

Effectiveness of Health Educational Program on Parents' Coping Strategies and their Children with Attention Deficit Hyperactivity Disorder

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ABSTRACT: Attention Deficit Hyperactivity Disorder (ADHD) is considered the most common psychiatric disorder that. (ADHD) is a developmental condition that involves problems with inattention and hyperactivity- impulsivity inconsistent with the age of the child.. The affected child often has difficulty learning, giving rise to special educational needs that, combined with poor peer and family relationship, can lead to lack of self -esteem.. Because the nature of illness is unknown ,parents are usually not aware of how the illness will be managed .So the present study aimed to identify the effectiveness of health educational program on parents' coping strategies and their children with Attention Deficit Hyperactivity Disorder. A quasi experimental design was utilized in this study. The study has been carried out in the Psychiatric Out-patient Clinic in Al-Amal Complex for Mental Health in Dammam. A total sample of (30) parents and their children with ADHD has been selected. Pre-post assessment were carried out using the following tools: Socio demographic data sheet for both: parents and children. Knowledge assessment was measured by Psychosocial Problems of Parents Scale. developed by Pruyne, 1983 . The last one is The Parental Coping Strategy Inventory (PCSI)Yeh. The result of the current study revealed a statistically significant difference in level of parents knowledge and coping strategies between pre-post assessment. Therefore, researchers recommended the necessity to increase the awareness of illness by health care professionals through counseling, family therapy, free work shops for parents because they really in need.

Keywords: Parents Knowledge, coping strategies, ADHD.

INTRODUCTION

ADHD (also called ADD) stands for Attention Deficit Hyperactivity Disorder. It is thought to be a brain disorder that makes it difficult to sit still and pay attention. Between 3 and 5 percent of children are thought to have ADHD. It is more common in males, though many girls also have it. (Bell, 2002).

According to (Hassan, 2006) ADHD is a group of chronic disorders that begin in childhood and sometimes last into adult life. It is a neurological condition that involves problems with inattention and hyperactivity that are developmentally inconsistent with the age of the child. Moreover, ADHD is a function of developmental failure in the brain circuitry that monitors inhibition and self-control, this loss of self – regulation impairs other important brain functions crucial for maintaining attention, including the ability to defer immediate rewards for later gain. (Barkley, 2000).

Attention deficit hyperactivity disorder (ADHD) is considered the most common psychiatric disorder. The privilege of Attention Deficit Hyperactivity Disorder (ADHD) in Saudi Arabia is 10%. According to an Arab news article (blogspot.com, 2011) Saudis "suffer" from a high rate of Attention Deficit Hyperactivity Disorder, also known as ADHD. The rate in Saudi was found to be an alarming 15% (globally 3-5%). ADHD is typically 4 times more common in boys than it is in girls. An estimated 50% of the children 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 children, boys almost four times commonly than girls.(American Institutes of Research, 2003).

According to (Hassan, 2006) ADHD is a group of chronic disorders that begin in childhood and sometimes last into adult life. It is a neurological condition that involves problems with inattention and hyperactivity that are developmentally inconsistent with the age of the child. Moreover, ADHD is a function of developmental failure in the brain circuitry that monitors inhibition and self-control, this loss of self – regulation impairs other important brain functions crucial for maintaining attention, including the ability to defer immediate rewards for later gain. (American Institutes of Research, 2003).

Causes of ADHD as stated by (Gephart, 2002) are combination of organic, genetic and environmental factors. Hereditary plays a major role in the development of ADHD, it causes approximately 80% percent of all cases (Medifocus, 2002). A recent brain imaging study has pinpointed where the brain of children with ADHD are different from children who do not have the disorder. The National Institute of Mental Health (National Institute of Mental Health, 2008) decided that ADHD is a legitimate condition. Doctors believe that a child shouldn't receive a diagnosis of ADHD unless he creates significant problems at home and school on an going basis, and core symptoms begin before age 7.

American Psychiatric Association in the fourth edition of the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV ,2002) have been proposed three subtypes of ADHD :predominantly inattentive ,predominantly hyperactive –impulsive and combined types. Kids with ADHD act without thinking, are hyperactive, and have trouble focusing. They may understand what's expected of them but have trouble following through because they can't sit still, pay attention, or attend to details. These symptoms are present over a longer period of time and occur in different settings. They impair a child's ability to function socially, academically, and at home. (Laura et al., 2002).

