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Parents' Adjustment for Caring of Attention Deficit Hyperactivity Disorders Children

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Abstract Attention deficit hyperactivity disorder defined as a condition in which a child has troubles in paying attention and difficult focusing on tasks; act without thinking and trouble in sitting still. ADHD begins in early childhood; without treatment. It can cause problems at home with relationships and at school. ***Aim*** of the study was to evaluate nursing intervention of parents' adjustment for caring of their ADH children. ***Research design*** was quasi experimental for this study. ***Sitting:*** The study was conducted at psychiatric outpatient clinic of Shebin Elkom, Menoufia University Hospital. ***Sample:*** The sample was convenience, consisted of 60 mothers providing care for their children suffering from ADHD. ***Tools of data collection*** were an interviewing questionnaire that includes four parts. **Part 1:** A Structured interviewing questionnaire; Socio demographic characteristics of studied parents and their children. **Part 11:** Family impact of childhood disability (FICD) scale. **Part 111:** This part was concerned with assessment of child completion and efficacy in the activity of daily life (ADL). **Part IV**: Care giver assessment about the health care needs of the child with ADHD. ***Results***: The study revealed that about two thirds of the sample was boys and one third was girls. Also, most of the care givers live in rural areas, representing two thirds of the sample size. Concerning parent adjustment with children having ADHD; there was statistically significant disruption of normal family routines with p value equal 0.000. Also regarding needs of child with ADHD, there was statistically significant improvement in most of children's' behaviors after implementation of the program. **Conclusion:** This study concluded that there were improvements after program implementation and follow up in modifying the children behaviors and their needs. **Recommendation:** Continuous education programs are important to improve parents' adjustment toward care of their ADHD children. Focusing on improving executive functioning as an important aim of improving ADHD behaviors.

Keywords: *parents' adjustment, caring of attention deficit hyperactivity children*

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1. Introduction

Attention deficit hyperactivity disorder (ADHD) is the most common neurobehavioral disorder of childhood and early adolescents. It is a neurological condition that involves problems with in attention and hyperactivity that are developmentally in consistent with the age of the child. It is typically 4 times more common in boys than it is in girls, an estimated 50% of the children's diagnosed with ADHD continue to have symptoms in adulthood. National Initiative for children's health care quality reveals that ADHD affects from 4%to 12% of all school age childrens [1]. This means that in a class of 30 children, one or more will have the condition .Children with attention deficit hyperactivity disorder cannot sit still without destruction and messy environment. They show intensive curiosity and destroy everything at home. They like dangerous activities and are never scared consequences [2]. These could be a result from impairing in their executive functions. As the ability to make plan and to put goals for themselves, and ability to control their inner impulses. Examples of deficiency in executive functions are externally as being disorganized, losing things all the time, poor time management ,inability to complete a task & inability to make a plan and follow it . Also internal issues includes difficulty deciding what's important and unimportant when reading or listening. Problems in absorbing or retaining what is taught in schools. Problems in understanding and following verbal directions. Problems in organizing thoughts & Problems with clear, organized writings [3]. ADHD may be associated with a number of comorbid psychiatric conditions as well as both patient and family emotional distress. However it was previously thought that the disorder is remitted before or during adolescence. It is caused by combination of organic, genetic and environmental factors; hereditary factors play a major role in the development of ADHD. They cause approximately 80% of all cases [4].

Most of children with ADHD have problems in daily life functioning in many areas including; academic performance,

behaviors at schools, relationships with peers, siblings, noncompliance with adult requests, and relationships with their parents. These problems are extremely important because they predict long-term outcome of children with ADHD. How a child with ADHD will do in adulthood is best predicted by three things; whether his or her parents use effective parenting skills, how he or she gets along with other children, and his or her success in school [5]. Parenting a child with ADHD can require different approaches, learning about ADHD, its symptoms and behavioral strategies can help parents to cope with some of the daily struggles and provide a nurturing environment for their children. Also parents must learn to use stress management methods such as meditation, relaxation techniques and exercise to increase their own tolerance for frustration. Hence they can respond more calmly to their child behavior [6]. There is no definitely one cure for ADHD but, when properly diagnosed and treated it can be well managed leading to increased satisfaction in life and improvement in daily functioning. Treatment depends on three steps, firstly is medication; stimulant medication has become the most widely used method of treatment for ADHD. Secondly is behavioral intervention and third step is advising to family which can help children to reduce anxiety, depression, behavioral problem and self-esteem. Nurses observe, assess and interact with the child; parents; teachers to collect the data needed to establish an accurate mental health diagnosis [7].

Nurses have an important role in stressing the "basics" of a nutritious diet, adequate sleep, incorporating structure and routine and achieving balance in the child's extracurricular activities (exercise, play, and spending time with electronic devices) [8]. Also nurses help parents to understand the rationale for the diagnostic process, the approach of treatment and the importance of follow-up to re-evaluate the child and make sure that the diagnosis and treatment are appropriate over time [9,10].

