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## The predictive role of oppositional defiant disorder and violent electronic game on depression and suicidal tendencies addiction among adolescents with attention-deficit hyperactivity disorder

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### Abstract

**Background:** The rapid change that the world witnessed with the beginnings of the third millennium was accompanied by a change in the concept of playing among young people. Games playing was associated with the elevation of their shouts and collective laughter in the garden of the house with each other, except the current generations are immersed in video games as an inevitable result of the information boom that occupied our lives in all its details. **Aims:** The aim is to investigate the predictive role of oppositional defiant disorder and violent electronic game on depression and suicidal tendencies addiction among adolescents with attention-deficit hyperactivity disorder. **Methods:** The study included 80 adolescents from both sexes (males and females). This research study is quantitative. Multiple regression was used to investigate the relative contributions of oppositional defiant disorder and violent electronic games to the prediction of depression and suicidal tendencies. **Results:** All variables were correlated positively and significantly at  $p < .001$ . The two independent variables (ODD, VEGs) when put together yielded a coefficient of multiple regression (R) of 0.646 and a multiple correlation square of 0.639.

**Keywords:** Oppositional Defiant Disorder , Depression , Suicidal Tendencies , Violent Electronic Game Addiction , Adolescents with attention-deficit hyperactivity disorder.

### Introduction

The current era is characterized by tremendous technological progress, especially electronic games (Alpaslan et al., 2021; Kurtdece & Yildirim, 2022; Uluçınar, 2021). The rapid change that the world witnessed with the beginnings of the third millennium was accompanied by a change in the concept of playing among young people. Games playing was associated with the elevation of their shouts and collective laughter in the garden of the house with each other, except the current generations are immersed in video games as an inevitable result of the information boom that occupied our lives in all its details (Yildirim & Zeren, 2021). It became familiar with the scene of the teenager, who sits most of the time in front of the computer screen completely isolated from the family, to start building an interaction process with his favorite games, which are classified as modern means of playing (Chamberlain et al., 2016).

It is also noted that adolescents are interested in new controversial and challenging

games, and here the teenager engages in the Internet for games (Li et al., 2022) most of which are violent and have a devastating impact on the activities of daily life and dealing with others (Obeid et al., 2019). Both sexes and in all age groups, especially teenagers, so we do not find a home free of these games (Wei & Lu (2014; Zou et al., 2022)

Violent electronic games (VEGs) depend on the psychological and social dimension of the individual, and the visual and sound effects through electronic devices, which include simulation, formation and planning of violence (Elsayed, 2021), where adolescents are confused between reality and imagination. Then carry out their dangerous actions in their games in their normal life, and here many psychological, social and physical disorders suffered by adolescents with addiction to violent electronic games and which those close to them are aware of, and it is noted that adolescents with gaming addiction violent e-mails have depressive symptoms of self-loathing, anticipation of failure, sadness and pessimism, feelings of punishment, loss of interest, irritability, excessive anger and annoyance, suicidal thoughts and desires, worthlessness, and changes in sleep pattern (Fontana, 2020).

They also have high suicidal tendencies as a result of suffering from depression; Which leads some adolescents with violent electronic game addiction to actual suicide, and this is relatively common among these adolescents. (Erevik et al., 2022).

However, to my knowledge, there is study in my country dealt with the predictive role of oppositional defiant disorder and violent electronic game on depression and suicidal tendencies addiction among adolescents with attention-deficit hyperactivity disorder.

### **Problem statement**

The creative industry has received increasing attention for its violent electronic games, which have witnessed remarkable growth in the past few years, as the electronic games industry is booming, and has become one of the largest sources of entertainment in the world (Oliver & Robert, 2014). This coincided with what the media recently raised about the negative effects of VEG, which led to the increase in the promotion of such deadly games, as they are spreading in our world tremendously. The teenagers spend most of their time playing VEG, and they are unable to control being away from it until it takes a large amount of time and effort. The teenagers can not give it up and become addicted to these games.

VEGs have become the preoccupation of adolescents. They have taken over their minds and thinking and through which most of their life behaviors are formed, and here the danger appears, as they are considered an enemy of society, as they target adolescents specifically. This stage is a special stage in self-building at the moral, psychological and social level (Chamberlain et al., 2016).

Ferguson et al. (2012) indicated that adolescents who are addicted to electronic games suffer from depression, as they appear to have higher levels of bad mood in all

aspects of life. Depression is the most prevalent disorder, and its prevalence in all peoples of the world ranges between (5-7%). What researchers expect is that depression is the main reason for luring adolescents into the cycle of addiction to these violent electronic games, as the designers of these games make the diagnosis of depression a condition for the teenager's acceptance to participate in these games, and the adolescent is often surrounded by many surrounding factors that lead to suffering from depression, which leads to depression. Increases the number of victims of addiction to these games (Sousa et al.,2017). It is also noted that these adolescents have suicidal tendencies, and according to the statistics of the WHO, 87% of adolescents commit suicide, 70 % of suicides are due to depression (Seo et al., 2017).

