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Effect of a Designed Nursing Intervention Protocol for Mothers on Outcome of Children with Attention Deficit Hyperactivity Disorder

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Abstract

Background: The behaviour disorder of attention deficit hyperactivity disorder (ADHD) is characterized by hyperactivity, impulsivity, and inattention. The symptoms of ADHD that the child displays can be difficult for parents to manage and their understanding of these behaviors is often limited. Parenting programs provide techniques that parents can use to manage their child's challenging behaviors. **Purpose**: To determine the effects on the outcome of children with attention deficit hyperactivity disorders of the Designed Essential Intervention Protocol for Mothers. **Methods:** A convenience sample of 65 mothers and their school-age children who suffering from ADHD were selected from the child psychiatric unit and pediatric outpatient clinics at Menoufia University Hospital, Menoufia governorate, Egypt. A Quasi-experimental design was utilized. **Tools of the study:** Information of Attention Deficit Disorders Scale, Alabama parenting Questionnaire and Diagnostic and Statistical Manual of Mental Disorders-5th edition. **Results**: There was a statistically significant improvement in mother's knowledge and practice while dealing with their children after protocol implementation. There was a statistically significant decrease in ADHD symptoms among the children post-intervention than pre-intervention. **Conclusion\ Implication for practice**: a Designed nursing intervention Protocol for mothers of children with Attention Deficit Hyperactivity Disorder had a positive effect on mothers' knowledge and practice and their children symptoms. So, a designed nursing protocol must be should be integrated as routine care of education and practice for all mothers and their children with attention deficit hyperactivity during regular care and medical follow up in the pediatric and psychiatric clinic.

Keywords: Children, ADHD, Mothers' knowledge of ADHD, Nursing Protocol,

Abbreviation. ADHD (Attention Deficit Hyperactivity Disorders).

Introduction:

Attention Deficit Hyperactivity Disorder (ADHD) can be treated as a serious illness condition that greatly affects many children but can also endure into adulthood in the form of a chronic condition characterized by frequent inattention, impulsivity and lack of self-control, which reduces a person's ability to function at their best level. (National Institute of Mental Health, 2017).

Children with ADHD more regularly have disturbances with social abilities, such as social interactions and forming and maintaining relationships. Approximately half of those children have a form of social disability, while the remainder do not (Raghibi et al,2014). Moreover, ADHD child characterized by different behavioural problems such as motor skills' impairment, attention defect, educational difficulties, learning disability, hyperactivity and aggression is the basic crisis for parents, peers, teachers, pediatric nurse, paediatricians, psychiatrists, psychologists and school nurse. Symptoms can harm a child's mental potential and social abilities. So the nurse has an important role in helping manage the problems of ADHD and reducing the burden on their parents, teachers and siblings (Zamini, 2016).

Nurses are important members of teams that provide diagnostic, treatment, and support services for children and their families at home and in school. Slobodin and Davidovitch (2019). The role of nurse involves providing information and listening to both parents and healthcare providers. The intervention should include guidance, assessing parental awareness and knowledge about treatment. The parents should be educated regarding psychosocial nursing intervention to teach them the techniques that can use to treat their children with challenging behaviors. The nurse should consider all the family members' opinions and give medical care when needed.

1.1. Significance of the study:

ADHD affects boys three times than girls, and occur approximately from 3% to 11% or more from all children. Over fifty percent of children diagnosed with ADHD in early childhood experience these symptoms into adulthood and affects 2% to 9% of school-age children **(**Solan, et al., 2020**).**

The prevalence of ADHD children in school-age about 11% in the United States.While around 13% of the Saudi population diagnosed from ADHD and around 30% of children have learning difficulties. The mean age of ADHD children is 7 years old (Krueger, Kendall .2017). Whereas, in Menoufia, the prevalence of probable ADHD among children was 19.7% in a sample of 600 children (5-12 years). The most common type of probable ADHD was the combined type. The predominance of ADHD was increased in male (72.9%) than female (17.1%) the ratio 2.7:1 (El-Nagger et al., 2017).

2.1. Aim of the study:

The study aimed to evaluate the effect of a designed nursing protocol for mothers on the outcome of children with ADHD.