1.1. Significant of the Study

Attention deficit hyperactivity disorder is one of the most common psychological disturbances among children, it can effects on educational achievement, social interaction and wellbeing of children. The disease control and prevention canters revealed the number of school age children diagnosed with attention deficit hyperactivity disorder has greatly increased by 42% between 2003 – 2011. Moreover, has annually increased by 5% yearly, the global occurrence of ADHD in Egypt was 16.45%. Also the prevalence of ADHD symptoms in Egypt among primary school children in Shebin Elkom to Menoufiya governorate was 19.9%. It is higher in boys than girls and higher incidence in urban region than rural area [11,12]. The family of the child with ADHD need emotional support and must make adjustment for caring of their children needs; modifying their behaviors and performing daily living activities effectively.

2. Aim of the Study

The aim of this study was to evaluate nursing intervention of parent's adjustment for caring of their ADHD children through:

* Assessing child efficacy in their daily activity of life.
* Assessing the family adjustment of childhood disorder to detect their care giver needs.
* Designing and implementing interventions according to children needs from parents view.
* Evaluating of caregivers improvement after implementation of nursing intervention.

2.1. Research Hypothesis

Intervention of the program of parents' adjustment will overcome the children needs and problems.

3. Subject and Methods

3.1. Study Design

A quasi experimental intervention design was used to conduct this study.

3.2. Setting

This study was conducted at the psychiatric outpatient clinic of Shebin Elkom , Menoufia University Hospital .

3.3. Sample

Convenience samples were used in this study; it consisted of 60 children who having ADHD and attending the previously mentioned setting for follow up with their accompanying caregivers. Children were selected according to the following inclusion criteria. Child free from any medical complication or disorder, all children had diagnosis of ADHD, with any age group and free from other psychiatric disorders.

3.4. Tools of Data Collection

Four tools were used for data collection:

Part 1: A Structured interviewing questionnaire developed by the researchers. It covered socio demographic characteristics of studied parents of their children suffering from ADHD such as age, level of education, occupation, family history, family size, residence area, consanguinity. Moreover, characteristics of studied children are such as age, gender, order of birth, duration of disease, degree of ADHD.

Part 11: Family impact of childhood disability (FICD) scale:

It was originally developed by Trute, 1988 [11] and it aimed to assess subjective interpretation or primary appraisal of parents regarding to developmental disorder into family systems and its impact on the family as an entity. It consisted of 12 items such as my child disability, needs for more time for caring, disruption of normal family routines, the experience of caring for child brought family closer to God, it has led to additional financial costs …etc. Scoring point of each item was rated on a four point Likert Scale. substantial degree , moderate degree, mild degree, and not at all items were scored 4,3,2,1 respectively.

Part 111: This part was concerned with assessment of child completion and efficacy in the activity of daily life (ADL).

It developed by the researchers to cover the activities of hygiene, elimination, nutrition and clothing, based on previous literatures [12,13]. The responses were in a three-points Likert scale: complete and effective, partial complete, partially effective and in effectively & incomplete. This tool was used pre, post and follows up.

Scoring: Items were scored 2,1 and zero for fully effective and complete, partially effective and fully ineffective not complete respectively . For each area, the scores of the items were summed –up and the total divided by the number of the items, giving a mean score for the part. These scores were converted into a per cent score. The child was considered effective if the per cent score was 75% or more. Partially effective if less 50 to less than 75%, and in effective if less than 50%.

Part IV: Care giver assessment about the health care needs of the child with ADHD

This included control of impulsivity, control of tantrum, control of hyperactivity, doing homework, exercise, control of aggression in communication, control of stubbornness, making school task, obeying instructions, exercise& nutrition it is based on literature review [14].

Scoring: The responses agree, uncertain and disagree were respectively scored 3, 2 and 1, the scores of the items were summed –up and the total divided by the number of the items, giving a mean score. These scores were converted into a per cent score, and means and standard deviations were computed. The total awareness about needs was considered to be high if the per cent score was 75% or more and low if less than 50%.

3.5. Pilot Study

After development of the tool, a pilot study was conducted on 10% of the sample size. This pilot study was conducted in month before collection of data. The purpose of the pilot study was to ascertain the feasibility of the tools, and to detect any problems peculiars to the statement as sequence and clarity. It also helped to estimate the time needed to complete the interview. After conducting the pilot study, it was found that the questions of the tools were clear and relevant, but few words were modified to increase clarity. Following the pilot study findings, the tools were finalized and made ready for use.

3.6. Ethical Consideration

All mothers and their children were informed about the aim of the study and its benefits in order to obtain their acceptance to participate. The researchers informed them that the participation in the study is voluntary; they have the right to withdraw from the study at any time without giving any reason and that their responses would be held confidentiality.

