

Efficacy of Mindfulness-Based Intervention to Raise the Awareness of Caregivers of Children with Autism Spectrum Disorder in Al-Nasiriya City

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Abstract

Background: Autism spectrum disorder ASD This disorder combines organic disease with behavioral disorder, and appears in children at an early age and affects the work of the digestive system, the immune system, endocrine stock and other parts of the body, according to the severity of the injury, which is not similar from one child to another, so its toxicity a broad spectrum.

Objectives: The main objective of this study is to determine the effect-iveness of an intervention based on the efficiency of complete mental focus to raise awareness of child care activities with autism spectrum disorder.

Methodology: A quasi-experimental study was conducted at Thi Qar Autism Center in the city of Nasiriya. From 27th October, 2019 to August 15, 2020.

Results: The results of the study indicate that there are differences with the high test between the previous and post-test in the experimental group (the study group) in the main general axes with regard to improving the efficiency of mental focus and thus raising awareness of health caregivers for children with autism spectrum disorder.

Also preparing the study results that the knowledge of the caregiver for the pre-test was not significant for the study group and the control group, Table (4-7) shows that the pre-test and post- test of the control groups are approximately equal ($M = 1.7$) while the pre and post-test study group scores are higher ($M = 1.36$) and ($M = 2.92$). Also this table show statistically significant differences between pre and post-test for study group at $P < 0.05$, which mean effectiveness of mindfulness-based intervention to raise the awareness of caregivers of children with autism spectrum disorder among the two period.

Keywords---Efficacy, Mindfulness-Based Intervention , Raise the Awareness.

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I. Introduction

Autism spectrum disorder (ASD), is recognized by the World Health Organization as a growing global public health concern and may represent some of the greatest burden of disease in children and adolescents ⁽¹⁾.

Autism Spectrum Disorder ASD is a general term for a group of complex disorders of brain development. The word "autism" comes from the Greek word "autos," which means "self." It describes conditions in which a person is an "isolated self". It is generally characterized by difficulty in social interaction and verbal, nonverbal and frequent motor interaction, ASD sometimes is accompanied by intellectual disability and physical health problems such as sleep and digestive disorders ⁽²⁾.

Autism is a mysterious disorder; there is little understanding of its cause, what causes Autism? A short time ago, the only sentence that "there is no idea." Fortunately, the researchers are recently starting to deliver the answers, now the present understanding that there is not a single cause for autism; and know that there are multiple types of autism ⁽³⁾.

Caregivers is an amazingly complex, exhausting, responsible, and at times unrewarding job, yet is accomplished by most of humanity with dedication, pleasure, and love. While caregivers' is a challenging task in general, it can be further complicated by child or parent difficulties such as mental disorders in the child as well as in the parent, and their interaction ⁽⁴⁾.

Mindfulness is a training program for a set of skills, cognitive, mental and behavioral therapies for treating individuals who have social problems. It combines training, meditation and psychological education, and it aims to help individuals increase awareness ⁽⁵⁾.

Caregivers' mindfulness training has an indirect effect on children as shown by reductions in behavioral problems of their children with ASD ⁽⁶⁾.

Standard yoga and mindfulness instructions, Yoga is a purify-ation of the mind and an exercise for the body Yoga originated in India. The word yoga means in ancient Sanskrit "control" or "monotheism." For yoga, then after a spiritual and physical dimension, it is a physical exercise, but also a spiritual training, and this increases the benefits of exercising⁽⁷⁾.

Autism advocates fail to understand the difficulties of parents with few socioeconomic resources. This study argues that scholars and local disability advocates need to pay closer attention to local particularities, including cultural histories of parenting, as well as the complex interactions between disability and social and economic inequalities, so as to better comprehend and address the immediate, existential, and long- range challenges which parents with little social capital face in managing autism⁽⁸⁾.

II. Methodology

2.1.Ethical consideration

First, the researcher meets with caregivers' each one alone and explained the purpose of the study before participation, and obtained oral consent from every caregivers before collection the data.

2.2Design and setting of study

The research is a quasi-experimental design (Two-group Pre-test Post-test) This study started from 27th October, 2019 to 15th August 2020 in order to achieve the objectives of the study. The study was conducted in Thi-Qar Autism Center in Al-Nasiriya city, this is center the only center in the province contains caregivers for children with ASD and children with autism.

2.3.Instrument of study

The tool designed by the researcher and supervisor based on presence literature was used to collect data and measure the variable at the level of awareness of caregivers for children with autism spectrum disorder in the Thi-Qar Autism Center in Al-Nasiriya city. The final study tool consists of three parts: The first part relates to the demographic variables of caregivers, and the second part relates to information on defining the concept of autism spectrum disorder and the causes, diagnosis and treatment Part Three: It relates to the efficiency of mindfulness, distraction, attention and what are the methods that increase from mental focus .

