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Research Article

Attention Deficit Hyperactivity Disorder And Its Relationship To Risk-Taking Behavior Among Adolescents With ADHD During The Covid-19 Pandemic

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ABSTRACT

The paper aims at studying the level of risk-taking behavior among adolescents with ADHD in East Jerusalem. It is of interest of this paper to study the nature of the dimensions of measures of attention deficit hyperactivity disorder, and risk-taking behavior. The sample of the study consisted of a total number of (55) adolescents who are suffering from ADHD in East Jerusalem during the academic year 2020/2021. The study used two measures: attention deficit hyperactivity disorder and risk-taking behavior. The results concluded that the level of attention deficit hyperactivity disorder is high, reaching 13%, as well as the level of risk-taking behavior, which reached 29%. Another promising finding also found a statistically significant correlation between attention deficit hyperactivity disorder and risk-taking behavior. The results also concluded that there were no statistically significant differences between the average responses of the study sample members on the total scale and the sub-dimensions of the ADHD scale due to gender, age, and educational level. The results also concluded that there were no statistically significant differences between the average responses of the study sample members on the overall scale and the sub-dimensions of the risk-taking behavior scale due to age and educational level, while there were differences due to gender in favor of females.

Keywords: Attention deficit hyperactivity disorder; ADHD; risk-taking behavior; adolescents; COVID-19 Pandemic.

1.Introduction

The effect of covid-19 has affected many life aspects of children and their guardians. Children's lives have been affected significantly by asking them to stay at home and follow online classes and social distance guidelines. A recent study carried out by Patrick et al. (2020) revealed that there is a percentage of 14% of parents reported a few health issues regarding their children in June 2020. This is to say, the physical and behavioral health of their children decreased significantly compared to March 2020.

This paper does not ignore the fact that all teens suffer from stress every now and then, especially those with neurodevelopmental conditions. To illustrate, children with attention-deficit i. e. hyperactivity disorder (ADHD). The results of Latzer et al. (2021) proved that children who are categorized as ADHD were found to face more frequent problems during the pandemic. The study of Lazter is in line with a previous study conducted by Courtenay and Perera (2020). Their study found that people who suffer from intellectual disability might be preoccupied with epidemiological information because of increasing anxiety.

Interesting studies completed by Brooks et al. (2020) and Patrick et al. (2020) shed light on the effect of Covid-19 on adolescents. The results found that the Covid-19 pandemic has clearly affected both adolescents and their guardians negatively. Furthermore, the results pointed out that there were increased incidences of PTSD symptoms among them.

Serious problems have been reported by families who have ADHD children at home. They mentioned that they have less access to health mental centers and were unable to cope with the new teaching system through online mode (McGowan et al., 2020). E-learning has become the most powerful tool of ensure the education of children. However, both teachers and students were not ready for such an event. Therefore, many issues were addressed by parents during the pandemic since they were unable to use the learning platforms effectively and submit the homework by the deadline (Abo Mokh et al., 2021). Moreover, schools shut down have caused to increase in the number of parents suffering from stress, child abuse, and violence against children (Cluver et al., 2020).

1.2Aim of the study

The optional aim of this study is to study the relationship between attention deficit hyperactivity disorder and risk-taking behavior among adolescents with ADHD in the Arab community in East Jerusalem.

1.3Questions of the study

This study aims to answer the following main question:

1- What is the relationship between attention deficit hyperactivity disorder and risk-taking behavior among adolescents with ADHD in the Arab community in East Jerusalem?
2- What is the level of attention deficit hyperactivity disorder among adolescents with this disorder in the Arab community in East Jerusalem?
3- What is the level of risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem?

The researchers also tried to answer these sub-questions:

4- Is there a statistically significant relationship between attention deficit hyperactivity disorder and risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem?
5- Are there statistically significant differences in the level of attention deficit hyperactivity disorder among adolescents with this disorder in the Arab community in East Jerusalem due to the variables of gender, age, and educational level?
6- Are there statistically significant differences in the level of risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem due to the variables of gender, age, and educational level?

1.4Study Hypothesis

1. There is no statistically significant relationship between attention deficit hyperactivity disorder and risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem.
2. There are no statistically significant differences in the level of attention deficit hyperactivity disorder among adolescents with this disorder in the Arab community in East Jerusalem due to the variables of gender, age, and educational level.
3. There are no statistically significant differences in the level of risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem due to the variables of gender, age, and educational level.