3.7. Field Work

Preparation of data collection tools was carried out over a period of about four months from March to end of June, 2016 after being revised from experts giving their opinions, and test validated. After conducting the pilot study, it was found that the questions of the tool were clear and relevant, following the pilot study findings; the tool was finalized and made ready for use.

Official permission were obtained from the dean of faculties, also administrators of psychiatric outpatient clinic of university hospital .A pilot study was carried out to test clarity and simplicity of questions. Data collection was carried out over a period two months, two days / week (Mondays and Wednesdays) from 11.00 am to 1.00pm. For assessment 4 -6 children and their caregiver/day, each caregiver was interviewed individually by the researchers for about 60 minutes to fill in the tools. At the end of the day, the implementation of the program started with all caregivers, in the waiting area. To cover all the content of the program for 4 -6 caregivers / day, it was taken 16 days to cover all (60) participated mothers.

3.8. Program Construction: It Included 4 Phases

3.8.1. Assessment Phase

The researcher was available in the study settings two days per week, as Mondays and Wednesdays, in the morning. The researcher started by introducing herself to each parent accompanying the ADHD child, gave them a brief idea about the study and its purpose, and asked for their participation. Upon agreement, they were interviewed using the designed questionnaire form .Each caregiver interview depending upon readiness and level of education.

3.8.2. Development Phase

A program for caregivers of ADHD children was designed by the researcher according to their needs regarding ADHD. It was constructed, revised and modified from the related literatures [15].

2.8.3. Intervention Program Objective

Improve the parents' adjustments according to child needs for caring for their children.

Program contents: It included:

* Effectiveness in performing of daily life activity, eating, clothing, bathing and elimination and completion of the daily tasks.
* Behavior modification based on improving self-regulation and executive function of the child.
* A hand out was developed for the caregivers of ADHD children as a suggested plan to help them to modify their children' behaviors. It covered the required behavior and effective daily activity related to ADHD children. The content of this hand out was adapted from [16,17,18].

Implementation phase:

The program was carried out at the study settings. The total number of sessions was 12 to cover the content of the program. Caregivers were divided according to their level of education into two main groups . Educated and illiterate. Then, each group was subdivided into five groups, with 4 – 6 caregivers in each group according to their children's condition and types of ADHD. The duration of each session was 45 to 60 minutes including periods for discussions. The sessions started at 11AM, Which was a

suitable time for caregivers. The researcher started each session with a summary for the previous one. The methods of teaching were lecture, group discussion, demonstration and re demonstration. Proper audio visual materials were used such as handouts, colored posters, and video tapes [5].

First session was an assessment for the child and parents. The rest of the sessions of the program covered the following according to the parents' needs: Parents orientation regarding the disease (signs and symptoms), behavior management strategies, and behaviors modifications concerning; school intervention, common drugs used, and nutrition and completion of daily living activities [18].

Evaluation phase:

After completion of the program contents, the post-test was done using the same form of the pretest to assess the change in caregivers' opinion about efficacy of children in performing daily living activities. Their opinion about behavior modification of their children regarding improvement in unacceptable behaviors as impulsivity, doing homework, control of self-harm, etc. This was repeated after a period of three months for follow up.

4. Results

Table 1. Socio-demographic characteristics of ADHD children in the study sample

Items	No.	%
Child Education :		
Nursery	40	66.7
School	20	33.3
Order of birth:		
First	34	56.7
Middle	12	20
Last	14	23.3
Only	0	
Degree of ADHD:		
Mild	34	56.7
Moderate	11	18.3
Sever	15	25
Duration of disease		
one year	6	10
two years	42	70
three years	9	15
four years	3	5

Table 1: Reveals that about two third of them were at the nursery stage and one third were at the school age. Regarding birth order, more than half of the sample was first child representing 56.7% of the study sample. Regarding degree of illness, the results revealed that about one quadrant of the sample size were severe cases, and about the fifth were moderate, while about half of the sample has mild symptoms. Regarding duration of illness, the majority of the cases have an illness with duration of two years.

Figure 1 show that; 61.70% of children were male while 38.30% of them were females.

Figure 2 show that 61.70% of children with ADHD their ages ranged from 1 to 5 years while 18.30% of them aged from 5 to less than 10 years and 20% of them aged from 10 to more.

