9±6.12	30.2±4.79	1.16 0.247
Intellectual and school status	15.8±2.06	15.1±1.56	1.80 0.074	19.4±3.57	14.2±1.55	9.51 0.001 **	20.5±3.32	14.0±1.69	12.2 0.001 **
Physical appearance and attributes	14.9±2.86	14.8±2.27	0.179 0.858	17.3±2.26	14.1±2.56	6.61 0.001 **	18.5±2.11	14.0±2.56	9.65 0.001 **
Freedom from anxiety	31.0±2.45	30.0±3.35	1.76 0.080	27.9±3.52	30.0±3.01	3.23 0.002 **	26.3±2.93	29.9±2.96	6.23 0.001 **
Popularity	19.9±4.12	20.5±4.34	0.894 0.480	24.5±2.46	19.2±3.46	8.90 0.001 **	25.4±2.09	19.1±3.44	11.2 0.001 **
Happiness and satisfaction	14.4±2.69	13.6±2.21	1.50 0.137	16.4±1.79	12.9±2.03	9.11 0.001**	17.3±1.47	12.7±2.01	13.1 0.001**

Table (4): Distribution of self -concept in both studied groups on pre, post and follow up intervention.

Self -concept	Study group (N=50)		Control group (N=50)		X2	P value
	N	%	N	%		
Pre intervention						
Low	31	62.0	35	70.0	0.713	0.398
Moderate	19	38.0	15	30.0		
Post intervention						
Low	7	14.0	41	82.0	46.3	0.001**
Moderate	43	86.0	9	18.0		
Follow up						
Low	8	16.0	43	86.0	49.0	0.001**
Moderate	42	84.0	7	14.0		
P1	0.001**		0.160			
P2	0.001**		0.053			
P3	0.779		0.585			

**High significant *significant P1: Comparison between pre and post intervention

P2: Comparison between pre and follow up intervention

P3: Comparison between post and follow up intervention

Figure (1): Total means score of anxiety disorder in both studied groups pre, post and follow up intervention

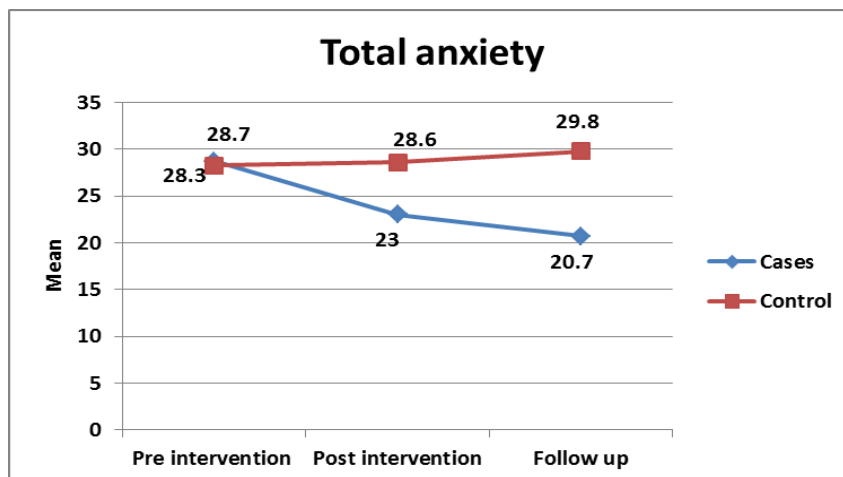


Figure (2): Total means score of self-concept in both studied groups pre , post and follow up intervention.