2. Literature Review

2.1 Studies related to ADHD

Research on ADHD has a long tradition. It is simply defined as an acute bodily motor activity that exists in a child and lasts for life. The main effect of ADHD is that the child cannot control his movements and attention and spends most of his time in continuous movement. In most cases, this phenomenon accompanies other problems such as brain injuries, and psychological problems. This behavior often appears between the ages of 4 and 15 (Khawla, Ahmed, 2008).

Seminal contributions have been made by Wang et al. (2021). Wang stated that children with ADHD have a higher chance to get affected by the Covid-19 virus. This is to say, not wearing masks in public and not following social distancing rules might increase the chance to get affected by the virus.

Several studies (Shur-Fen gay, 2007) conducted before the schools shut down found that individuals with ADHD are more likely to encounter problems in dealing with guardians. The studies also found that individuals with ADHD face tremendous problems in their academic learning, planning, and time management with their mates without ADHD (Evans, 2020).

Other studies reviled that during the Covid-19 pandemic, individuals with ADHD experienced less activity routine. For example, they were sleeping more but the quality of their sleeping is affected because they were not following the correct timings of sleeping. In addition, they had problems in dealing with e-learning and using the learning platforms correctly as well as using the smartphones increased significantly (Zhang et al., 2020; Bruni et al., 2021; Becker, 2020; Sciberras et al., 2022).

It is worth mentioning that individuals with ADHD before Covid-19 are used to having many symptoms compared with individuals without ADHD during the pandemic. These symptoms are mainly conducted disorder, oppositional defiant, and emotional dysregulation (Factor et al., 2016). A series of recent studies have also indicated that individuals with ADHD are expected to have symptoms such as inattention, hyperactivity,

impulsivity, opposition defiance, anger, and depression (Zhang et al., 2020; Breaux et al., 2021; Sciberras et al., 2022).

2.2 Studies related to Covid-19 Pandemic

The new viral virus Covid-19 has forced people to change the way they live all over the world. It has officially been announced that Covid-19 is a pandemic by the World Health Organization (WHO). One of the main challenges that teachers faced is changing their teaching style from the traditional way of teaching to e-learning. All countries around the world had considered the Covid-19 as a major threat to both health and the economy. The aforementioned have affected people's psychology. They suffered from stress, depression, and anxiety. Studies from China have shown that children from three to seventeen years old had suffered from the Covid-19 effects as well (Shen et., 2020).

Most educational institutions that have previously shied away from e-learning have been forced to use this mode of learning since they have no other options. E-learning has proved itself worthy as an effective way of learning during the pandemic (Farooq et al., 2020).

The pandemic has brought significant disruptions around the world and necessitated rapid and lasting changes in the lives of all people of all ages, including families and children (Patrick et al., 2020).

2.3 Studies related to risk-taking behavior

Most early studies, as well as current work, focus on risk-taking behavior. Irwin (1990) and Pat- Horenczy; et al. (2007) defined it as a voluntary behavior whose consequences are uncertain or expected and there is a possibility of negative consequences on its impact. Risk-taking behavior suggests that adolescents get themselves exposed and get into fights, drinking alcohol, smoking, theft acts, and so forth.

Other studies defined risk-taking behavior as integration into behaviors that significantly deviate individuals from the socially accepted norms in their culture. These behaviors which has far-reaching effects on the social, psychological, health and psychological aspects of the individual (Gullone, et al, 2000).

In a study conducted by Zimak (2008) on risk-taking and impulsive behavior among people with ADHD. The study tested the differences in risk-taking behavior and personal characteristics of the children sample. The study assumed that these sufferers have a high risk-taking behavior. The sample consisted of 78 undergraduate students from Ohio University, who were subjected to a demographic information form, an ADHD symptom list, and a subjective scale of risk-taking behavior. Results clearly showed that ADHD individuals are expected to take risks in more than two dimensions of this behavior. The study also reviled that they have different personal characteristics from the characteristics of other individuals.

Previous work was conducted by Kendal et al. (2003) found that there is a clear relationship between individuals with ADHD and risk-taking behavior. This is to say, it is an important factor in understanding the risk-taking behavior of adolescents with ADHD and works to explain the problems that adolescents with ADHD may develop, such as cognitive problems and perceptual learning. Based on the foregoing, they have to deal with more emotional, social, and behavioral problems and difficulties than boys without the disorder.