Table 2. Socio-demographic characteristics of Parents of ADHD children in the study sample

Items	No.	%
Family history of ADHD:		
Positive	0	0
Negative	60	100
Residence area :		
Rural	43	71.7
Urban	17	28.3
Family size		
4- 3	46	76.7
6-5	14	23.3
6-7	0	0
Consanguinity		
Yes	45	75
No	15	25
Type of disease:		
Hyperactive	60	100
Epilepsy	0	0
Depression	0	0
Who brings the child		
Mother:	31	51.7
Both parents:	29	48.3
Condition of the child before school:		
Quite	0	0
Not stable	20	33.3
Aggressive	40	66.7
Other	0	0
With whom the child is more comfortable		
Mother	52	86.7
Father	8	13.3
Brothers	0	0
Others	0	0
Does the child split from one of the parent		
Yes	6	10
No	54	90
Do the children split from both of parents		
Yes	0	0
No	60	100

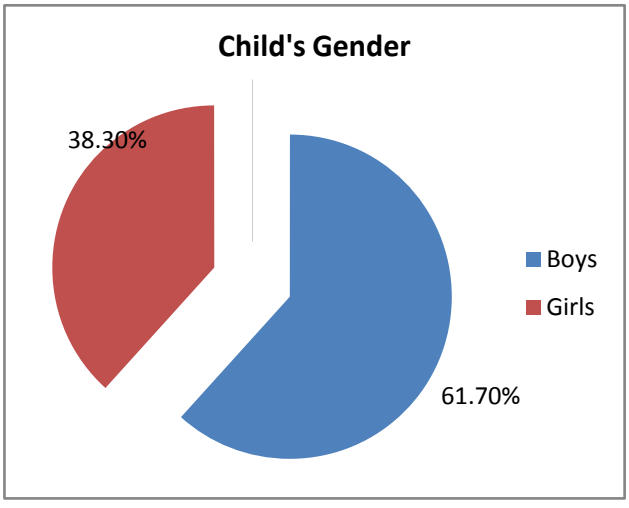

Figure 1. Distribution of children regarding to their gender

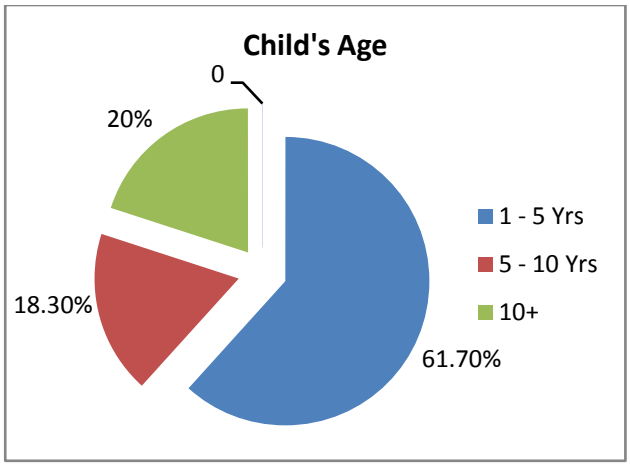

Figure 2. Distribution of children regarding to their age

Table 2: Denotes that most of the care givers live in rural areas, about two thirds of the sample size. For the size of the family most of the sample have family size of 3-4 numbers. More than half of the children come with their mothers, while the rest comes with both parents. Also most of the children feel comfortable with their mothers representing 86.7%. Regarding living with family most of children sample live with both parents. Most of mothers and fathers are intermediate educated representing 66.7% and 86.7% respectively.

Figure 3 show that 66.7% of mothers were intermediate education while 28.3%of them were high education and 5% of them were illiterate. Also 86.7% of mothers were not working while 13.3% of them were working.

Table 3: Show that there was statistically significant disruption of normal family routines with p value equal 0.000. Having a child with ADHA has led to mild improved relationship with spouse in about 60% of cases. Most of the cases have a moderate degree to postpone or cancel major holidays. More over 50% of the cases have moderate and severe limitation in social contact outside the home. Most of the care givers the situation led to severe stress with Spouse representing 50% of the cases. More over severe reduction in time parents could spend with their friends.