Moreover,(American Academy of Pediatrics, 2004) stated that, the symptoms of ADHD fall into two broad categories :Inattention & Hyperactivity – Impulsive Behavior. Inattention includes, fails to pay close attention to details or makes careless mistakes in schoolwork , has trouble sustaining attention during tasks or play , doesn't seem to listen when spoken to directly , has difficult organizing tasks or activities , forgetful , easily distracted , avoids tasks that require sustained mental effort, and loses things needed for tasks or activities such as books, pencils, and toys.

Regarding Hyperactivity – Impulsive Behavior, it includes, fidgets with hands or feet or squirms in seat, leaves seat in the classroom , run or climbs excessively when it is not appropriate, talks excessively blurts out the answers before questions have been completely asked , is often 'on the go' or act as if "driven by a motor" and has difficulty waiting his turn (Jensen et al., 2001).

In addition (Gordon et al., 2001) ADHD can also cause trouble in relationships. For instance, you may be more likely to interrupt others, to lose your temper and overreact to things, to forget what you promised to do, and to not pay attention when someone is talking to you. It can be harder to maintain friendships and relationships as a result. (Quinn et al., 2003.).

According to (MathLeague.Com, 2011) Many teens with ADHD also have learning disabilities (LD). This means that they have trouble learning certain subjects, such as reading, math, writing, and spelling. It does not mean that they are not smart! Some teens with ADHD and LD are placed in LD classes to help them learn more effectively. For more information about learning disabilities, contact the Learning Disabilities Association. Many ADHD teens have trouble with what is called executive functioning. This makes it hard to start things, stay focused while working on them, avoid distractions, and complete them.

Parenting a child with ADHD can require different approaches. Learning about ADHD, its symptoms and behavioral strategies can help parents cope with some of the daily struggles and provide a nurturing environment for their children (Gordon et al., 2001). Furthermore, both parents and children may need special help to develop techniques for managing the patterns of behavior Health care providers can counsel the child and the family, helping them to develop new skills, attitudes, and ways of relating to each other. The therapist assists the family in finding better ways to handle the disruptive behaviors and promote change, most of the therapist's work is with the parents, teaching them techniques for coping with and improving their child's behavior (American Institutes of Research, 2003).

Parents must learn to use stress management methods, such as meditation, relaxation techniques, and exercise to increase their own tolerance for frustration so that they can respond more calmly to their child's behavior (Ball, 2006) when parents have a thorough understanding of ADHD management strategies, they can plan and provide day activities that successfully include the child with ADHD. Therefore, parents' education programs must be carried out in groups to help children as well as their parents how to deal with their difficulties (Firestone et al., 2002). So, the aim of the present study is to design and implement knowledge training program for

parents having ADHD children to help them to cope and deal effectively with them which in turn enhance children progress.

MATERIALS AND METHODS

Subjects and Methods

The aim of the study

To identify the effectiveness of health educational program on parents' coping strategies and their children with Attention Deficit Hyperactivity Disorder.

Hypothesis

Health education program enhances parents' coping toward their children with Attention Deficit Hyperactivity Disorder (ADHD).

Study Design

A quasi-experimental design has been utilized in this study.

Setting

The study has been carried out in the Psychiatric Out-patient Clinic in Al-Amal Complex for Mental Health in Dammam. This hospital is a governmental hospital affiliated to Ministry of Health in the Eastern Province in Saudi Arabia.

Subjects

A total sample of (30) parents and their children with ADHD has been selected from psychiatric out-patient clinic in Al-Amal complex for Mental Health in Dammam according to:

Inclusive criteria

- Children who have been diagnosed as ADHD.
- The age of the children is between 6-12 years old.
- Volunteered to participate in this study.

Exclusive criteria

Children with all other physical and mental problems rather than ADHD.

Tools

Two tools were used in this study:

Tool I: This tool include

1- Socio demographic data sheet for both: parents & children. It includes data about children's age, sex, order in the family, number of siblings, parents' level of education, children's level of education, history of any psychiatric disorder, onset of ADHD, with whom does the child come to the clinic, the condition of the child in preschool stage, with whom the child is more comfortable, has the child ever been separated either from one of his/ her parents or both.

2- Psychosocial Problems of Parents Scale developed by (Pruyn, 1983). It includes 43 items with seven subscales as follows: data about uncertainty about prospect of disease, uncertainty about access to help and about how to solve problems, fear for negative consequences for the child, fear for negative consequences for the parents, loss of control, self-esteem, and depression with four respond likert scale, response was coded into (rarely=4, a little bit=3, quite a lot=2, very much=1).