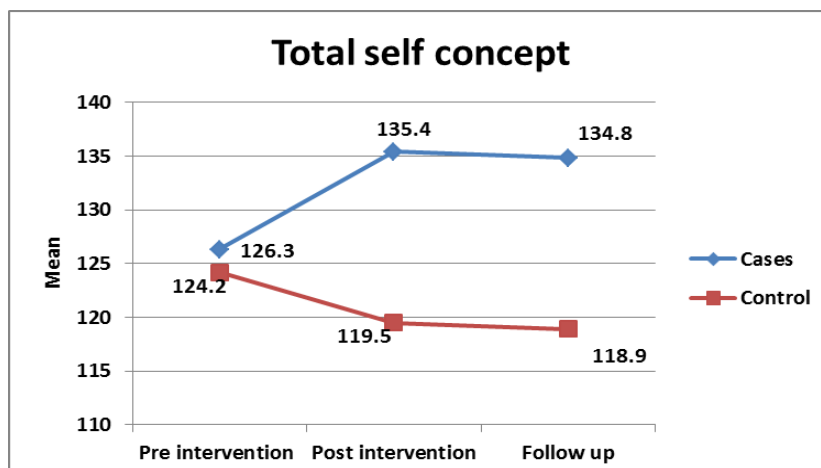


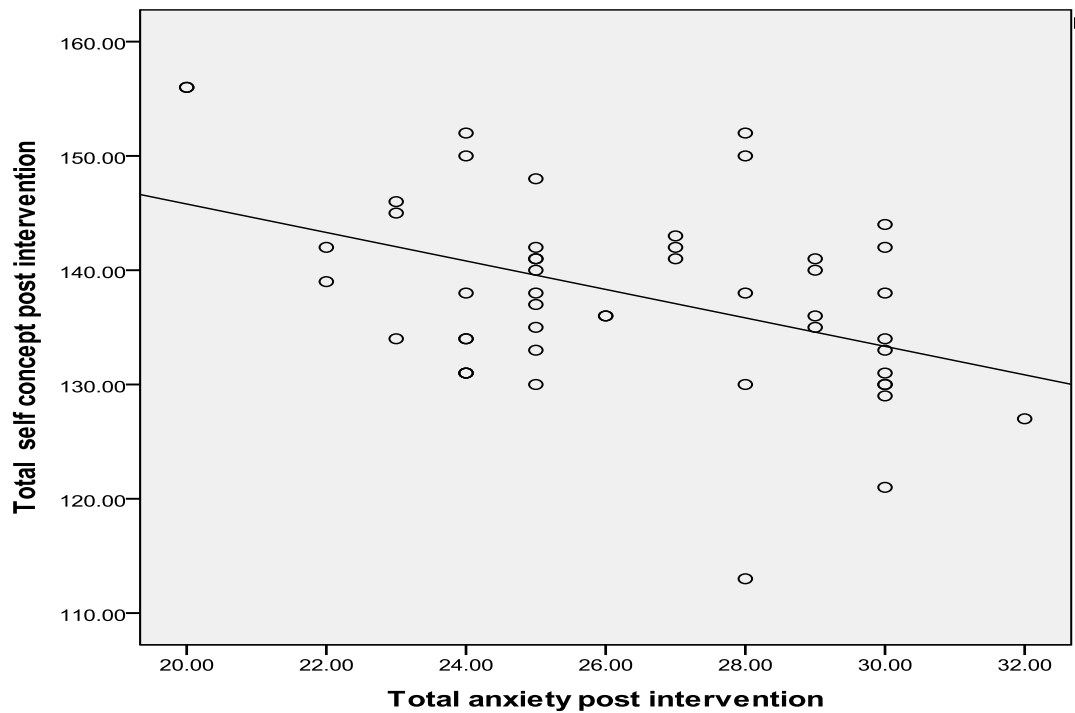
Table (5): Relation between anxiety and self- concept in both studied groups pre ,post and follow up intervention

Self- concept	Total anxiety			
	Study group (N=50)		Control group (N=50)	
	r	P value	r	P value
Pre intervention	-0.100	0.488	-0.096	0.505
Post intervention	-0.438	0.001**	0.146	0.311
Follow up	-0.313	0.027*	0.125	0.421

**High significant *significant

r correlation coefficient

Figure (3): Relation between anxiety and self concept post intervention in the study group



IV. DISCUSSION

Epilepsy is a burden disorder which affects the quality of life of the child and their families. Epileptic child has Loss of control, independence, low self-esteem, fear, depression, stigmatization, lifestyle, social and employment restrictions, and financial strains Cramer et al., [21]. Children with epilepsy have more emotional, behavioral, and cognitive difficulties than children in the general population. The current study hypothesized that children with epilepsy who will receive nursing intervention based on Cognitive Behavioral Therapy will have a reduction on Social anxiety. Also, children with epilepsy who will receive nursing intervention based on cognitive Behavioral Therapy will have an improvement in self-concept than those in the control group.