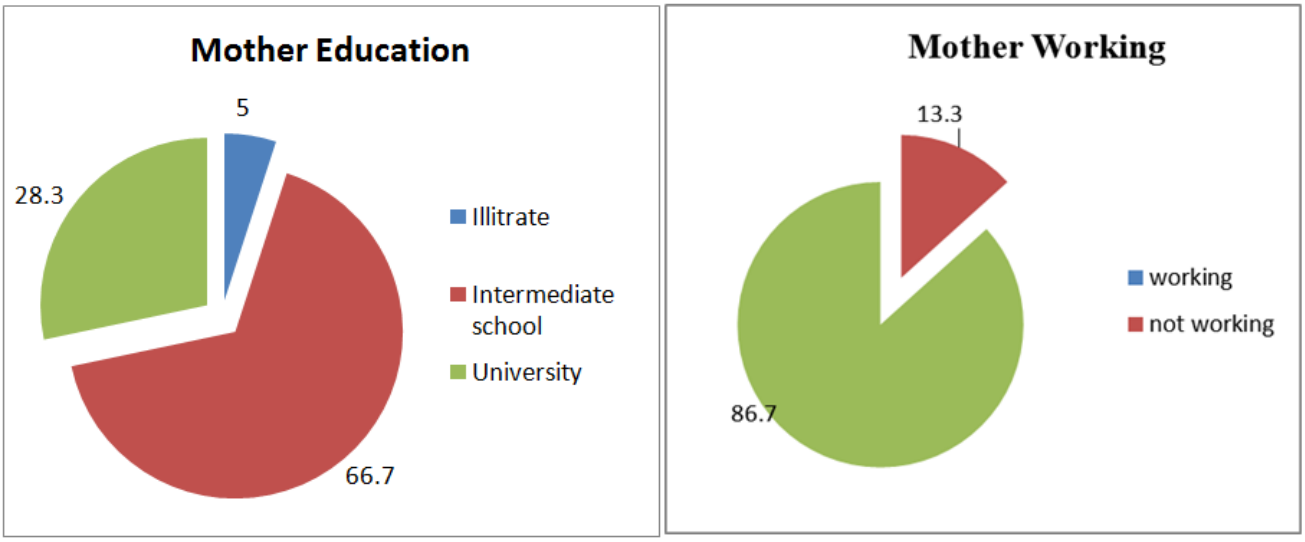

Figure 3. Distribution of mothers regarding to education and working

Table 3. Family impact of child with ADHD adjustment

	Not at all	Mild	moderate	severe	X^2	P
	%	%	%	%		
My child disease needs more time	0	26.7	48.3	25	6.100	.047
Disruption of normal family routines	35	50	5	10	32.400	.000
The experience of caring for child brought family closer to God	0	13.3	48.3	38.3	11.700	.003
It has led to additional financial cost	0	13.3	41.7	45	10.900	.004
Having a child with ADHA has led to an improved relationship with spouse	0	66.7	5	28.3	34.900	.000
Having a child with ADHD has led to limitation in social contact outside the home	0	0	50	50	0.000	1.000
The experience of caring for a child has made us to terms with what should be valued in life?	0	25	50	50	7.500	.024
We have to postpone or cancel major holidays .	0	28.3	46.7	25	4.900	.086
The situation lead to stress with Spouse.	0	13.3	36.7	50	12.400	.002
It has led to reduction in time parents could spend with their friends.	0	13.3	36.7	50	12.400	.002
Because of the circumstances of child disability there has been postponement of major purchases.	0	41.7	30	28.3	1.900	.387
Raising a child with made life more meaningful for family members.	0	28.3	38.3	33.3	.900	.638

Table 4. Dependence in daily life activities among ADHD children as reported by Parents

	Time						t-test (p-value) Pre- Post	t-test (p-value) Pre-FU
	Pretest (N=60)		Posttest (N=60)		Follow up (N=60)			
	Mean	SD	Mean	SD	Mean	SD		
Hygiene:	1.0667	.25155	3.3000	.67145	2.5833	.69603	24.789 .000	15.712 .000
Elimination:	1.6500	.68458	3.3000	.67145	2.5833	.69603	11.439 .000	8.211 .000
Nutrition:	1.6667	.77387	3.3000	.67145	2.5833	.69603	11.621 .000	7.126 .000
Wearing clothes:	1.9333	.73338	3.3000	.67145	2.5833	.69603	10.014 .000	5.381 .000

Table 5. Needs of children with attention deficit hyperactivity disorder (ADHD)

	Time						X^2 (p-value) Pre- Post	X^2 (p-value) Pre-FU
	Pretest (N=60)		Posttest (N=60)		Follow up (N=60)			
	No.	%	No.	%	No.	%		
Control of impulsivity								
Yes	0	0	34	56.7	34	56.7	1.067 .302	1.067 .302
No	60	100	26	43.3	26	43.3		
Control of tantrum								
Yes	0	0	34	56.7	42	70	1.067 .302	9.600 .002
No	60	100	26	43.3	18	30		
Control of hyper activity								
Yes	3	5	30	50	34	56.7	3.158 .076	4.130 .042
No	57	59	30	50	26	43.3		
Doing homework and following home instructions								
Yes	21	35	45	75	48	80	13.846 .000	13.846 .000
No	39	65	15	25	12	20		
Control of aggression in communications								
Yes	0	0	42	70	51	85	9.600 .002	29.400 .000
No	60	100	18	30	9	15		
Interacting with friends & classmates.								
Yes	0	0	33	55	51	85	.600 .439	29.400 .000
No	60	100	27	45	9	15		
Making school tasks.								
Yes	39	65	45	75	51	85	42.249 .000	19.664 .000
No	21	35	15	25	9	15		
Exercises.								
Yes	5	8.3	25	41.7	51	85	7.663 .006	0.963 .327
No	55	91.7	35	58.3	9	15		
Nutrition.								
Yes	8	13.3	36	60	51	85	6.154 .013	1.629 .202
No	52	86.7	24	40	9	15		
Obeying instructions								
Yes	11	18.3	45	75	51	85	4.490 .034	2.377 .123
No	49	81.7	15	25	9	15		
Control of stubbornness								
Yes	3	5	39	65	48	80	5.865 .015	12.632 .000
No	75	95	21	35	12	20		
Use of community resources								
Yes	12	20	21	35	45	75	27.857 .000	5.000 .025
No	48	80	39	65	15	25		
Self-direction								
Yes	28	46.7	39	65	51	85	13.6111 .000	9.265 .002
No	32	53.3	21	35	9	15		
Control of self-harm								
Yes	28	46.7	42	70	48	80	22.500 .000	13.125 .000
No	32	53.3	18	30	12	20		