2.4 Studies related to adolescents

The word "adolescence" is derived from the Latin verb adolescere, which means gradation towards physical, sexual, mental, emotional, and social maturity (Zaidan, Mansour, 1982). During this period, the adolescent undergoes major changes and severe disturbances in all aspects of his physical, mental, social, and emotional development. These changes result in multiple problems that require guidance. By relying on these guidelines, the adolescent can overcome these problems and grow in a natural way (Ibrahim, 1981).

There exists a considerable body of literature on ADHD by Bron et al. (2017). Bron et al. believed that adolescents with ADHD drive in a reckless way. The study sample consisted of 330 individuals with ADHD and the same without ADHD. A self-report questionnaire was used in this study. The results revealed that individuals with ADHD are expected to drive in a dangerous way. In addition, the results also showed a clear effect of high levels of anxiety and hostility in adults with ADHD on unsafe driving behaviors.

2.5 Research Gap

Most of the studies in this field examined the issue of decision-making and the degree of risk taken by adolescents with ADHD when performing behavioral tasks. However, few studies examined how these adolescents perceive the disorder as a factor for limiting risky behavior in Arab society in general and the teenage community in particular. In this study, the researchers attempted to examine ADHD and its relationship to risk-taking behavior among adolescents with ADHD in the Arab community in East Jerusalem. The researchers assumed that there is a positive relationship between ADHD and risk-taking behavior in adolescents. Adolescents with the disorder have a higher level of risky behavior and reported more exposure to risk, more risk unawareness, and a lower level of benefit awareness and awareness of risk behavior.

3.Methodology

3.1Study Approach

In this study, the researchers used the descriptive approach, through which they try to describe the phenomenon, analyze its data, and indicate the relationship between its components, and the effects it causes. This approach fits with the perspectives of the research goals Abuhamda (2021).

3.2 Participants

The study population consists of all 1983 adolescent students who suffer from ADHD in East Jerusalem during the 2020/2021 school year, according to the municipality's knowledge department.

3.3 The study samples

The study sample consisted of (55) adolescents from school students in East Jerusalem during the academic year 2020/2021, they were selected in a simple random way because they form part of the adolescents suffering from ADHD, aged between 19 and 12 years old. The Attention Deficit Hyperactivity Disorder Scale and the Risk-taking Behavior Scale were applied to them.

Table (1) *shows the distribution of the sample members according to the study variables*:

variable	Statement	the number	percentage
sex	male	7	%11
	female	48	%88
	the total	55	%100
the age	less than 12-15	40	%72
	less than 17-15	8	%15
	17-19	7	%15
	the total	55	%100
Academic level	primary	3	%6
	Middle school	40	%73
	High school	12	%21
	the total	55	%100

3.4Tools of data collection

The study used two tools:

3.4.1 *First: The Attention Deficit Hyperactivity Disorder Scale*

After reviewing the studies and measures related to the subject of the study, a scale for ADHD was built by the researchers. Description of the scale:

The scale consists of (43) items distributed on (3) dimensions, which are:

1. Symptoms of Attention Deficit Hyperactivity Disorder It includes (15) paragraphs, which are from 1-to 15.
2. Symptoms of hyperactivity include (15) paragraphs, which are from 16-to 30 years old.
3. Impulsive symptoms and includes (13) paragraphs, which are from 31to 43 years old.

Scale correction

The scale is corrected according to a hexagonal gradual scale, which is: Applies with a degree (very high, large, medium, low, very low, not applicable) that takes grades (6, 5, 4, 3, 2, 1) respectively.

Validity of the scale

To ensure the validity of the scale and its validity to measure what it was developed for, the validity was measured through the following:

The validity of the arbitrators

The researchers presented the scale to (3) arbitrators specialized in special education and linguistic research, in order to ensure that the paragraphs of the scale are honest and measured everything that was designed to measure. It also aimed to obtain their observations and opinions about the clarity of the wording of the paragraphs and their consistency with the study sample, and the clarity of instructions. The term has been replaced by another more linguistically appropriate term, and a degree in the scale has been increased. The paragraphs approved by the arbitrators (98%) were adopted and the scale is ready for application.