Regarding the mean score of anxiety disorder subscales in both studied groups on pre, post and follow up intervention (table 2). The current study showed that there was a highly statistically significant difference in total mean scores of anxiety subscales in the post and follow up intervention between the study and control group ($p < 0.001$) after cognitive behavioral therapy. This could be due to a positive effect of cognitive therapy with applied relaxation which helps the children to be calm and decreased intensity of anxiety and fear from an epileptic fit. this study comes in agreement with Kipping et al., [22] who found that there was a significant change over time on the social Anxiety

subscales ($p = 0.024$) after application of cognitive behavioral therapy for epileptic children. Also, these findings agree with Reed, [23] who reported that nursing intervention based on psychological intervention decreased epileptic child anxiety. Moreover, Lewis et al., [24] reported that children in the experimental group less anxious and their anxiety level was decrease post intervention with a significant difference was found than children in the control group after application of nursing intervention based on cognitive therapy.

Concerning the mean score of self-concept attributes in the study and control groups pre, post and follow up intervention (table 3). The current study showed that there was no statistically significant difference between study and control group in all self-concept attributes pre-intervention while there was highly statistically significant difference in post-intervention and follow up intervention between study and control group ($p < 0.001$). This could due to increasing self-control and adjustment capacity of the child seizures after a relaxed atmosphere of nursing intervention and increase satisfaction, self-esteem after the intervention. This is in line with Yunus et al., [25] who reported that the great majority of children in the experimental group had Piers-Harris total scores indicating an above-average self-concept and preponderance of low epilepsy severity than children in the control group.

Regarding self- concept among studied groups on pre, post and follow up intervention (table 4). The current study revealed that more half children had low self- concept at pre-intervention compared to the minority of them at post-intervention. This due to uncontrolled seizure is usually perceived as a deficit of self-control by the child. Because of the fear of seizures in public places, parents tend to restrict their children from routine daily activities including peer activities. So, Children's perceived nursing intervention based on cognitive therapy become quit and received procedure with low dangers. This is line with Russo et al., [26] who examine the impact of CBT on both negative and positive self-concept in the context of a randomized controlled trial, who found that changes in self-views on pre and post of cognitive therapy.

In relation to total means score of anxiety disorder pre, post and follow up intervention in both studied groups (figure 1). The current study illustrated that total means score of anxiety decrease from 28.6 ± 3.52 pre-intervention to 23.0 ± 3.08 post-intervention and 20.7 ± 2.76 and after 3 months of follow-up. This could be due to positive effect of nursing intervention based on cognitive behavioral therapy that increase relationship of children with other children, enhance independent of the child and raise life outcomes including academic, social and mental health outcomes. Besides, cognitive therapy is most often used in conjunction with behavioral techniques, which may include exposure exercises and is problem-focused on the issues the child identifies as of primary concern. According to Rantanen et al., [27] who investigated that cognitive therapy technique had clinical improvements of social anxiety of the children with epilepsy. This result lines with Ferro, et al., [28] who reported that Piers-Harris 2-Total score was significantly improved at 3-month follow-up compared to scores at baseline and week 7 after application of cognitive behavioral therapy for epileptic children.

Concerning the total means score of self-concept pre, post and follows up intervention in both studied groups (figure 2). The finding of the current study clarified that there is a statistically significant improvement in the total mean score of self-concept among studied groups post-intervention and 3-months follow-up than pre-intervention. This could be due to the negative impact of epilepsy on children's identity development and self-confidence. Epilepsy needs of long-term medication treatment, impairment on multiple functioning domains pre-intervention. So, post-intervention improves the quality in children with epilepsy on various domains including self-esteem, physical restriction and social interaction. In the same direction, Austin [29] who compared self-concept in children with uncomplicated epilepsy and complicated who found that those with epilepsy had significantly poorer self-concept before intervention than post-intervention.