2.2. Research Hypotheses:

H1- the Mothers who are subjected to a designed nursing protocol will have higher knowledge regarding attention deficit hyperactivity on post-intervention than pre-intervention.

H2-The Mothers who received a designed nursing intervention protocol will be improved their practice toward their children with attention deficit hyperactivity on post-intervention than pre intervention.

H3-Children with attention deficit hyperactivity undergoing nursing intervention protocol likely to have fewer ADHA on post-intervention than pre-intervention.

3. Methods

3.1. Study design, setting and sample

The study utilized a quasi-experimental design (pre and post). The sample was purposive samples of 65 mothers and their school-age children who suffer from ADHD. The sample was recruited according to the following inclusion criteria: was included children are age from 6-12 years, both sexes and without any other medical or psychiatric disorder and agreed to participate in the study. Exclusion criteria are the presence of any other medical or psychiatric disorder. The study was carried out at the child psychiatric unit and pediatric outpatient clinics at Menoufia University Hospital, Menoufia Governorate, Egypt. These hospitals were purposively selected because they are known to present services to large sector of the governorate population thus having a high flow rate of children with ADHD.

3.2: Data collection measures: This study utilized five data collection measures, which was filled by researchers and included the followings:

3.2.1. Measure I: A structured interviewing questionnaire (Pre and post): The study was conducted after reviewing related literature. The manuscript was divided into two sub-parts:

Part one (7 items): Bio-socio demographic data about the studied children with ADHD, such as age, sex, birth order, duration of disorder and child's condition before school.

Part two: Characteristics of the studied mother such as age, marital status, educational level, residence, family size and family history of ADHD.

3.2.2. Measure II: knowledge of Attention Deficit Disorders Scale (KADDS) (Pre and post):

- It was adopted from Garque et al., (2007) and modified by the researchers. It was translated into Arabic. It consisted of 30 questions designed to assess mothers' knowledge of their

children's symptoms, symptoms of ADHD, ADHD treatment, and general information about ADHD and ADHD research.

- Scoring system: Each question was answered as true, false. An incorrect answer takes 0, and correct answer takes 1. Each mother can receive a score ranging from 0-30 grades.

  Total Scoring system: total score <50% means poor knowledge, 50-75% means average knowledge while > 75% means good knowledge.

3.2.3. Measure III: Alabama Parenting Questionnaire (APQ) (Pre and post):

It was adopted from Frick, P. J. (2016) and modified by the researchers. It's composed of 42 questions to measure the parenting practices related to disruptive behavior disorders in school-age children. This questionnaire consisted of six subscales, which includes the following: The children questionnaire items are grouped into scales that reflect the parent scales.

1- Involvement: numbers for these questions are: 1, 4, 7, 9, 11, 14, 15, 20, 23, 26 (these questions divided into two parts — One for mother participation and one for father involvement)

2- Positive Parenting: numbers for these questions are: 2, 5, 13, 16, 18, 27

3- Poor Monitoring/Supervision: numbers for these questions are: 6, 10, 17, 19, 21, 24, 28, 29, 30, 32

4- Inconsistent Discipline: numbers for these questions are: 3, 8, 12, 22, 25, 31

5-Corporal Punishment: numbers for these questions are: 33, 35, 39.

6- Other Discipline Practices provide knowledge on an item by item basis. These questions are: 34, 36, 37, 39, 40, 41, 42

Scoring System: The scores were given as the following: 1= never, 2= rarely, = sometimes, 4 = usually and 5 = always. Whole all items within the scale to get a total scale score.

3.2.4. Measure V: Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) scale: It was adopted from Wolraich, et. Al., (2019) and modified by the researchers to detect the behaviours of ADHD and define its three nominal subtypes {predominantly hyperactive-impulsive type (ADHD-H), predominantly inattention type (ADHD-I), combined type (ADHD-C). Inattention type includes 9 items, hyperactivity includes 6 items and impulsive type includes 3 items.

- Scoring System: The scores were given as the following: 1= never, 2= rarely, = sometimes, 4 = usually and 5 = always.