Construction validity

The scale was applied to an exploratory sample consisting of (30) adolescents from outside the study sample, and the correlation coefficient was calculated between the degree of each paragraph with the total score of the scale, and all correlation coefficients were a statistical function and this confirms that the scale has a high degree of internal consistency The following tables explain this in details. Study table (2):

Table (2)

Sig. (2-tailed)	Person Corr-elation	question number	Dimension	Sig. (2-tailed)	Person Corr-elation	question number	Symptoms of hyperactivity dimension	Sig. (2-tailed)	Person Corr-elation	question number	Attention deficit hyperactivity disorder dimension
0.000	.753**	30	Impulsive symptoms	0.000	.747**	16		0.000	.681**	1	
0.000	.641**	31		0.000	.646**	17		0.000	.541**	2	
0.000	.632**	32		0.000	.615**	18		0.000	.790**	3	
0.000	.724**	33		0.000	.812**	19		0.000	.691**	4	
0.000	.547**	34		0.000	.734**	20		0.000	.685**	5	
0.000	.827**	35		0.000	.669**	21		0.000	.482**	6	
0.000	.707**	36		0.000	.460**	22		0.000	.603**	7	
0.000	.658**	37		0.000	.663**	23		0.000	.675**	8	
0.000	.603**	38		0.003	.397**	24		0.000	.653**	9	
0.000	.627**	39		0.000	.748**	25		0.000	.664**	10	
0.000	.720**	40		0.000	.794**	26		0.000	.574**	11	
0.001	.440**	41		0.000	.770**	27		0.000	.742**	12	
0.000	.617**	42		0.000	.831**	28		0.000	.626**	13	
				0.000	.758**	29		0.022	.309*	14	
								0.182	0.183	15	

Tables (2) shows the correlation coefficient between the score of each paragraph and the total score of the disorder scale

Table No. (3): The relationship between the first dimension and the other dimensions of the scale

		Attention deficit hyperactivity disorder	Symptoms of hyperactivity	Impulsive symptoms
ADHD Attention deficit hyperactivity disorder scale	Pearson Correlation	.648**	.797**	.784**
	Sig. (2-tailed)	0.000	0.000	0.000
	N	55	55	55

It is clear from the above table the relationship between the first dimension and the other dimensions of the same scale. The results indicate that there is a correlation between the dimensions of the same scale for ADHD.

Reliability

To ensure the stability of the scale, the stability was measured by the following methods

Stability by the Cronbach's alpha method

The stability of the scale as a whole, and its components, was calculated using Cronbach's alpha coefficient, and the reliability coefficient reached (0.944). This degree indicates a high degree of stability, and therefore the validity of using the scale, and the following table shows that:

Table No. (4)

Cronbach's Alpha	N of Items
.944	42

Table (4) shows the stability values according to Cronbach's alpha

Stability by the split-half method

The correlation coefficient was calculated between the degree of response on the first half of the scale, and the degree of response on the second half of the scale by comparing the odd and even columns, and the reliability coefficient was (0.724). This indicates that the scale enjoys a high degree of stability, and the table The following explains it:

Table No. (5):

Cronbach's Alpha	Part 1	Value	.917
		N of Items	21
	Part 2	Value	.926
		N of Items	21
	Total N of Items		42
Correlation Between Forms			.568
Spearman-Brown Coefficient	Equal Length		.725
	Unequal Length		.725
Guttman Split-Half Coefficient			.724

Table (5) shows the scale stability by half-segmentation method

3.4.2 Second method: The risk behavior scale

The study used the risk-taking behavior scale prepared by Skaar, Nicole. Renee (2009).

Scale description

The scale consists of (28) items. The scale is corrected according to a five-step gradual scale, which is: (always, often, sometimes, rarely, never). Scores are taken (65, 4, 3, 2, 1) respectively.

The validity of the arbitrators

The researcher presented the scale to (3) arbitrators specialized in special education and linguistic research, in order to ensure that the paragraphs of the scale are honest and measure everything that was designed to measure, in addition to their observations and opinions about the clarity of the wording of the paragraphs and their consistency with the study sample, and the clarity of instructions. The degree has been increased on the scale of degrees. The paragraphs approved by the judges were approved (99%) and the scale was ready for application.

Construction validity

The scale was addressed to a total number of (30) adolescents from outside the study sample. The correlation coefficient between the scale items and the scale as a whole was calculated. All correlation coefficients between the scale items and the scale as a whole were a statistical function, and this confirms that the scale has a high degree of internal consistency, and the following table shows that.