Table 4: Indicates that; there was a statistically significant improvement in children daily living activities after parent education in hygiene; elimination; nutrition and wearing clothes.

Table 5: Show that there was statistically significant improvement in most of children' behaviors such as, Control of aggression in communications, interacting with friends & classmates. Making school tasks, Obeying instructions, Control of stubbornness, Self-direction and Control of self-harm after parents education .

5. Discussion

Attention-deficit/hyperactivity disorder (ADHD) has very serious effects on the children themselves as well as their families and social environments. In the majority of cases, medication softens the behavioral edges and allows children to function more effectively as they carry out the tasks of daily living in interaction with family and peers. However, it is rare to see the behaviors' of these children normalized by pharmacotherapy only [20]. As a parent dealing with a child having ADHD needs different approaches and techniques. As lack of knowledge about the disease, fear of complications and how to cope with child abnormal behavior was source of parent mal adjustment [21]. It was a must to assess parent adjustment to determine source of fears and needs. The present study found that in Table 1 number of male affected was two third of the sample compared to female. This result agrees with (AL Mahmoud) who stated that the prevalence of ADHD was higher in male than female, as (77%) of her cases were males. This result could be explained as what researches said that ADHD is four times higher in boys than girls. In relation to the age, about more than two thirds of the children' age from 1-5 years and *about* one fifth with age from 5-10 years this could be related to the detection of the disease is common in nursery age as the main complain in this age is impulsivity and hyperactivity and lack of attention in nursery schools [22]. As ADHD is a highly prevalent disorder in childhood? [24].

The primary purpose of this study was to assess child efficacy in their activity of daily life, parental adjustment of children with ADHD to detect their care givers needs and designing and implementing intervention according to their needs. Evaluating parents opinions of their children behavior pre, post and follow up the program.

In Table 2 the result revealed that more than two thirds of the study samples are more comfortable with their mothers. This result agrees with what AL Mahmoud, 2013 said that mothers tend to have primary parenting responsibility in domains where inattention and disorganization are likely to create problems i.e., getting homework completed and turned in, keeping one's room clean, remembering to complete chores, etc. In the case of fathers who tend to be less involved in these aspects of their child's life, they would not have to contend as often with the problems caused by inattention and disorganization.

In Table 3, the result revealed that Disruption of normal family routines was statistically significant related to hyperactivity and impulsivity of the child., this could be related to lack of knowledge about disease, inability of child to sit still and pay attention. This congruent with Bell, et al., 2002 who stated that Attention Deficit Hyperactivity Disorder (also called ADHD) is thought to be a brain disorder that makes it difficult to sit still and pay attention [25]. This could be explained as most of the parents are intermediate education and from rural areas (Table 2) so; their awareness of the disease is lacked.

In addition to that the result stated that having a child with ADHA has led to additional financial costs. This could be related to lack of knowledge about community resources of treatment of ADHD. As majority of the parents (more than two thirds) are intermediate educations as in Figure 3. Also could be related to lack of these resources in rural areas as most of the parents of the study from rural areas representing more than two thirds of the study. Moreover it could be related to lack of income as in Figure 3 majorities of the mothers are not working, and the financial burden on father only. In addition to that, literatures have demonstrated that parents with children diagnosed with ADHD experience more stress than parents as children without ADHD, which led to several problems, including health and financial struggles [26].

The study revealed also that, the situation (presence of ADHD child) led to stress with Spouse and has led to reduction in time parents could spend with their friends. This agrees with (Richard, 2008) who found that most of parents with ADHD children suffer from "Loss of control'' over the situation. Hence it is necessary to educate parents how to modify their children' behavior and this is the purpose of the study to avoid stress with spouse [27].

In ADHD the child has deficiency in EF internally as Planning, Organizing, Setting priorities, Shifting between situations or thoughts, Controlling their emotions and impulsivity, Using working memory, Monitoring themselves to keep track of how they 're doing [19].