3.3. Administrative design: An official permission to apply the study was gained from the responsible authorities (the dean of Faculty of Nursing, the director of Menoufia University Hospital and directors of both child psychiatric clinic and pediatric clinic).

3.4.Validity and reliability the study measures (I-V) : Internal consistency of the study tools was achieved using Cronbach's Alpha coefficient, which yielded values of r=0.9021 - r= 0.8725 respectively.

3.5.A pilot study: The pilot study was conducted on 10% (7 mother and their children) from the total sample to ensure the clarity, applicability of the measures and the time needed to be completed. According to the results obtained from the pilot study, the required modifications were performed

3.6. Ethical Approval:

- Ethical Approval institution was Committee for Scientific Research Review in Faculty of Nursing, Menoufia University, Egypt at 10 July 2019. Oral and written informed consent was obtained from the mothers after explaining the aim of the study. Privacy and confidentiality were assured and kept. Mothers' rights to be withdrawn from the study at any phase were respected.

3.7. Data collection procedure

Procedure: The actual study carried out in four phases:

a)Assessment phase: This phase lasted for four weeks.

- Mothers were met in outpatient clinics at El-Menoufia University Hospital. The questionnaires were administered to each mother individually.
- The selected mothers asked to be a participant in the study after explaining the aim of the study. The total number of mothers was 65.
- Mothers were undergoing a pre-test using the 4 tools in the presence of the researchers for necessary clarification.
- Each interview took from 60- 90 minutes, according to the mothers' free time (after finishing therapy with the child).
- Before the beginning of the program, the researchers fixed a meeting time with the participants, on Monday for child psychiatric clinic and on Wednesday for the pediatric outpatient clinic (every week)

b) Planning phase:

1- The nursing protocol was developed by the researchers depending on the data from the assessment phase and the literature review. Prioritize goals and expected outcome criteria were formulated as:

- Improvement of mothers' knowledge and skills regarding ADHD.

-Mothers will be able to deal with their children who have ADHD effectively.

- The nursing protocol will reduce symptoms of ADHD.

2- The researchers prepared videos, pictures and PowerPoint presentation to be used in the educational program.

3- Colored booklets were developed to be distributed to every mother for enforcement and as a reference.

- The nursing protocol was implemented on a small group basis. The participants divided into 5 groups. Each group was encompassing of 13 mothers. Each mother attended 5 sessions (one group per day/ one day per week). These sessions were being scheduled as one session per week).

-Data were collected over a period of 7 months starting from the beginning of August 2019 until February 2020

c) Implementation phase:

The implementation phase consisted of five sessions for mothers, which included the following:

First session: This session was included orientation, greeting with the mothers, introduction about the study topics, and commitment about timetable and meeting time. The session included definition, causes (genetics, social and environmental causes), subtypes, signs and symptoms, according to Diagnostic and Statistical Manual of Mental Disorders -criteria of attention deficit hyperactivity disorders to increase mothers' knowledge and awareness about ADHDs. Supported by PowerPoint and pictures. It required 30 minutes. By the end of this session, mother able to define ADHD, causes, subtypes and manifestation of attention deficit hyperactivity disorder. The researchers give mothers 10 minutes to ask any question, and then give them 20 minutes to summarize all the outlines discussed.

Second session: this session covered many topics, prognosis, the impact of ADHD on the suffered children and their family, friends, teachers, learning outcomes, methods of management (How to deal with attention deficit hyperactivity disorders) and barriers of implementation. This session also contained the suitable nutrition that the mother should follow with the child to reduce symptoms of hyperactivity, impulsivity and increase attention as provide the child with food that is free of industrial colors and avoid food that

contains excess calories and sugars such as chocolate and sweets. Also, avoid giving the child cola and foods that contain preservatives. It took about 90 minutes. Supported by PowerPoint shows, pictures and role-plays. The researchers give mothers 20 minutes to give a situation that they meet with their children. After that, give mothers 10 minutes to summarize all the outlines and demonstration and re-demonstration was done.

Third session: This session included some instruction that helps mothers to deal with the child suffering from ADHD as the following:

- Mothers' asked to change the home environment and create home routines for eating and sleeping as save the environment without distraction for child attention or noising.