Table No. (6)

Sig. (2-tailed)	Person Correlation	question number	Sig. (2-tailed)	Person Correlation	question number
0.003	.395**	.15	0.010	.345**	.1
0.001	.426**	.16	0.000	.701**	.2
0.000	.475**	.17	0.313	0.139	.3
0.000	.611**	.18	0.000	.717**	.4
0.000	.608**	.19	0.000	.500**	.5
0.000	.659**	.20	0.000	.591**	.6
0.000	.498**	.21	0.000	.737**	.7
0.010	.344*	.22	0.025	.302*	.8
0.000	.592**	.23	0.000	.592**	.9
0.000	.589**	.24	0.000	.626**	.10
0.000	.681**	.25	0.000	.517**	.11
0.012	.335*	.26	0.000	.524**	.12
0.007	.358**	.27	0.000	.593**	.13
0.000	.533**	.28	0.000	.600**	.14

Tables (6) shows the correlation coefficient between the scale items and the scale as a whole

Reliability

To ensure the stability of the scale, the stability was measured by the following methods:
Stability by the Cronbach's alpha method
The stability of the scale as a whole, and its components, was calculated using Cronbach's alpha coefficient, and the reliability coefficient reached (0.908). This degree indicates a high degree of stability, and therefore the validity of using the scale, and the following table shows that:

Table No. (7):

Cronbach's Alpha	N of Items
.908	28

Table (7) shows the stability values according to Cronbach's alpha

Stability by the split-half method: The correlation coefficient was calculated between the degree of response on the scale items, and the reliability coefficient reached (0.856). This indicates that the scale has a high degree of stability, and the following table shows that:

Table (8)

Cronbach's Alpha	Part 1	Value	.850
		N of Items	14
	Part 2	Value	.837
		N of Items	14
	Total N of Items		28
Correlation Between Forms			.754
Spearman-Brown Coefficient	Equal Length		.860
	Unequal Length		.860
Guttman split-half Coefficient			.856

Table (8) shows the scale stability by the split-half method

Statistical manipulations

In analyzing its data, the study relied on the following statistical methods: arithmetic averages, standard deviations, relative weight, Pearson correlation coefficient, Cronbach's alpha coefficient, Levi's test, and analysis of variance test.

4.Results

Results of the first question, which states: "What is the relationship between ADHD and risk-taking behavior among adolescents with ADHD in the Arab community in East Jerusalem?"
To answer this question, the researchers applied the Pearson test, using the SPSS statistical software package. Study the following table (9):

		ADHD Attention deficit hyperactivity disorder scale	Adolescent risk-taking behavior scale
ADHD Attention deficit hyperactivity disorder scale	Pearson Correlation	1	.612**
	Sig. (2-tailed)		0.000
	N	55	55
Adolescent risk-taking behavior scale	Pearson Correlation	.612**	1

Table No. (9) *shows the correlation coefficient between turbulence and risk-taking behavior*

It is noted from the table that a correlation coefficient of 0.612 at the level of significance of 0.01 which is less than 0.05. Thus, rejecting the null hypothesis, meaning that there is a statistically significant relationship between ADHD and risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem.

Results related to the second question are found in the following table:

Table (10)

Binomial Test						
		Category	**N**	**Observed Prop.**	**Test Prop.**	**Exact Sig. (2-tailed)**
ADHD Attention deficit hyperactivity disorder scale	Group 1	<= 3	48	.87	.50	.000
	Group 2	> 3	7	.13		
	Total		55	1.00		

Table (10) shows the level of ADHD in adolescents

It is clear from the above table and by looking at the responses of the study sample that 13% suffer from attention deficit hyperactivity. The results indicate that the level of ADHD.

In the results of the third question, the researchers applied the Binomial Test for non-parametric samples. Study the following table

Table (11)

Binomial Test						
		Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Adolescent risk-taking behavior scale	Group 1	<= 3	39	.71	.50	.003
	Group 2	> 3	16	.29		
	Total		55	1.00		

Table (11) shows the level of risk-taking behavior among adolescents

It is clear from the above table and in view of the responses of the study sample that 29% of those who are below risk behavior. The results also show that individuals with risk-taking behavior is high and have a statistical significance of 0.03.