2.4. Statistical Analysis

Data will be analyzed using the statistical package for social science (SPSS), version 24.0, using the statistical measures of frequency, percent, mean, standard deviation, paired-sample t-test, and independent-sample t-test.

III. Resluts and discussion

3.1.Part I: Discussion of Caregivers' Socio-Demographic Characteristics:

Table (4-1): The sample of the study included sixty caregivers (30 in the study and 30 in the control group), this sample is close to that gathered by (Singh et al., 2019)⁽⁹⁾ who stated that the sample of his study was ninety four (47 in the study and 47 in the control group). Caregivers' ages ranged from 20 to more than 50 years old. This result is close to that by (Zhou et al., 2018)⁽¹⁰⁾ who mentioned that the ages of their sample were ranged from 21 to 47 years old. Also, (Dardas and Ahmad, 2013)⁽¹¹⁾ stated that the ages of their sample were from 21 to 57 years old for mothers and from 25-69 years old for fathers. The sample of the study included thirteen males and forty-seven females. This result agrees with that by (Rayan and Ahmad, 2016)⁽¹²⁾ who noted that the females (73) in their sample were outnumbered the males (31). Researcher by the main reason for the outnumbered of the females in the sample

is that the males were at work during the day time, also the females in our society considered the primary caregivers for children.

Concerning caregiver related, (68%) of them were mothers, and as the researcher mentioned before the females in our society considered the primary caregiver and the mothers are considered the first one who in charge of children. More than (70%) of caregivers live in urban areas and only (28%) of them lives in rural areas. This result is similar to that by (Zhou et al., 2018)(10) who noted that more than (83%) of their sample were living in urban areas and only (17%) were living in rural areas.

Regarding the educational level of caregivers, (23%) of them were graduated from an institute followed by (21%) graduated from an intermediate school, and the other classes come after. (25%) of fathers were having a preparatory school certificate, as well as (25%) of them, were having an institute certificate, and the other educational levels come after. (18%) of mothers were having a primary school certificate, as well as (18%) of them, were having a preparatory school certificate, and the other educational levels come after. This result disagrees with that mentioned by (Mohsin and Abed Neamah, 2019)⁽¹³⁾ whose their study sample had shown (26%) of both fathers and mothers could read and write only without having a school certificate.

More than (80%) of fathers and mothers were living together. This result agrees with that by (Dardas and Ahmad, 2014)⁽¹¹⁾ as the percentage of fathers and mothers who living together was (97.1%). More than (60%) of fathers were employed, and more than (40%) of families having a monthly income between 600-900 thousand Iraqi dinars. This result agrees with that by (Rayan and Ahmad 2016)⁽¹²⁾ who stated that more than (30%) of their sample was having a monthly income between (425-705) dollars.

3.2.Part II: Discussion of Children Socio-Demographic Characteristics:

Table (6-2): The study sample included sixty children (30 in the study and 30 the control group). (31%) of them their ages between five to six years old followed by (30%) of them their ages between seven to eight years old, while the other group of ages come after. This result disagrees with that by (Mohsin and Abed Neamah, 2019)⁽¹³⁾ as they mentioned that their sample included seventy-two children with ages between two-four years old. (61%) of the children in the sample were males and only (38%) were females. This result in line with that by (Chaaya, Saab, Maalouf, & Boustany 2015)⁽¹⁴⁾ as they stated that more than half (53.9 %) of their sample were males. Researcher by because these ages are the ones in the Autism Center, and the interest of parents in this period is greater than in other periods because when their age increases, the rate of recovery is weak, they may be their last chance for recovery, so they rush to the Autism Center. Scientifically, autism affects every three males and one female, and this is the reason for the genetic characteristics of the chromosomes.

Regarding the child sequence between the brothers, (43%) of them were the second child in the family followed by (41%) of them were the first child, while the other orders come after. This result disagrees with that by (Chaaya et al., 2015)⁽¹⁴⁾ as they noted that more than half (57.9%) of children in their sample were the first child in the family and only (33%) of them were the second child in the family.

The duration of diagnosis, (35%) of children were having a duration between three to four years, followed by (30%) of them were having a duration between five-six years, and the other classes come after. This result close to that by (Al- Shimery et al., 2010)⁽¹⁵⁾ who noted that (21%) of children in their sample were having a duration between

four to five years old followed by (18%) having a duration between six to seven years old, and the other classes come after.