- Mothers' informed about problems of cognitive behavior of the ADHD child and the importance of cognitive behavior therapy intervention; practice enhanced to make behavioral modification for children to produce change in thinking, feeling and behavior. - Guidelines of behavioral modification were informed through making a chart to:

- Identify the area where the child has problem and strengths, assign points for each behavior, set up a chart for scoring the good behavior and sit down with the child and discuss possible rewards for point accumulation. This session Supported by PowerPoint, videos and pictures. It required 90 minutes. The researchers gave mothers 20 minutes to discuss a case study about ADHD and 10 minutes to make free discussion and ask any question.

Fourth session: this session covered the following: Mothers informed about the importance of play therapy to improve the child ability to perceive others' emotional state, types of play therapy and selecting the suitable toys for the children and the importance of play therapy in helping their child to overcome any problems and solve it.

Fifth session: All concepts of previously presented, reviewed and mothers' informed about the importance of drawing to help the child to express him/herself, support children are

learning to develop their artistic skills as they play with pictures, use color, draw and create scenes. These choices permit the child to make art, which permits the child to express their feelings to the therapist.

- Mothers' instructed about guidelines of play therapy such as provide a safe environment and avoid any sharp instrument, prepare the suitable toys and encourage the child to express the feeling, use suitable language. This session supported by PowerPoint, videos and pictures. It required 45 minutes.

-The researchers started each session by asking the mothers about what given in the previous session and ended it by summarizing what was given during the present session, which took about 10 minutes.

-The nursing protocol was presented through a discussion between the researchers and the mothers. Visual aids and handouts were used whenever needed to supplement discussions and guidance. The booklet was distributed to the mothers during the study.

d) Evaluation phase:

At the end of all sessions, the evaluation was done through reassessing the 4 tools (posttest).

Statistical analysis:

-Information gathered were sorted out, organized and factually broke down utilizing SPSS version 20. The number and rate were determined and contrasts between subcategories were tried by chi square. For qualitative variables, mean and standard deviations were determined. The relations between the two variables were tried by Wilcoxon – Sign-Rank-test and combined T. Test. The P estimation of < 0.05 indicates a significant result, while a P estimation of < 0.001 demonstrates a high significant result.

4.Results

Table (1) shows that distribution of the studied children and their mothers according to socio-demographic characteristic. Firstly, regarding the mean age of studied children was 8.69±1.83 and ranged from 6-12 years old. Also, less than half (41.5%) of them were a primary child and more than half (50.8%) of studied children have ADHA since 3- <6 years. As well as more than half (67.7%) of them don't have siblings with ADHD. Secondly, concerning to mother's age were less than 35 years (66.2%) and 64.6% of them were working. Approximately about half of the families (45%) having 3-6 persons at home and more than half of them (69.2%) were married while 61.6%of mother's residence in urban areas.

Figure (1) shows that pre-intervention, the majority of mothers have poor knowledge about ADHA (76.9%). While post-intervention more than half of them have good knowledge (61.5%).

Table (2) reported that pre-intervention, level of mothers of practice was(66.2 % Parental Involvement, 66.2% Positive Parenting,55.4% Poor monitoring/Supervision, 100% Inconsistent Discipline, 92.3% Corporal Punishment and100% Other Discipline Practices. Post-intervention, the majority of mothers had fair levels of practices. So, there are statistically significant differences in the relation between pre and post nursing intervention in the mothers' practices at <0.001of significant

Table (3) clarified that the total mean scores level of studied children as regards inattention, hyperactivity and impulsivity in pre and post nursing intervention protocol as reported by their mothers are 45.31 ± 4.07 and 31.76 ± 4.98 respectively. Also, this table reports that there are high statistical significant differences regarding children inattention, hyperactivity and impulsivity pre and post nursing intervention protocol as reported by their mothers.

Table (4) illustrates that there is a significant positive correlation between Inattention and corporal punishment as per mothers' practice.

Discussion:

Special education teachers are also important members of the teams that provide diagnostic, treatment, and support services for children with attention-deficit/hyperactive disorders. Subsequently, their unique skills and training are important when supporting those children's families in the hospital, school and community.