Regarding the relation between anxiety and self-concept post intervention in the study group (figure 3). This finding of the current study reflected that there was negative relation between anxiety and self-concept after intervention in the study group. Scores for anxiety were 28.7 ± 4.03 pre-intervention and 23.0 ± 3.08 post-intervention while scores for self-concept were 126.3 ± 5.46 , and 136.4 ± 7.74 at post-intervention. This could be due to provide support for the possibility that addressing social skills deficits and improving coping behaviors may, in turn, reduce symptoms of social phobia/social anxiety improving self-concept with the hopes that long term life outcomes might also be impacted positively. This is result is consistent with Cicei, [30] who found that children with high social anxiety reported significantly lower self-concept clarity than children with low social anxiety, $F(3, 52) = 20.45$, $p < .001$, $\eta^2 = .30$.

V. CONCLUSION

The findings supported that cognitive behavioral therapy proved to be effective in decreasing social anxiety and improving self-concept among children with epilepsy.

VI. RECOMMENDATION

- Integrating cognitive behavioral therapy into the nursing care of children with epilepsy.
- Provide continuous training for psychiatric , pediatric and all nurses regarding the application of cognitive behavioral therapy for children with epilepsy.
- **Further studies should be conducted to apply and demonstrate the research on a larger population for generalization of the results**

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REFERENCES

- [1] Fisher, R. S., Acevedo, C., Arzimanoglou, A., Bogacz, A., Cross, J. H., & Elger, C. E. Engel JJ.(2014). official report: a practical clinical definition of epilepsy. *Epilepsia*,: 55(4), 475.
- [2] Trinka, E., Cock, H., Hesdorffer, D., Rossetti, A. O., Scheffer, I. E., Shinnar, D.& SLOWENSTEIN, D. H (2015). A definition and classification of status epilepticus–Report of the ILAE Task Force on Classification of Status Epilepticus. *Epilepsia*, :56(10), 1515-1523.
- [3] Shorvon, S., and Tomson, T. (2018). Sudden unexpected death in epilepsy. *The Lancet*, 378(9808), 2028-2038.
- [4] Marsh M., & Diehl, E.L. (2018). Risk and resilience factors in coping with daily stress in adulthood: the role of age, self-concept incoherence, and personal control *Journal of Psychology*:(48), pp. 1132-1146
- [5] Robins F., Buelow JM, Austin JK, Perkins SM, Shen J, Dunn DW, Fastenau PS. (2017).Behavior and mental health problems in children with epilepsy and low IQ. *Developmental Med Child Neurology* 3 (45),683–92.
- [6] Ridsdale, L., McCrone, P., Morgan, M., Goldstein, L., Seed, P., & Noble, A.(2018). Evaluation of knowledge of and attitudes toward, and practices with respect to epilepsy among health science students of Manipulation University; *Epilepsy & Behavior Journal*.; 20(5), 447- 449.
- [7] Mula, M. (2013). Treatment of anxiety disorders in epilepsy: an evidence-based approach. *Epilepsia*, 54, 13-18. .
- [8] Jones, J. E., Blocher, J. B., Jackson, D. C., Sung, C., & Fujikawa, M.. Social (2014).anxiety and self-concept in children with epilepsy: A pilot intervention study. *Seizure*, :23(9), 780-785.
- [9] Matsuoka MJ, Liverman CT, Schultz AM, Strawbridge LM.(2018).Epilepsy across the spectrum: promoting health and understanding. A summary of the Institute of Medicine report. *Epilepsy Behavior* ; 25(2),266–276.
- [10] Bellon, M., Pfeiffer, W., & Maurici, V. (2014). Choice and control: how involved are people with epilepsy and their families in the management of their epilepsy? Results from an Australian survey in the disability sector. *Epilepsy & Behavior*, 37(5), 227-232.
- [11] Smith, G., Wagner, J. L., & Edwards, J. C. (2019). CE: Epilepsy update, Part 2: Nursing care and evidence-based treatment. *AJN The American Journal of Nursing*, 115(6), 34-44