Tool II

Parental Coping Strategies Scale developed by (Yeh, 2001).It includes 51 items with 12 main subscales as follows: data about learning, struggling, interaction with the child, interaction with the healthy sibling, emotional support, information support, actual support, maintaining stability, Maintaining an optimistic state of mind, Increasing religious activities, and effect of parent's coping on the ADHD child with four respond likert scale, response was coded into (strongly disagree=4, disagree=3, agree=2, strongly agree=1).

Method

Steps of data collection were as follows:

1. Written official permission and approvals for conducting this study has been obtained from the authorized personnel.

Ethical Consideration

An official permission to conduct the current study was obtained from the head of psychiatric out – patient's clinic, Al-Amal Complex for Mental Health. Oral informed consent were obtained from ADHD children and their parents to participate in the current study . Confidentiality of each subject were protected by allocation of the code instead of using subject's name.

2. Ethical approval has been obtained before data collection from Ethical committee in the university.
3. An informed consent has been obtained from parents before data collection and confidentiality has been maintained.
4. A pilot study has been carried out on 5 parents selected from the previously mentioned setting according to the chosen inclusion criteria to ascertain the applicability and time needed to accomplish the assessment. Parents in the pilot study have been excluded.

Procedure

This study has been carried out through three phases: preliminary, program implementation and evaluation.

Preliminary phase

This phase was concerned with obtaining an official permission from the hospital director of the selected setting. This was to explain the purpose of the study and to facilitate data collection and assessment of parents' needs.

Program implementation

The total program was divided into seven sessions offered in two hours/ week for each fifteen parents on (Sunday-Tuesday). The program extended for 7 weeks. The first session included parents' and children assessment.

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, behaviors modifications concerning; school intervention, common drugs used, and stress management.

Evaluation phase

The post program assessment has been done using previous mentioned tools immediately and three weeks later.

Program implementation

The total program was 7 sessions offered in two hours/ week . The program was extended for one month and three weeks, started from mid of October,2012 to the end of November.

The first session

The aim of this session is to identify the researcher with the study sample (parents and their ADHD children) and make a contract of the work which will start . This contract contains; parents' agreement to participate in the study , the schedule of meeting, time of meeting , parents commitment to continue, and researcher commitment to help parents. Pre-program assessment has been carried out.

The second session

The aim of this session was to explain the purpose of the program to stimulate the participants interest and to enhance their appreciation for their role. Pre assessment was continue at this session .After that, the researcher presented the plan and content out lines of the program sessions. Each session was preceded by open discussion about the problems of previous days and ended by assignment or home work. Teaching methods were lecture, discussion, role playing and practice, such as small group activities to apply problem solving, communication and time planning using real home problems. Researcher used handouts also.

The third session

The aim of this session was to orient the parents with the nature of the disease regarding the causes, symptoms, and the methods proven to manage the disorder.

The fourth session

It aimed at orient the parents with behavior management strategies. Strategies covered in these session include: parents training, school intervention, and child intervention concerning in this session on parents training skills.

The fifth session

In this session researcher continued working on behavior modification concerning school intervention, child intervention, to raise parents awareness by common drug used in treating ADHD children, its usefulness and possible side effect, help parents to manage stress. This training involved instruction about causes of stress, consequences of stress and recognizing anger signals and using techniques like relaxation to cope with the anger.

The sixth session

Aimed at summarizing all the information and techniques taught ,answer all parent's questions and clarify any ambiguous, explaining to the parents how they can contact the researcher when needed.

The seventh session

The post program assessment was carried out.

Ethical Consideration

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Statistical analysis

Data were analyzed using SPSS windows statistical package version 14. Numerical data were expressed as mean \pm SD, and range. Qualitative data were expressed as frequency and percentage. Relations between different variables were tested using Fridman test, t-student t-test (P-value) less than 0.05 was considered significant and less than 0.01 was considered as highly significant.