Regarding the fourth question of the study, the researchers applied the Pearson test, using the SPSS statistical software package. Study the following table:

Table (12)

		ADHD Attention deficit hyperactivity disorder scale	**Adolescent risk-taking behavior scale**
Attention deficit hyperactivity ADHD disorder scale	Pearson Correlation	1	.612**
	Sig. (2-tailed)		0.000
	N	55	55
Adolescent risk-taking behavior scale	Pearson Correlation	.612**	1
	N	55	55

Table (12) shows the correlation coefficient between hyperactivity disorder and risk-taking behavior

Results from the table show that there is a statistically significant relationship (0.01) between the total score and the dimension of the disorder scare and risk-taking behavior scale among adolescents with disorder scale and the risk-taking behavior scale among adolescents with this disorder in the Arab community in East Jerusalem.

In the results of the fifth question, the researchers calculated the arithmetic averages and standard deviations according to the variables that were collected gender, age, and educational level. Study the following table:

Table (13)

T-TEST	**gender**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Attention deficit hyperactivity disorder scale ADHD	1	10	2.50	.850	.269
	2	45	2.84	.706	.105

Table (13) shows the difference in the level of turbulence is due to gender variables

It is noted that there are no statistically significant differences in the level of turbulence due to the gender variable, as it appears from the table that the number of males is equal to (10) with anarithmetic mean (2.5 and a standard deviation (0.850), and errors in the arithmetic mean (0.269), as well as females, their number (45) with mean (2.84), standard deviation (0.706) and mean errors (0.105). Because of the homogeneity between the variables, we tested Levini for two homogeneous samples and the following table shows that.

Table No. (14):

Attention deficit hyperactivity disorder scale gender		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ADHD	Equal variances assumed	1.192	0.280	-1.346	53	0.184	-0.344	0.256	-0.858	0.169
	Equal variances not assumed			-1.194	11.912	0.256	-0.344	0.289	-0.974	0.285

Table (14) shows arithmetic averages and standard deviations of the disorder scale according to the gender variable.

The results from the above table clearly show that the value is (1.129) with a significance of (0.280) and this value is higher than the significance level (0.05). These results assume that the variance of the two societies is homogeneous, and we will take the results of the application, specifically those in the first line because the value (0.280) is greater from (0.05), in which the t-test value is (-1.346) and with a degree of freedom of d f 53. The difference between the mean of the two samples is (-0.344). The standard error of this difference is (0.256) and since the value of Sig. (2-tailed) = (0.184), which is greater than the value (0.05), and therefore we accept the null hypothesis, that is, there are no statistically significant differences in the level of ADHD among adolescents with ADHD in the Arab community in East Jerusalem due to gender variables.

Table No. (15)

Age		Levene Statistic	df1	df2	Sig.
ADHD Attention deficit hyperactivity disorder scale	Based on Mean	1.400	2	52	.256
	Based on Median	1.330	2	52	.273
	Based on Median and with adjusted df	1.330	2	51.248	.274
	Based on trimmed mean	1.396	2	52	.257

Table (15) shows the difference in the level of turbulence is due to the variables of age

It is noted from the table that the value of the Levene Statistic test = 1.369 and the value of Sig. = 0.257, which is a value greater than 0.05. Therefore, it is found that there is homogeneity between the groups in terms of age.

Table (16):
One way anova_ Attention deficit hyperactivity disorder scale

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.790	2	.895	1.686	.195
Within Groups	27.592	52	.531		
Total	29.382	54			

Table (16) shows arithmetic averages and standard deviations of the turbulence scale according to a variable

It is noted from the results that the value of the analysis of variance test = (1.686) and the level of significance = (0.195), which is greater than (0.05), and this indicates the acceptance of the null hypothesis, that is, there are no statistically significant differences in the level of ADHD among adolescents with this disorder In the Arab society in East Jerusalem attributed to the variables of age.

Table (17)

educational level		Levene Statistic	df1	df2	Sig.
ADHD **Attention deficit hyperactivity disorder scale**	Based on Mean	.717	2	52	.493
	Based on Median	.175	2	52	.840
	Based on Median and with adjusted df	.175	2	47.537	.840
	Based on trimmed mean	.585	2	52	.561

Table (17) shows the difference in the level of turbulence is due to the variables of the educational level

It is clear from the above table that according to Levene's test, the value of Levene Statistic = (0.585) and the value of Sig appear. = (0.561), a value greater than (0.05), and therefore we conclude that there is homogeneity between the groups in terms of educational level.