Concerning having another child with autism, more than (93%) of families had no other child with autism and only (6%) of them were having another child with autism. (85%) of children living with their parents and only (15%) living with their grandfathers, grandmothers, uncles, and aunts. This result agrees with that by (Tawfeeq, Mukhaiser, & Al-Hemiary, 2016)⁽¹⁶⁾ who reported that (70%) of families that included in their study had no another child with autism, also (92%) of children in their sample were living with their parents and only (8%) of them living with the other members of the family.

3.3.III:Part VI: Discussion of Distribution and Association Between Efficacy of Mindfulness-Based Intervention to Raise the Awareness of Caregivers and Sociodemographic Variables:

According to the result of the table (6-3), there was no association between the age of caregivers and their awareness that acquired from the mindfulness-based intervention. This result agrees with that by (Paller et al., 2014)⁽¹⁷⁾ as they noted, there was no relationship between the age of caregivers and their awareness. Researcher by this result can be explained in terms of constructing the intervention, as the intervention was constructed to suit all ages, taking into account the age differences between the caregivers, and because of this, most likely the result has shown no significant association

Concerning the table (6-4), there was no association between the caregivers' awareness and their gender. This result agrees with that by (Wang et al., 2011)⁽¹⁸⁾ stated that there was no association between the caregivers' awareness and their gender. A possible reason for this result may be that the awareness did not differ between the males and females with respect to autism spectrum disorder.

IV. Conclusions

The study concluded the effectiveness of an intervention based on the efficiency of complete mental focus to raise awareness and health care for children with autism spectrum disorder was positive and at a high level.

V. Recommendations

This study recommended applying the program to a large number of the population (the national level) to generalize the results and improve the overall mental efficiency to raise awareness of care in the Thi Qar Autism

Center in the city of Nasiriya. The researcher also recommended the need to encourage care activities to continue reading and follow up on the latest methods and programs that raise the efficiency of mental focus and participate in lectures and courses that develop from personal capabilities and human development courses.

Table (6-1): Distribution of the Study Sample by Socio- Demographic for Caregivers of Children with Autism Spectrum Disorder, No =60 Caregivers

Basic Information	Groups	Study group		Control group		Total Sample	
		F	%	F	%	F	%
Caregiver Age Groups	20-29	5	16.7	4	13.3	9	15.0
	30-39	18	60.0	15	50.0	33	55.0
	40-49	5	16.7	9	30.0	14	23.3
	50 and more	2	6.7	2	6.7	4	6.7
	Total	30	100.0	30	100.0	60	100.0
Gender	Male	6	20.0	7	23.3	13	21.7
	Female	24	80.0	23	76.7	47	78.3
	Total	30	100.0	30	100.0	60	100.0
Caregiver related	Father	2	6.7	6	20.0	8	13.3
	Mother	21	70.0	20	66.7	41	68.3
	Aunt	2	6.7	0	0	2	3.3
	Grandmother	1	3.3	1	3.3	2	3.3
	Uncle	3	10.0	2	6.7	5	8.3
	Other	1	3.3	1	3.3	2	3.3

	Total	30	100.0	30	100.0	60	100.0
Residence	Urban	23	76.7	20	33.3	43	71.6
	Rural	7	23.3	10	66.7	17	28.4
	Total	30	100.0	30	100.0	60	100.0
Educational Level of caregiver	Do not read and write	1	3.3	1	3.3	2	3.3
	read and write	1	3.3	3	10.0	4	6.7
	Primary	5	16.7	5	16.7	10	16.6
	Intermediate	9	30.0	4	13.3	13	21.7
	Secondary	2	6.7	4	13.3	6	10
	Institute	7	23.3	7	23.3	14	23.3
	College	4	13.3	5	16.7	9	15.0
	Master	1	3.3	1	3.3	2	3.3
	Total	30	100.0	30	100.0	60	100.0
Parent social status	Live Together	23	76.7	26	86.7	49	81.6
	Separated	3	10.0	2	6.7	5	8.3
	Father Deceased	1	3.3	1	3.3	2	3.3
	Mother Deceased	3	10.0	1	3.3	4	6.7
	Total	30	100.0	30	100.0	60	100.0
Educational level of Father	Read and write	5	16.7	5	16.7	10	16.6
	Primary	2	6.7	6	20.0	8	13.3

	Intermediate	7	23.3	4	13.3	11	18.3
	preparatory school	8	26.7	7	20.0	15	25
	Institute	7	23.3	8	26.7	15	25
	Master	1	3.3	0	0	1	1.6
	Total	30	100.0	30	100.0	60	100.0
	Continue to Table (4-1).....						
Educational level of Mather	Do not read and write	4	11.8	4	13.3	8	13.3
	read and write	3	10.0	4	13.3	7	11.6
	Primary	5	16.7	6	20.0	11	18.3
	Intermediate	5	16.7	7	20.0	12	20
	preparatory school	7	23.3	4	13.3	11	18.3
	Institute	4	13.3	3	10.0	7	11.6
	College	1	3.3	2	6.7	3	5
	master degree	1	3.3	0	0	1	1.6
	Total	30	100.0	30	100.0	60	100.0
Households' occupation of	Employed	21	70.0	18	60.0	39	65
	free worker	6	20.0	7	23.3	13	21.6
	house wife	2	6.7	3	10.0	5	8.3
	Retired	1	3.3	2	6.7	3	5
	Total	30	100.0	30	100.0	60	100.0