RESULTS AND DISCUSSION

Results

Table 1. Socio-demographic characteristics related to ADHD children for the continues variables (n=30)

Variable	Mean	SD	Minimum	Maximum
Age	8.13	2.11	6	12
Number of siblings	3.11	1.5	1	7
Order of child	2.8	1.37	1	6
Duration of diagnoses	1.36	0.63	1	3

Table 2. Socio-demographic characteristics related to parents and their ADHD children for the categorical variables (n=30)

Variables	Number	%
Sex of children		
Boys	23	76.7
Girls	7	23.3
Father education		
Primary	5	16.7
Intermediate	9	30.0
Secondary	5	16.7
Diploma	2	6.7
University	9	30.0
Mother education		
Primary	3	10
Intermediate	3	10
Secondary	5	16.7
Diploma	8	26.7
University	11	36.7
Child education		
First	14	46.7
Second	7	23.3
Third	3	10
Fourth	1	3.3
Fifth	2	6.7
Sixth	3	10
Family history		
Yes	14	46.7
No	16	53.3
Type of disease		
Hyper active	10	71.4
Epilepsy	3	21.4
Depression	1	7.1
Who brings the child		
Mother	19	63.3
Both parents	11	36.7
Condition of the child before school		
Quite	9	30
Not stable	10	33.3
Aggressive	7	23.3
Other	4	13.3
With whom the child is more comfortable		
Mother	22	73.3
Father	6	3.3
Brothers	1	3.3
Others	1	20.1
Do the child split from one of the parent		
Yes	3	10
No	27	90
Do the child split from both of parents		
Yes	3	10
No	27	90

Table 3. Parental Psychosocial Problems Scale related to parents having children with ADHD pre-, immediate and 3 week post program (n=30)

Variable	Pre-program		Immediate post-program		3 weeks later post program		p value
	Mean	SD	Mean	SD	Mean	SD	
Uncertainty about prospect of disease(out of 20)	14.5	0.51	14.0	3.08	13.4	1.65	0.133
Uncertainty about access to help (out of 20)	14.0	1.02	13.1	2.00	12.7	2.75	0.174
Fear for negative consequence (out of 8)	5.0	1.02	5.3	1.89	5.9	1.48	0.081
Fear for negative consequences for the parents (out of 28)	21.5	1.53	18.5	1.53	19.6	4.58	0.085
Loss of control (out of 28)	18.7	4.50	19.0	2.03	16.8	3.36	0.005*
Self-esteem (out of 32)	21.7	1.41	25.0	4.07	21.0	2.03	0.117
Depression (out of 36)	25.0	3.05	21.5	5.59	26.5	3.56	< .001**
Total (out of 172)	120.4	1.50	116.3	3.72	115.9	8.15	< .001**

*P=0.05

** P=0.001

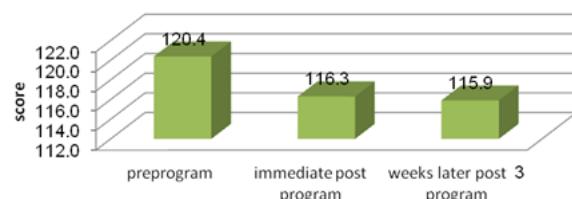
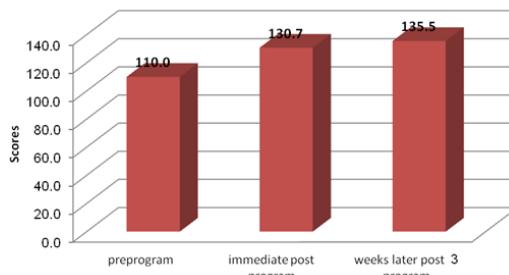
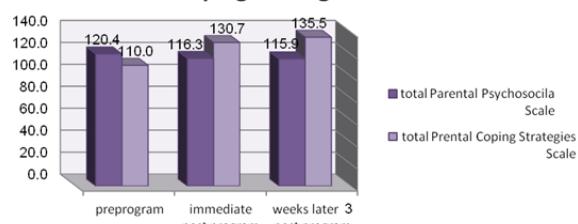
Table 4. Parental Coping Strategies Scale related to parents having children with ADHD (n=30)