.So, as a parent dealing with a child having ADHD needs different approaches and techniques. The current study hypothesized that the mothers who received nursing protocol would have high Knowledge and better practice about attention deficit hyperactivity disorder than those who did not receive the intervention. Also, Children with ADHD undergoing nursing protocol would have fewer ADHD symptoms than those who did not receive the intervention.

Regarding characteristics of the studied children mean and standard deviation of the age was (8.69±1.83) years& ranged from 6-12 years old. This could be related to the age of disease detection as is more common in preschool and school-age and the main complain in this age is impulsivity, hyperactivity and lack of attention in school performance and learning. Also, ADHD is a highly prevalent disorder in childhood. Regarding sex, the present study demonstrated that the majority of them were male. These results were matched with El-Nagger et al., (2017) who reported that more than half of the children were boys and about two-thirds of them their age was 6-12 years. Moreover, these findings were in the same line with Danielson et al., (2018) who said that the rate of ADHD is higher in boys than girls and added that ADHD are more likely to be detailed four and half times among boys than girls. On the other hand, Al Hariri and Faisal (2013) illustrated that a higher rate of ADHD is among school-age children (4% to 12%). Moreover, Novik et al., (2018) discovered that

girls with ADHD are having issues on paying attention and are ordinarily not hyperactive and disruptive as boys.

-The present study reported that more than half of mothers' age was less than 35 years and the majority of them were working. This finding was consistent with Naderi, (2010) who stated that mothers' age was between 35-45 years. These findings were conflicting with Danielson et al., (2018) who said that children from low financial condition families are besides; the results of the current study also illustrated that nearly half of the mothers had secondary education. This could be due to that majority of mothers are from rural areas.

Mother knowledge regarding attention deficit hyperactivity:

-The current study revealed that pre-intervention, the majority of mothers had poor knowledge about ADHA while post-intervention more half of them had good knowledge. This could be related to the lack of mother's knowledge about the disease as most of them had secondary education and from rural areas. However, after the intervention and due to the different methods of teaching used by researchers their awareness about the disease increased. This suggests the significance of holding preparing programs for families. This result came within the same line with Shafiee et al., (2017) who detailed that the overall information of the parents was 66%. Their most elevated levels of information were within the areas of determination (91.37%), medications (74.54%), manifestation (72.76%), aetiology (66.44%) and 72.82% of them had a positive attitude towards ADHD after application of the nursing intervention.

Mothers practice to manage their children with attention deficit hyperactivity:

The results in this study illustrated that there is a highly statistically significant relation between pre-nursing intervention in mothers' practices and post-nursing intervention. This result agreed with Dodangi, N., Habibi Ashtiani, N., & Valadbeigi, B. (2014) who indicated that more than half of mother's deal with their ADHD children in the form of punishing on preprogramming. While only the minority of them became founded in post-program intervention. This may be because the majority of mothers in pre-intervention used to punish their children when refusing orders, to keep quiet, make noise, refusing to study or to maintain home clean and the inability of mothers to handle this action or to deal with those children. However, after the nursing intervention, the mothers started to deal better with their children as their skills improved. This might be due to simplicity and clarity of protocol content in addition to frequent feedback during the protocol session that helped mothers to be more concentrated with the different methods of copings with their ADHD children's behaviors and challenges. This result was consistent with Ghahizadah (2017) who recommended that parents should avoid repetitions of commands to the child and take after disciplinary activities with commend when the child follows to the rules and carries on appropriately.

The findings of the current study also reported that pre-intervention, more than half of the mother's level of practice was poor. Meanwhile, Post intervention the majority of mothers had good levels of practices. This result came in agreement with the American Academy of Pediatrics (2017) who found that there was a strong relationship with parents' self-reported involvement in their ADHA children's care and practice. This could due to mother's positive feelings to learn about positive parenting, involvement and handling the ADAH child. In addition, the levels of mother's practice about the care of ADHD were significantly higher post-intervention than pre-intervention.