Monthly income	less than 300	1	3.3	1	3.3	2	3.3
	300-600	6	20.0	5	16.7	11	18.3
	601-900	12	40.0	13	44.3	25	41.6
	901-1200	7	20.6	9	30.0	16	26.6
	1,201,000-1,500,000	4	13.3	3	10.0	7	11.6
	Total	30	100.0	30	100.0	60	100.0

Freq=Frequencies, %=Percentages, NO = number of sample

Table (6-2): Distribution of The Study Sample by Socio-Demographic for Children with Autism, No.= 60 Child:

Child characteristics	Groups	Study group		Control group		Total Sample	
		F	%	F	%	F	%
Child age	(1-2)years	2	6.7	3	10.0	5	8.3
	(3-4)years	5	16.6	2	6.7	7	11.6
	(5-6) years	8	26.6	11	36.7	19	31.6
	(7-8) years	9	30.0	9	30.0	18	30.0
	(9-10) years	3	10.0	2	6.7	5	8.3
	(11-12) years	3	10.0	3	10.0	6	10.0
	Total	30	100.0	30	100.0	60	100.0
	$\bar{x} \pm S.D.$	\mp		\mp		\mp	

Gender of Child	Male	18	60.0	19	63.3	37	61.6
	Female	12	40.0	11	36.7	23	38.3
	Total	30	100.0	30	100.0	60	100.0
Child sequence between the brothers	First	13	43.3	12	40.0	25	41.1
	Second	12	40.0	14	45.1	26	43.3
	Third	3	10.0	3	10.0	6	10.0
	Fourth	2	6.7	1	3.3	3	5.0
	Total	30	100.0	30	100.0	60	100.0
Duration of diagnosis of children	(1-2) years	6	20.0	4	13.3	10	16.6
	(3-4) years	10	33.3	11	36.6	21	35.0
	(5-6) years	9	30.0	9	30.0	18	30.0
	(7-8) years	2	6.7	2	6.7	4	6.6
	(9-10) years	3	10.0	4	13.3	7	11.6
	Total	30	100.0	30	100.0	60	100.0
Is the family had a child with autism spectrum disorder before this child:	Yes	2	6.7	2	6.7	4	6.6
	No	28	93.3	28	93.3	56	93.3
	Total	30	100.0	30	100.0	60	100.0
Is child live with his parents	Yes	24	76.7	27	90.0	51	85.0
	No	6	20.0	3	10.0	9	15.0

	Total	30	100.0	30	100.0	60	100.0
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F=Frequencies, %=Percentages, NO = number of sample

Table (6-3): Efficacy of Mindfulness-Based Intervention to Raise the Awareness of Caregivers of Children with Autism Spectrum Disorder Among the Two Period (Pre, Post-test) of the Study and Control Group.

Period	Groups	N	Total Mean	SD	P-Value	Sig.
Pretest	Control	30	1.678	0.03851	0.094	NS
Posttest	Control	30	1.755	0.03478		
Pretest	Study	30	1.369	0.17070	0.026	S
Posttest	Study	30	2.920	0.06297		

N=number, SD=standard deviation, , P = probability value. , NS : Non Significant at $P \geq 0.05$, S : Significant at $P < 0.05$

Table (6-4): Distribution and Association Between Efficacy of Mindfulness-Based Intervention to Raise the Awareness of Caregivers of Children with Autism Spectrum Disorder and Gender of Caregiver:

Efficacy of Mindfulness-Based Intervention Gender of Caregiver	No.	Pre-test Mean \pm S.D.	Post-test Mean \pm S.D.

Male	7	1.3095±0.21599	2.8902 ±0.11300
Female	23	1.3877±0.15556	2.9297 ±0.03691
Total	30	1.3694 ±0.17070	2.9205 ± 0.06297
		F =1.130 d.f.=29 P =0.297	F =2.201 d.f.= P =0.149

$\bar{x} \pm S.D.$ = Arithmetic Mean (\bar{x} and Std. Dev. = (S.D.), No. = Number of frequencies, F = Fisher test ,
d.f. = degree of freedom, P = probability value.

test , d.f. = degree of freedom, P = probability value.

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