Variable	Pre-program		Immediate post-program		3 weeks later post program		p value
	Mean	SD	Mean	SD	Mean	SD	
Learning (out of 20)	14.0	3.08	16.0	2.03	9.5	4.58	<.001*
Struggling(out of 8)	5.5	1.50	5.5	.63	5.5	.51	0.905
Interaction with the child(out of 16)	9.87	1.04	8.4	3.50	15.5	.51	<.001*
Interaction with spouse (out of 16)	11.3	1.40	10.9	1.06	11.5	.51	<.001*
Interaction with healthy sibling(out of 16)	8.5	.51	10.7	2.86	14.5	.51	<.001*
Emotional support (out of 16)	10.0	1.02	8.5	1.53	12.5	.51	<.001*
Information support (out of 12)	6.0	1.02	6.5	1.53	7.5	.51	<.001*
Actual support (out of 12)	4.5	1.53	6.5	.51	7.0	.00	<.001*
Maintaining stability(out of 28)	17.5	3.58	21.0	2.03	20.0	3.05	0.117
Maintaining an optimistic state of mind (out of 16)	9.9	2.01	9.0	2.08	15.5	.51	<.001*
Increasing religious activities (out of 20)	12.8	2.87	11.9	3.00	16.5	1.53	<.001*
Total (out of 180)	110.0	5.30	130.7	15.51	135.5	0.51	< .001*

* P=0.001

Table 5. Effect of parent's coping on their ADHD children (n=30)

Variable	Mean	SD
(1)He/she doesn't pay attention to the details	2.7	0.785
(2)He/she finds difficulty in concentrating	2.7	0.71
(3)He/she seems like not listening	2.6	0.72
(4)He/she doesn't follow the instructions	2.7	0.61
(5)He finds it difficult to organize work and activities	2.5	0.78
(6)He/she avoids, hates, or doesn't want to start activities	2.7	0.76
TOTAL	15.8	2.74

Parental Psychosocial Problems Scale**Figure 1. Total Parental Psychosocial problems Scale
Parental Coping Strategies Scale****Figure 2. Total Parental Coping Strategies Scale****Total Parental Psychosocial and Parental
Coping Strategies Scales****Figure 3. total Parental Psychosocial and Parental Coping Strategies Scales**

First part: Socio-Demographic Characteristics of the Sample

As shown in table (1), the mean age of the children included in the sample was 8.13 years \pm SD 2.11 years. The minimum age was 6 years and the maximum age was 12 years according to the inclusive criteria. The mean number of the siblings related to children having ADHD was 3.11 sibling \pm SD 1.5. The number of the siblings was ranged between 1 to 7 siblings.

Table (2) Pointed out that majority (77%) of the children were males. Regarding the level of education of the parents (fathers), 30% of them were intermediate and 30% were having bachelor degree. In addition, nearly 63.4% of the mothers were having bachelor and diploma degree. More ever, nearly 50% of the children were in the first grade. It also showed that around 50% of the children were having positive history of psychiatric disorders and among them, three quarters (71.4%) were having ADHD. Additionally, it revealed that 63.3% of the children come with their mothers to the clinic. one third (33.3%) of the children were not stable before entering the school and nearly one third (30%) were quite. It also shows that nearly three quarters (71%) of the children feel comfortable with their mothers. Finally, 90% of the children have not been separated from one of their parents neither both.

Second part: Parental Psychosocial problems Scale and Parental Coping Strategies Scale related to parents having children with ADHD

Regarding total Parental Psychosocial Problems Scale, statistically highly significant difference ($p < .001$) was found between pre-, immediate, and 3 weeks later post program assessments with mean of 120.4, 116.3, 115.9 respectively.

Table (3) also shows that sub items of Parental Psychosocial Problems Scale, statistically highly significant difference ($p < .001$) was found in depression subscale (the depression has fade out) between pre-, immediate, and 3 weeks later post program assessments with mean of 25.0, 21.5, 26.5, respectively. In addition, there was statistically significant difference ($p=0.005$) in loss of control subscale (loss of control has been reduced) between pre-, immediate, and 3 weeks later post program assessments with mean of 18.7, 19.0, 16.8 respectively. It was also found that there were no significant differences between pre-, immediate, and 3 weeks later post program assessments in the following subscales: Uncertainty about prospect of disease, Uncertainty about access to help and about how to solve problems, Fear for negative consequence for the child, Fear for negative consequences for the parents, Self-esteem; the parents' knowledge regarding these subscales was not improved.

Third part: Parental Coping Strategies Scale related to parents having children with ADHD

As regards to the Total Parental Coping Strategies Scale, it was found that there is statistically highly significant difference (coping was improved after application of the program) ($p < .001$) between pre-, immediate, and 3 weeks later post program assessments with mean of 110.0, 130.7, 135.5 respectively.