Degree of symptoms of attention deficit hyperactivity among studied children:

In comparison with the mean scores of the examined children's attentiveness, hyperactivity and impulsivity before and after the nursing protocol reported by their mothers, it can be deduced that [much]. As shown by the mothers, there were significant differences regarding child's inattention, hyperactivity, and impulsivity before and after the process of implementing the nurse's implementation of the nursing protocol. These results are therefore consistent with other studies in psychology that conclude that nursing programs are very effective in improving attention, decreasing impulsiveness and self-control in middle school children. After nursing programs were successfully used for children with attention deficit hyperactivity disorder (ADHD), it could be used in the treatment of such children. Al-Za'ben, et al., (2018) who report that a nursing protocol for children with ADHA decreased the three basic features of ADHD symptoms including hyperactivity, impulsiveness, and attention deficit as well as expends some of their energy. It may be that these unhealthy ways of acting out and expressing feelings, possibly as a way to deal with stress, are becoming more prevalent within our adolescent population. This could be the result of our children's sensitivity to the ways these behaviors are perceived by their peers, higher self-evaluation and competition among them to look cool. As a result, more of the child's attention is focused on studying. Parents who had children who visited their office answered that they had a high tolerance for inattention and hyperactivity symptoms.

Conclusion:

The general discoveries within the present study revealed that implementing of the nursing protocol was effective in improving mothers' knowledge and practice to manage their

children better as well as reduced children's behavioral symptoms and improved parenting skills.

Recommendations:

- A designed nursing protocol must be considered as an essential part of education and practice for mothers' and their children attention deficit hyperactivity during regular care and medical clinic follow up period.

- Future experiments must be carried out in a wider sample to have sufficient time to track the effects of parent training in these findings. Parent-oriented education on the treatment of ADHD child's symptoms.

-Increase community and families' awareness with appropriate community mental health services that achieve the needs of those children through mass media and social media.

- Use a variety of instructional and therapeutic methods, to assist the families of the children who suffer from attention deficit hyperactivity disorder in choosing the appropriate method of therapy right for their child's needs and abilities.

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Table (1): Distribution of the studied children with ADHD and their mothers according to Socio-demographic characteristics

Demographic characteristics	No.	%
1-Age (years)		
• **X ±SD**	**8.69±1.83**	
• **Range**	**6 – 12**	
2-Birth order		
• First	27	41.5%
• Second	18	27.7%
• Third	12	18.5%
• Fourth	8	12.3%
3-Duration of the ADHD (years)		
• **< 3**	32	49.2%
• **3- <6**	33	50.8%

4-Other siblings suffering from ADHD		
• **Yes**	21	32.3%
• **No**	44	67.7%
5-Mother's Age (years):		
• < 35	43	66.2%
• 35- < 45	22	33.8%
6-Occupational:		
• Employed	42	64.6%
• unemployed	23	35.3%
7-Family size:		
• 3-6 persons	57	87.7%
• >6 persons	8	12.3%
6- Residence:		
- Rural	25	38.4%
-Urban	40	61.6%

Figure (1) Mean scores of mothers' Knowledge about ADHD on pre and post intervention.