In Table 4, Executive functions on Daily living activities in ADHD children are improved after parent education. There is highly statistically significant difference in task completion and effectiveness in bathing, feeding, hygiene and wearing clothes in post and follow up periods than in pre intervention period with $p<0.05$. This could be related to dividing tasks into small tasks, putting plans and goals for the child and using role play. As the problem of ADHD child not doing daily activity as eating, bathing, hygiene, or even wearing clothes independently, the problem is how they are doing these tasks, as deficits in all of the major EFs, and each of these EFs is a type of self-regulation – a special form of self-directed action [22]. Moreover in Table 5 the result of the present study revealed that there is statistically significant improvement in control of tantrum $p=0.002$, this could be related to applying firm instructions of the program and using negative reinforcement with child tantrum, through verbal and written instructions. These results agree with the rules that are understood to be operating during educational or occupational activities, for instance, do not seem to be controlling the person's behavior, they should be externalized [20]. Related to doing homework and following home instructions, there is highly statistically significant improvement in doing homework and following instructions after parent counseling and during follow up with $p<0.001$ respectively. This could be explained as the parents followed the instructions of the researcher which included (1) focusing on doing home

working and studying not on the result only (2) dividing the home work to small tasks (3) fixation of the site of school homework and avoiding TV, people and noise during making homework and studying [28].

Not only was that, but also the methods of teaching used by researcher were effective. Moreover, the results agree with harpin, 2005 who stated that providing parents with effective strategies to handle homework doing and home instructions with their child's ADHD would seem to be quite important [29]. For the control of aggression in communication, the study revealed highly statistically significant improvement in post and in follow up with p equal 0.002& <0.001 respectively. This could be related to one such technique used by the researcher in which the parents were taught the use of token or point systems for immediately rewarding good behavior or work. Another technique used is "time-out" or isolation to a chair or bedroom when the child becomes too unruly or out of control. During time-outs, the child is removed from the agitating situation and sits alone quietly for short time to calm down. Parents also taught to give the child "quality time" each day, in which they share a pleasurable or relaxing activity and these techniques adopted from. Al Mahmoud, 2013. In relation to self-direction and control of self-harm, the results revealed that there is highly significant improvement in both of self-harm control and self-direction. This could be explained as a relation to persuasion of the parents to use the negative reinforcement of the child for un acceptable behaviors and firm instructions about the consequence of recurrence of these behaviors. This agrees with (Richard, 2008) who stated that, the rules can be externalized by posting signs about the acceptable behavior that are related to these rules and having the adult frequently refers to them. Having the adult verbally self-state these rules aloud before and during these individual work performances is helpful [23]. More over providing more frequent and immediate feedback (including rewards and punishment), setting up more structure in advance of potential problem situations, and providing greater supervision and encouragement to children with ADHD in relatively unrewarding or tedious situations [29].

6. Conclusion

Based on the results of this study it concluded that. More than two thirds of children, their age range between 1-5 years and about fifth of them their age range between 5 – 10 years and most of them were male. Concerning family impact of child with ADHD adjustment, there were statistically significant disruptions of normal family routines. After the intervention program the children were improved in efficacy of handling daily living activities as hygiene, elimination, nutrition and wearing clothes. Also there was statistically significant improvement in control of tantrum, hyperactivity, doing homework after parents' education and during follow up.

7. Recommendations

Based on the results of the present study, it was recommended that:

- Continuous health education programs are necessary to improve parents' adjustment toward care of their ADHD children through explaining ADHD child needs, applying guidance handouts including information about community resources and providing comprehensive care needs as physical, emotional, motor, behavior, social and therapeutic communication to prevent further complications.
- Continuous Follow up care for ADHD children through daily activities, school health, social services and skills in collaboration with school and related Centers.
- Making continuous programs focusing on improving executive functions in ADHD children is very effective than controlling attention or controlling hyperactivity only.

References

[1] Fathia Mohamed El-Nemr, et al,. Prevalence of Attention Deficit Hyperactivity Disorder in Children. Department of Pediatrics, Faculty of Medicine, Menoufia University, Shebin Elkom, Menoufia, Egypt. Science Journal of Public Health; 2015, 3(2): 274-280.

[2] Ann A. Abd elkader, Nagwa A. Mohamed, Basema B. ELsayed, Omnia R. Amin ,Islam F. Halawa : Continuous performance task in attention deficit hyperactivity disorder children. Egypt J. Neurol. Psychiatry. Neurosurgery; 2016, 53(1): 19-22.

[3] Brown. Attention Deficit Disorder: The Unfocused Mind in Children and Adults, published by Yale University Press in 2005, in his 2013 book A New Understanding of ADHD in Children and Adults: Executive Function Impairments, published by Rout ledge, and in his most recent book, Outside the Box: Rethinking ADD/ADHD in Children and Adults—A Practical Guide published by American Psychiatric Publishing, Inc. in 2017.