It can also be seen in table (4), regarding sub items of Parental Coping Strategies Scale, statistically highly significant difference ($p < .001$) was found between pre-, immediate, and 3 weeks later post program assessments in the following subscales: learning subscale with mean of 14.0, 16.0, 9.5 respectively(knowledge of the parents has been improved after the program), interaction with the child subscale with mean of 9.87, 8.4, 15.5 respectively (improvement in this subscale has been noticed), interaction with spouse subscale with mean of 11.3, 10.9, 11.5 respectively(this subscale has improved after the program), interaction with healthy siblings with mean of 8.5, 10.7, 14.5 respectively (it has been noticed an improvement in the interaction with the healthy siblings), emotional support subscale with mean of 10.0, 8.5, 12.5 respectively (emotional support has improved after the program), information support subscale with mean of 6.0, 6.5, 7.5 respectively(the parents became rich with information after the program),and there was an improvement to the positive side in the following subscale also : actual support subscale with mean of 4.5, 6.5, 7.0 respectively, maintaining an optimistic state of mind subscale with mean of 9.9, 9.0, 15.5 respectively, increasing religious activities subscale with mean of 12.8, 11.9, 16.5 respectively.

The table revealed that there were no significant differences between pre-, immediate, and 3 weeks later post program assessments in the following subscales: Struggling, Maintaining stability.

In relation to the effect of parents' coping on their ADHD children, table (5) clarifies that there is an improvement for children to pay attention to details with mean of 2.7 with SD 0.78, also the ability to concentrate with mean of 2.7 with SD 0.78. while the ability to organize work and activities has mean of 2.5 with SD 0.78.

Discussion

The primary purpose of this study was to identify the effectiveness of health educational program on parents' coping strategies and their children with Attention Deficit Hyperactivity Disorder .Overall, the researcher expressed satisfaction with the study, and noted that it seemed to give the parents a better understanding of the disorder, as well as ways to cope with their children .

The results of the present study demonstrated that, In relation to the age ,the minimum age was 6 years and the maximum age was 12 years. points out that most (77%) of the cases were males. These results are congruent with (Biederman & Faraone, 2005) Who stated that Attention-deficit/hyperactivity disorder (ADHD) is a highly prevalent disorder in childhood. Prevalence rates between 3% and 12% have been reported for schoolchildren Consistent among these reports is the finding of (Biederman, 2005) who reported that boys are more frequently affected than girls. Accordingly, male-to-female ratios of 3:1 in community samples and 10:1 in clinically referred samples have been reported .

Moreover (Bell, 2002) stated that Attention Deficit Hyperactivity Disorder (also called ADD). It is thought to be a brain disorder that makes it difficult to sit still and pay attention. Between 3 and 5 percent of children are thought to have ADHD. It is more common in males, though many girls also have it.

The results of the present study revealed that more than half of the *children come with their mothers to the clinic* .this result is consistent with the study of (Mahmoud, 2008),who found that for many mothers, however, children's aspects of their child's ADHD to a greater extent than fathers. One plausible explanation is that, on the whole, 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.

This explanation is quite speculative, it implies that when fathers play a significant role in these aspects of parenting – as many fathers certainly do – they would be just as likely as mothers to be adversely affected by their child's struggles with attention. In any case, providing parents with effective strategies to handle these aspects of their child's ADHD would seem to be quite important.(Harpin, 2005).

The results of this study showed that parents have knowledge deficit regarding the ADHD pre intervention & this deficit was fade out after a comprehensive knowledge and training program given to the sample .Parents' knowledge classified into seven main areas of concern as follow:

As regard "Loss of control subscale ", the results of the present study revealed that , there are a statistical significant differences between pre-, immediate, and 3 weeks later post program assessments . This result is consistent with (Richard, 2008) who found that most of parents with ADHD children suffer from "Loss of control " over the situation . What care giver can do , or what is the best way to deal with ADHD children is our main concern in this study , because it is our main rule ;to help people overcome their difficulties.

This task offered by therapists or in special classes, gives parents tools and techniques for managing their child's behavior. One such technique is the use of token or point systems for immediately rewarding good behavior or work. Another is the use of "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 a short time to calm down.

Parents may also be taught to give the child "quality time" each day, in which they share a pleasurable or relaxing activity. During this time together, the parent looks for opportunities to notice and point out what the child does well, and praise his or her strengths and abilities.(Faiget et al., 2002).