Table (18)

One Way ANOVA Attention deficit hyperactivity disorder scale

educational level	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	1.549	2	.774	1.447	.245
Within Groups	27.833	52	.535		
Total	29.382	54			

Table (18) shows arithmetic averages and standard deviations of the disorder scale according to the educational level variable

It is clear from the above table that the value of the analysis of variance test = (1.447) and the level of significance = (0.245), which is greater than (0.05), and this indicates the acceptance of the null hypothesis, that is, there are no statistically significant differences in the level of ADHD among adolescents with this disorder In the Arab society in East Jerusalem, it is attributed to the variables of the educational level.
The results of the sixth question, the researcher calculated the arithmetic averages and standard deviations according to gender, age, and educational level. Study the following table:

Table (19)

T-TEST	**Gender**	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Adolescent Risk-taking Behavior Scale	1	10	2.80	1.135	.359
	2	45	3.31	.557	.083

Table (19) shows he difference in the level of risk-taking behavior is due to gender variables

Table. (20)

		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Adolescent Risk-taking Behavior Scale	**Equal variances assumed**	7.192	0.259	-2.118	53	0.039	-0.511	0.241	-0.995	-0.027
	Equal variances not assumed			-1.387	9.982	0.196	-0.511	0.368	-1.332	0.310

Table (20) the difference in the level of risk-taking behavior is due to gender variables

Results from the table show the value of Levini's test (7.192) with a significance (0.259) and this value is greater than the significance level (0.05), and this indicates that we can assume that the variance of the two societies is homogeneous, and therefore the null hypothesis is rejected, i.e. there are statistically significant differences

in the level of behavior The risk among adolescents with this disorder in the Arab community in East Jerusalem is due to gender variables.

Table (21)

Age		**Levene Statistic**	**df1**	**df2**	**Sig.**
Adolescent Risk-taking Behavior Scale	Based on Mean	2.592	2	52	.084
	Based on Median	1.334	2	52	.272
	Based on Median and with adjusted df	1.334	2	44.495	.274
	Based on trimmed mean	2.443	2	52	.097

Table (21) shows the difference in the level of risk-taking behavior is due to age variables

Results show the value of Levene Statistic = (2.443) and the value of Sig. = (0.097), a value greater than (0.05), and this indicates that there is homogeneity between groups due to the age variable.

Table No. (22)

One Way Anova. Adolescent Risk-taking Behavior Scale

Age	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	.972	2	.486	.956	.391
Within Groups	26.410	52	.508		
Total	27.382	54			

Table (22) shows arithmetic averages and standard deviations of the risk-taking behavior scale according to the age variable

It is clear from the above table that the value of the analysis of variance test = (0.956) and the level of significance = (0.391), which is greater than (0.05), and this indicates the acceptance of the null hypothesis, that is, there are no statistically significant differences in the level of risk-taking behavior among adolescents with this disorder in the Arab community In East Jerusalem, it is attributed to the variables of age.

Table (23)

educational level		Levene Statistic	df1	df2	Sig.
Adolescent Risk-taking Behavior Scale	Based on Mean	6.749	2	52	.002
	Based on Median	4.560	2	52	.015
	Based on Median and with adjusted df	4.560	2	34.870	.017
	Based on trimmed mean	6.700	2	52	.093

Table (23) shows the difference in the level of risk-taking behavior is due to the variables of the educational level

It is clear from the above table and according to Levene's test, which is the test of homogeneity between groups, the Levene Statistic = (6.7) and Sig value appear. = (0.093), a value greater than (0.05), and therefore we conclude that there is homogeneity between the groups due to the educational variable.

Table (24)

educational level	**Sum of Squares**	**Df**	**Mean Square**	**F**	**Sig.**
Between Groups	1.533	2	.766	1.542	.224
Within Groups	25.849	52	.497		
Total	27.382	54			

Table (24) arithmetic averages and standard deviations of the risk-taking behavior scale according to the educational level variable.

It is noted from the value of the analysis of variance test = (1.542) and the level of significance = (0.224), which is greater than (0.05), and this indicates the acceptance of the null hypothesis, that is, there are no statistically significant differences in the level of risk-taking behavior among adolescents with this disorder in the Arab community In East Jerusalem, it is attributed to the educational level variables.

5. Discussion and conclusion

From the above-mentioned analysis and results, this paper found that there is a close relationship between turbulence and risk-taking behavior. This behavior makes the adolescents take higher risk-taking behaviors.