[4] Al-Mahmoud. S. Effectiveness of Health Educational Program on Parents' Coping Strategies and their Children with Attention Deficit Hyperactivity Disorder. Appl Sci.; 2013, 2 (10): 461-472.

[5] Hanan, T. Elbahnasawy and Naglaa, M. Girgis (2011). Counseling for Mothers to Cope with their Autistic Children. Journal of American Science; 2011, 7 (7): 183-192.

[6] American Institutes of Research: Identifying and treating attention deficit hyperactivity disorder. 2003. Available at www.ed.Gov/pubs/edpubs.html.

[7] Barkley. T. Development of clinical services for attention-deficit hyperactivity disorder. Arch. Gen Psychiatry; 2000: 56: 1097-1099.

[8] Norvilitis. JM., Fang. P. "Perceptions of ADHD in China and the United States: a preliminary study". J Atten Disord. (November 2005): 9 (2): 413-24.

[9] National Institute for Health and Clinical Excellence, Sep. 2008. Attention deficit hyperactivity disorder. Diagnosis and management of ADHD in children, young people and adults. Quick reference guide. Nice Clinical Guideline 72.

[10] Mustafa. M., Elbahnasawy. H., and Atief. J. A. Parents Adjustment for Caring of Cerebral Palsy Children. IOSR Journal of Nursing and Health Science (IOSR-JNHS) e-ISSN: 2320-1959. p-ISSN: 2320-1940, 4(5), Ver. II (Sep. - Oct. 2015), PP. 01-10.

[11] Younis. O.A. Prevalence of ADHD among primary school children in Menoufiya un published master thesis, Banha university: 2012.

[12] Centers for disease control and prevention. ADHD. Data and statistics. 2013. Retrieved April 27, 2012, from www.cdc.gov/ncbddd/adhd/data/html.

[13] Trute. B., & Hauch. C. Gender difference in the psychological adjustment of parents of young developmentally disabled children. Journal of Child Psychology and Psychiatry; 1988, 36: 1225 -1242

[14] Naomi, et al. "Individual Differences in Executive Functions Are Almost Entirely Genetic in Origin." Journal of Experimental Psychology: 2008, 137(2): 201-25.

[15] Rebecca. E: "Executive Functions and Their Disorders." British Medical Bulletin; 2003, 65(1): 49-59.

[16] "What Is Attention Deficit Hyperactivity Disorder?" NIMH.nih.gov. National Institute of Mental Health. Web. http://www.nimh.nih.gov/health/publications/attention-deficit.

[17] Richard L. Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder (Rev. Ed.). New York, NY: Workman Publishing; (2008). — Examines a generation's alienation from nature and advocates the health and emotional benefits of reconnecting children with great outdoors.

[18] Laura. A. Attention deficit hyperactivity disorder across the life span. Annual Review of Medicine; 2002, 3: 33-45.

[19] Executive Functions. What They Are, How They Work, and Why They Evolved. Russell A. Barkley Hardcover/E-Book. May 2012.

[20] Mather. N. and Goldstein. S. "Behavior Modification in the Classroom" retrieved 12/27/2012.

[21] Carol K Whalen, Barbara Henker, and Sharon S Ishikawa. ADHD and Anger Contexts: Electronic Diary Mood Reports from Mothers and Children. J Pediatric Psychology; 2009, 34 (9): 940-953.

[22] Kevin M. Antheil et al: Cognitive Behavioral Treatment Outcomes in Adolescent ADHD. Journal of Attention Disorders; 2014, 18 (6).

[23] Kazdin, A.E. Behavior modification in applied settings. (6th ed.). Belmont, CA: Wadsworth/Thomson Learning; 2001.

[24] Biederman. J., Faraone. S. Attention-deficit hyperactivity disorder. Lancet; 2005, 16-22; 366 (9481): 237.

[25] Bell. You, Your Relationship, and Your ADD. Oakland, CA: New Harbinger Publications, Inc. This workbook is directed at adults, but contains useful information on issues that arise in relationships with people with ADHD; 2002.

[26] Mahmud. N: The impact of play therapy program on attention and activity of school age children with Attention Deficit Hyperactivity Disorder (ADHD) Dissertation proposal, Doctoral degree in Pediatric Nursing Science; 2008. From AL Mahmoud 2013.

[27] Harpin. VA: The effect of ADHD on the life of an individual, their family, and community from preschool to adult life. Arch Dis Child; 2005, Feb, 90 Supple 1: i2-7.

[28] Linda. J., Pfiffner & Haack.l.. Behavior Management for School Aged Children with ADHD. Child Adolescent Psychiatric Clinic N Am. 2014. Author manuscript; available in PMC 2015 Oct 1.

[29] Cantwell DP: Association between attention deficit-hyperactivity disorder and learning disorders. Journal of learning disabilities; 2001, 24: 88.