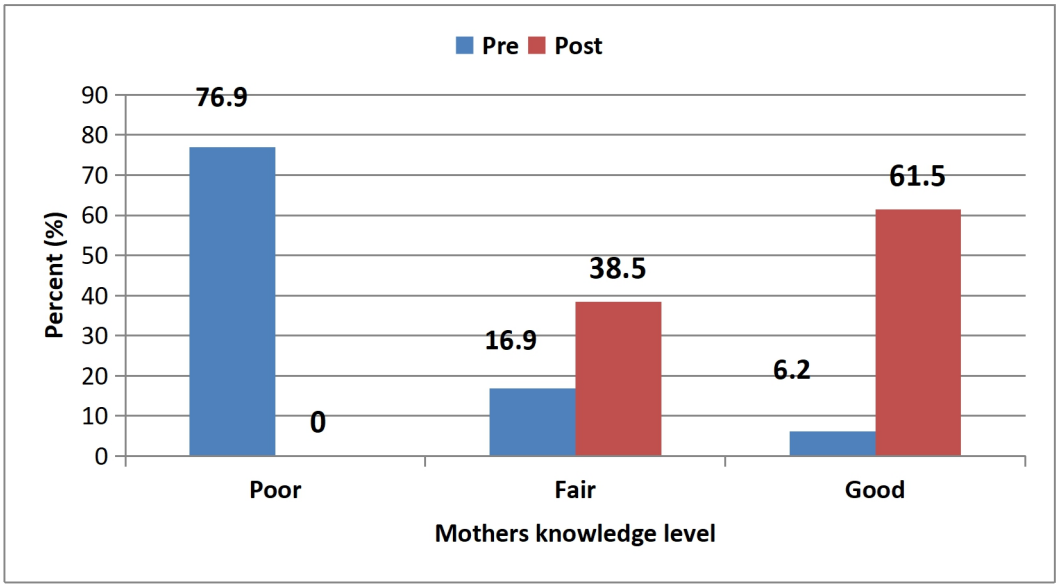

Table 2: Distribution of levels of mother's practice toward children with ADHA on pre and post intervention

Studied mothers N = 65

levels of mother's practice	Pre		Post		X^2	P Value
	no	%	no	%		
1-Parental Involvement						
Poor	43	66.2 %	1	1.5 %	112.55	<0.001* *
Fair	22	33.8 %	4	6.2%		
Good	0	0 %	60	92.3%		
2-Positive Parenting						
Poor	0	0%	0	0%		
Fair	43	66.2%	1	1.5%	60.6	<0.001* *
Good	22	33.8%	64	98.5%		
3-Poor						
Monitoring/Supervision	29	44.6%	0	0%		
Poor	36	55.4%	46	70.8%	94.0	<0.001* *
Fair	0	0%	19	29.2%		
Good						
4-Inconsistent Discipline						
Poor	65	100%	18	27.7%		
Fair	0	0%	36	55.4%	73.6	<0.001* *
Good	0	0%	11	16.9%		
5-Corporal Punishment						
Poor	60	92.3%	11	16.9%		
Fair	5	7.7%	54	83.1%	74.51	<0.001* *
Good	0	0%	0	0%		
6-Other Discipline						
Practices	65	100%	18	27.7%		
Poor	0	0 %	36	55.4%	73.6	<0.001* *
Fair	0	0%	11	16.9%		
Good						

* * p-value ≤ .01 high statistical significant difference; p-value > .05 no statistical significant differences

Table 3: Symptoms of ADHD as reported by children's mother's on pre & post intervention

symptoms of ADHD	Studied children

	n = 65		Paired	P
	Pre	Post	t test	value
Inattention				
X ±SD	20.61±2.64	14.32±2.49	25.49	<0.001* *
Range	16 – 26	10 – 18		
Hyperactivity				
X ±SD	16.40±1.59	11.49±2.61	24.17	<0.001* *
Range	12 – 18	7 – 17		
Impulsive				
X ±SD	8.29±0.74	5.95±1.48	20.42	<0.001* *
Range	7 – 9	3 – 9		
Total ADHD scale				
X ±SD	45.31±4.07	31.76±4.98	42.7	<0.001* *
Range	38 – 53	23 – 42		

Table (4): Correlation among symptoms of ADHD children Mother's in the study sample (n=65)

	Inattention		Hyperactivity		Impulsive		Total ADHD scale	
Mother's Practice	**R**	**P value**	**R**	**P value**	**R**	**P value**	**R**	**P value**
1-Parental Involvement	0.07	0.56	0.22	0.08	0.09	0.46	0.13	0.22
2-Positive Parenting	0.04	0.73	-0.02	0.87	0.17	0.17	-0.04	0.76
3-Poor monitoring/supervision	0.06	0.62	0.09	0.47	-0.42	0.32	0.05	0.74
4-Inconsistent discipline	-0.17	0.17	0.14	0.26	0.03	0.84	0.16	0.22
5-Corporal punishment	-0.32	0.01	0.12	0.36	0.05	0.72	0.23	0.06
6-Other discipline practices	-0.07	0.55	0.19	0.13	0.23	0.07	0.07	0.58
Total practice	-0.14	0.27	0.05	0.70	0.02	0.90	0.10	0.43

* * p-value ≤ .01 highly statistically significant differences