Moreover, this system of rewards and penalties be an effective way to modify a child's behavior. The parents (or teacher) identify a few desirable behaviors that they want to encourage in the child-such as asking for a toy instead of grabbing it, or completing a simple task. The child is told exactly what is expected in order to earn the reward. The child receives the reward when he performs the desired behavior and a mild penalty when he doesn't. A reward can be small, perhaps a token that can be exchanged for special privileges, but it should be something the child wants and is eager to earn. The penalty might be removal of a token or a brief time-out. Make an effort to find your child being good. The goal , over time, is to help children learn to control their own behavior and to choose the more desired behavior. The technique works well with all children, although children with ADHD may frequent rewards.(Harvey, 2008).

In addition, parents may learn to structure situations in ways that will allow their child to succeed. This may include allowing only one or two playmates at a time, so that their child doesn't get over stimulated. Or if their child has trouble completing tasks, they may learn to help the child divide a large task into small steps, then praise the child as each step is completed. Regardless of the specific technique parents may use to modify their child's behavior, some general principles appear to be useful for most children with ADHD. These include 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.(Cantwell and Baker, 2001).

Regarding depression subscale statistically highly significant difference ($p < .001$) was found in between pre-, immediate, and 3 weeks later post program assessments. In fact many researches support this result like

(NIMH,2005) who stated that, It is obvious that, parenting a child with ADHD can be discouraging and stressful. Many cognitive – behavioral parenting program for most of children with ADHD who are experiencing at least mild levels of stress and / or depression which based on strong research support have great effect in improving both child behavior and moms' mood and stress.

In addition,(Dyson, 2004; Van Berkum, 2006) reported that, parents of children of with ADHD are frequently confronted with various kinds of psychosocial and practical problems that sometimes cause high levels of parental distress, these include emotional problems such as fear , depression and worry , reduced satisfaction in their marriage, practical and financial problems, problems related to educational tasks, as well as reduced level of self-esteem and self- confidence.

Although the result of the present study shows that there is no statistical significant difference in relation to "Fear for negative consequences" subscale between pre- immediate, and 3 weeks later post program assessments. The researcher explained that this result is a sort of parent positive coping, but the National Institute of Mental Health (NIMH) in its researches found that children with ADHD experience harmful consequences as a result of their behavior. They frequently experience peer rejection and academic and social difficulties which may have long term effects. According to the National Institute of Mental Health (NIMH), these children may have conduct disorders, experience drug abuse, exhibit antisocial behavior, and incur injuries of all sorts. For many individuals, the impact of ADHD continues into adulthood.

Research concerning the issue of parenting ADHD children is limited in regards to the coping strategies used by parents to deal with the parenting stress they experience from raising a child, or children with ADHD. Studies have demonstrated that parents with children diagnosed with ADHD experience more stress than parents with children without ADHD. This has been found to lead to several problems, including health and financial struggles (Richard,2008). This current study investigated the coping techniques used by parents with children who are diagnosed with ADHD , and its effects on their children.

As perceived from the result of the present study that, there are a statistical significant differences pre-, immediate, and 3 weeks later post program assessments in relation to *the total of parental coping scale*. According to Lazarus and Folkman, (1984), parents coping depends firstly on the parents' appraisal of the situation of their child and the expected consequences for the family and the family members well-being (primary appraisal). Subsequently, parents will appraise the resources (external and interpersonal) available to cope with situation , also the effectiveness of the different resources and the expected outcomes after implementation of these resources (secondary appraisal).

According to Beresford, (2001), added that , parents will appraise the efficacy of external resources such as available services, the special education facilities for their child or opportunities for work. They will also appraise their personal resources and skills in handling the stress for themselves and their family. Based on this appraisal process, parents will apply specific problem – focused and emotion- focused strategies in coping with the situation and with their emotions.

Most of researches have been done on ADHD emphasis parents education or the importance of increase parents' awareness about the disorder, how to deal effectively with their children, which possible management available, including medication used, cognitive – behavioral program skills training program and school role.(Dyson, 2004; Van Berkum, 2006).

In the light of this fact (Andrea, 2008) stated that ,several intervention approaches are available. Knowing something about the various types of interventions makes it easier for families to choose a therapist that is right for their needs. The author recommends the use of psychotherapy which works to help people with ADHD to like and accept themselves despite their disorder. It does not address the symptoms or underlying causes of the disorder. In psychotherapy , patients talk with the therapist about upsetting thoughts and feelings, explore self- defeating patterns of behavior, and learn alternative ways to handle their emotions. As they talk , the therapist tries to help them understand how they can change or better cope with their disorder.