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- [12] Beverly, E. A., Worley, M., Prokopakis, K., & Ivanov, N. (2016). Patient-physician communication and diabetes self-care. *Journal of Clinical Outcomes Management*: 23(11), 45-54.
- [13] Schultzm, MJ, Berlowitz DR, Montouris G, (2018). What constitutes high quality of care for adults with epilepsy?. *Journal of Neurology*.;69(21):2020–2027.
- [14] Dykens, E.M., Fisher, M.H., Taylor, J.L., Lambert, W., Miodrag, N. (2014). Reducing distress in mothers of children with autism and other disabilities: A randomized trial. *Pediatrics*, 134(2), e454-63. doi: 10.1542/peds.2013-3164.
- [15] Shakirullah A, Ryvlin P, Steinhoff BJ, Dedeken .P.(2014). Measures for improving treatment outcomes for patients with epilepsy—results from a large multinational patient-physician survey. *Epilepsy Behavior*, 34(5),58–67
- [16] Mohamed, M., Hassan, M., & Mohamed, M. (2018). Effect of Epilepsy on The Quality of Life of Children and Their Family Caregivers, *IOSR Journal of Nursing and Health Science* :45(7), 55-63
- [17] Wang, H. S., & Lin, K. L. (2013). Ketogenic diet: an early option for epilepsy treatment, instead of a last choice only. *Biomed J*, 36(1), 16-7.
- [18] Groenewegen A. Measures for improving treatment outcomes for patients with epilepsy—results from a large multinational patient-physician survey. *Epilepsy Behav*. 2018;34:58–67.
- [19] Piers, E. V., & Herzberg, D. S. (2002). *Piers-Harris Children's Self-concept Scale:(PHCSCS)*. Western Psychological Services
- [20] Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders (SCARED): a replication study. *Journal of the American Academy of Child & Adolescent Psychiatry*, 38(10), 1230-1236
- [21] Cramer JA, Wang ZJ, Chang E, Powers A, Copher R, . (2014).Health Care Utilization and Costs in Children with Stable and Uncontrolled Epilepsy. *Epilepsy & Behavior*; 32(2), 135- 141.
- [22] Kipping ,D. Shah AK, Shein N, Fuerst D, Yangala R, Shah J, Watson C.(2011).Peripheral WBC count and serum prolactin level in various seizure types and nonepileptic events. *Epilepsia*, 42(5):1472–1475.
- [23] Reed, M. (2016). A description of Canadian epilepsy monitoring units: An initial step toward developing nursing practice consensus guidelines. *Epilepsy Behavior journal*, 57(6),145-150.
- [24] Lewis, GA, Spector S, McGrath Y, Soteriou H. (2017).Impact of epilepsy in adolescence: a UK controlled study. *Journal of Epilepsy Behavior*:65(6),556–62
- [25] Yunus A, Hamiwka LD, Sherman EM, Wirrell EC. (2018).Self-concept in adolescents with epilepsy: biological and social correlates. *Journal of Pediatric Neurology*, 38(7),335–9
- [26] Russo G.J. Stams, A.M. Meijer, A.P. Aldenkamp, M. Dekovic. (2015). Psychopathology in children with epilepsy: a meta-analysis, *Journal of Pediatric Psychology* , 30(7), 453-468
- [27] Rantanen, L.D, Stacy K.M, & Lough ME.(2014). *Critical Care Nursing: Diagnosis and Management*. 7th ed. Canada, Mosby;; 1060.
- [28] Ferro ,R.G, Ngugi ,A.K, Twine R, Bottomely C, & Kamuyu, G, (2018).Prevalence and Risk Factors for Active Convulsive Epilepsy in Rural Northeast South Africa. *Epilepsy Research; Lancet Neurology*; 12(3): 253-263.
- [29] Austin, P.S. Fastenau .(2017).Are seizure variables related to cognitive and behavior problems?. *Development Med Child Neurology*, 52 pp. 5-6
- [30] Cicei, C. C. (2012). Examining the association between self-concept clarity and self-esteem on a sample of romanian students. *Procedia-Social and Behavioral Sciences*, 46, 4345-4348..