This can be explained that the greater the symptoms of the disorder, the greater the tendency of adolescents to conduct risky behaviors. These results are consistent with what was confirmed by (Molina & Pelham, 2003) that the presence of risky behavior among young people and adolescents with ADHD at a higher level than boys without this disorder. However, the study (Zimak, 2008) confirms that people with the disorder are more inclined to take risks and have different personal characteristics. The foregoing was confirmed by (Molina & Pelham, 2003) that the presence of risky behavior among young people and adolescents with ADHD, and among adults who were diagnosed in their childhood with the disorder at a higher level than boys without this disorder.

The results also indicate that the level of attention deficit hyperactivity disorder is high. It has a statistical significance of 0.00. These results are consistent with the study (Manor, 2002), where the study confirms that ADHD is one of the popular disorders in adolescents and appears with difficulties in the ability to pay attention, impulsive behavior, and hyperactivity or hyperactivity. The disorder manifests itself at all stages of development and persists into adulthood. Its characteristics appear 80-50% during adulthood.

The paper also found that the level of risk-taking behavior is high and has a statistical significance of 0.03. these results are in harmony with previous work completed by Pat-Horenczyk et al. (2007) that confirms the existence of risk-taking behavior in the adolescence age, which is exposure and involvement in fights, drinking alcohol, smoking, theft, and participation in brawls.

The paper also confirms that there is a relationship between ADHD and risk-taking behavior. This means that the higher the symptoms of the disorder, the higher the risk-taking behavior, and these results agree with an early study (Barkley et al., 2008). Barkley et al. confirm there is risky behavior. It was also shown that adolescents who were diagnosed in childhood as suffering from the disorder show a tendency to take risks in adulthood. These results are also consistent with the study of Al-Qahtani (2011). The results showed that behavioral disorders and organization disorders coincide with ADHD in 73% of cases.

The results of the above research indicate that there are no statistically significant differences in the level of ADHD due to the study variables which are gender, age, and educational level. These results can be explained based on some studies which confirm that the level and signs of the disorder are heterogeneous among adolescents according to gender, age, and educational level. However, these results differ from the results of the study of the American Society's Diagnostic Manual (DSM5). This study confirms that the symptoms of the disorder vary greatly in their severity and severity from one person to another and change with age, and differ in their nature, the severity of symptoms, and their prevalence among males and females. This was previously explored by Al-Qahtani (2011). Al-Qahtani showed that the disorder is more common in the school generation. This confirms that there are differences in the level of turbulence due to the age variable.

One of the paper's main findings is that there are statically significant differences in the level of risk-taking behavior among adolescents with this disorder in the Arab community in East Jerusalem due to gender variables.

These results differ from the findings of Zimak (2008). Zinak found that there were no differences in risk-taking behavior due to gender as it tested the differences in risk-taking behavior and personal characteristics of adolescents. The sample consisted of 78 undergraduate students from Ohio University who were subjected to a Demographic Information Form, ADHD Symptoms List, and a subjective scale of risk-taking behavior. The results of the study found that adolescents with ADHD are expected to take risks in more than two dimensions of this behavior without distinguishing between sex.

The results of the above tables (21-24) agree with the results of the study by Barkley et al. (2008). Barkley confirms that there are no differences in the level of risk-taking behavior due to age and educational level. Where the study showed that adolescents who engage in risky behavior in childhood, show a tendency to take risks in adulthood. These results differ from the results of the study Dryer et al. (2012). The results of their study showed that effective intervention would reduce problems and behaviors in the adolescence age, and this confirms that there is a difference in risk-taking behavior due to the age variable.

6.Recommendations

Based on the results of this study, the researcher recommends the following

1- Future research should consider the potential effects of ADHD on individuals more carefully. For example, employing counseling programs and seminars aimed at guiding adolescents to the dangers of adopting risk-taking behaviors.
2- Future research on ADHD might extend the explanations of ADHD and its relationship to risk-taking behavior in different age environments.
3- In future work, activating counseling programs to show the correlation between ADHD and risk-taking behavior among adolescents.
4- Future studies could fruitfully explore this issue further by building plans and programs that raise the level of public awareness among adolescents regarding ADHD.
5- A complementary study to this study, which will examine the effect of different intervention programs on the level of risk-taking behavior among people with ADHD.
6-Future investigations are necessary to validate the kinds of conclusions that can be drawn from this study.

7.References

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