As indicated in the result of the current study , " *interaction with child subscale* " had a statistical significant difference between pre – immediate, and 3 weeks later post program assessments. Researches done indicated that parents who reported greater use of positive reframing as a coping strategy experienced less stress and reported fewer behavior problems in their child. This suggests the way in which parents interpret the challenges they encounter with their child has a significant impact on the satisfaction and stress they experience as parents. By learning to redefine stressful events in realistic and positive terms (i.e. as challenges to overcome rather than unsolvable problems),parents may find themselves feeling less stressed and more satisfied with their parenting. Of course, simply reframing one's situation without taking appropriate steps to actually improve things is unlikely to result in any long – term positive change. It may , however, be an important part of the process.(Salem, 2006)

In relation to "Interaction with the spouse " sub scale revealed a statistical significant difference between pre-immediate, and 3 weeks later post program assessments. This result is supported by (Krulik, Kanematsu and Swan, 2003) who described that, personal and family life is profoundly affected by the diagnosis of chronic illness in a young child , within a short time after the diagnosis , families must initiate a number of substantive change in family structure and function, including a possible redistribution of roles and responsibilities for some family members. Depending on illness severity, family members also may be required to become intensely involved in the care of the child. The parental dyad is responsible for making these changes and in seeing that structural and functional alterations promote long- term health for family members. Parental stress, an emotional response experienced by both parents, resulting from the stressors associated with the child's chronic illness, can occur concomitantly or as a consequence of these dramatic changes .

As regard "information support subscale", statistically highly significant difference ($p < .001$) was found between pre-, immediate, and 3 weeks later post program assessments. This result is consistent with the study of (Salem, 2006) who found that a comprehensive assessment by a team of professionals working in conjunction with the parents and the child . Members of this assessment team usually include physician , psychologists, social workers, and school personnel such as teachers, guidance counselors, learning specialists. If a diagnosis of ADHD is established, treatment planning should be done in all areas where intervention are recommended. The physician may discuss appropriate medical interventions with the child and parents . The psychologist or other mental health professionals may discuss counseling, behavior modification, or social and organizational skills training options . The school may set up classroom interventions to accommodate the child's areas of need in school or may provide special education or related services.

In relation to "parent struggling sub scale" result of the present study indicates that, there were not a statistical significant differences between pre- immediate, and 3 weeks later post program assessments . This results was contradicted with (Harpin, 2005) who found that special struggle is needed by mother with ADHD child .The mother said "deciding to put my child on medication was very difficult". The mother's complain was "my child was aggressive, couldn't play with other children, would become easily over stimulated, and couldn't wind down'. In fact, the mother felt guilty about medicating her son. But after several meetings with a pediatrician, psychologist, neurologist, and neuro psychiatrist, she changed her view :"I realized that he's a child with a disability. He needs something to help him focus and control his explosiveness so he can be a successful person".

The result of the present study reveals that there were a statistical significant relationship between parents psychosocial problems and coping used by them between pre- immediate, and 3 weeks later post program assessments(it was noticed that while the psychosocial problems reduced, the coping was increased). This result was supported by (Biederman, 2005), who found that , parenting a child with ADHD often brings special challenges. Kids with ADHD may not respond well to typical parenting practices. Also because ADHD tends to run in families, parents may also have some problems with organization and consistency themselves and need active coaching to help learn these skills. In addition, experts recommend parents education and support groups to help family members accept the diagnosis and to teach them how to help kids organize their environment, develop problem- solving skills, and cope with frustrations. Training can also teach parents to respond appropriately to a child's most trying behaviors with calm disciplining techniques. Individual or family counseling can also be helpful. In addition, (Lange et al., 2005) pointed out that a diagnosis of ADHD can exert a considerable amount of stress on family members, which often results in a significant amount of familial tension or number of relational problems. Indeed, parents of children with ADHD experience greater parenting stress than parents of children without ADHD. Parents of children with ADHD also report less helpful social support and having fewer outside resources may increase the family burden of effectively overcoming the child's disruptive behaviors.

CONCULSION

Health education program enhances parents' coping toward their children with Attention Deficit Hyperactivity Disorder (ADHD).

Recommendations

From the results of the present study, it can be concluded that :

Necessity of collaboration between health team, parents, and school members for early recognition, assessment and management of ADHD , this can redirect the educational and psychosocial development of most children with ADHD.

Further research are needed to measure feasibility of school team help if they aware by the disorder and if they aware of the best way in managing these type of children.

The importance of increase the awareness of illness by health care professionals through counseling, family therapy, free workshops for parents because they are really in need.

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