Oppositional defiant disorder is one of the most important negative effects that are evident among adolescents who are addicted to electronic games, and defiance disorder and stubbornness is one of the most common disorders, as statistics on its prevalence indicate that approximately (9.5%) of adolescents around the world suffer from oppositional defiant disorder (Ghosh et al.,2017). Epidemiological studies indicated that its prevalence rates ranged between (4-16%) in males, and (1.2- 9%) in females (Odgers et al., 2008). The bad mood of adolescents with ODD coincides with a rate ranging between (15-45%) (Loeber et al. 2000).

What makes the matter worse is that the teenager does not find another outlet available to unload his energies other than indulging in these games that make him a stubborn person who does not respond to others, especially to those in power, and his behavior is characterized by exaggerated violence and helps him in that the absence of an effective role for parents in this case, and the practice of Violent electronic games are self-evident to adolescents as a result of technological development in this era (Sousa et al., 2017).

The addiction of VEGs is a phenomenon that threatens the lives of many adolescents, as they are the most vulnerable and targeted group to this problem that may end their lives with death, and this happens with the intention of challenging these deadly games and that he can pass these games without causing any harm to him. These games encourage a love of adventure, exploration, breaking out of the norm and doing unconventional actions, and the desire to research, and defying regulations and laws, but it falls prey to the aggressive and hostile directed from these games of pleasure and others, and then the domination of thinking about suicide and even actually committing suicide, as indicated by the media and making everyone wonder why these teenagers committed suicide In response to the orders of a violent electronic game? Which introduced fear and anxiety into the hearts of parents and sounded the alarm bell in most families (Mukhra et al., 2019).

Among the most important models of these VEGs that are currently chasing teenagers are the blue whale game, the Charlie challenge game, and the pokemon game, as these games have received great attention from specialists and researchers at the psychological and clinical levels (Kuss et al., 2014).

In view of the previous observations, it becomes clear the urgent need to study such disorders among adolescents who are addicted to violent electronic games. In predicting ODD symptoms in adolescents who are addicted to violent electronic games, studies focusing on violent electronic games are still scarce (Kuss et al., 2014).

It is worth noting that there is a discrepancy in the results of studies that focused on studying the differences in oppositional defiance disorder among adolescents who are addicted to VEGs according to gender, which increases the importance of conducting the current study to ensure the validity and accuracy of the results.

## **Aims**

The aim is to investigate the predictive role of oppositional defiant disorder and violent electronic game on depression and suicidal tendencies addiction among adolescents with attention-deficit hyperactivity disorder.

## **Literature review**

### ***Violent Electronic Game Addiction***

Electronic games are the most widespread games among children and adolescents in the current era due to their multiple advantages in entertainment, fun and psychological excitement. They include all kinds of games available on electronic bodies, and their forms, types and names vary between video games, digital games, and PC games Online games, mobile games (Salen & Zimmerman, 2004). It is distinguished from other traditional games by the interactive relationship that enables players to control the course of events while playing, in a manner that simulates their desires and tendencies and increases their motivation towards using them (Barnett et al., 2012). The more skills players have in using these games, the more they become attached to them (Riddle et al., 2019).

The media plays a very important role in promoting these games, especially those that have a devastating psychological impact on the personality of the teenager himself and on others around him, which makes it a phenomenon that everyone talks about and increases the desire and provocation of adults before young people to play the game that has become a challenge to others, which leads to the spread of these games, especially among adolescents, show the severe consequences of such violent games as the suicide of players, and what is clear to them of aggression, counter-behaviour, thoughts and feelings destructive to others, defiance of officials, stubbornness and violence with parents and friends.

All of this is increasingly observed immediately after the practice, where the psychological and physiological excitement of the adolescent is at its highest levels as a result of the negative impact on the entire range of thinking and directing behavior

towards violence with self and others, and this is a major goal of game designers that target a large segment of adolescents and turn them into a tool of harm to self and others (Prot et al., 2014)

Violent electronic games have been criminalized due to suicides among teenagers in Russia and Europe (Calvert et al., 2013), which are promoted through social networking sites on the Internet, after submitting a request from the teenager. On online psychological scales, only the adolescent who has a negative attitude towards things and people, has depressive symptoms, and hostile beliefs towards others, and wants to get rid of all his troubles, is accepted and then falls prey to suicide through death games that teach the common teenager ways to end his life without pain (Mukhra et al., 2019). Some studies indicated that ADHD was a predictor of the development of VEGs (Ferguson & Ceranoglu, 2014; Peeters et al., 2018).

### ***Oppositional Defiant Disorder***

Most psychological, cognitive, or neurobiological theories recognize adolescence disorders as one of the most important factors affecting the mental health of adults, and there are two groups of disorders related to adolescence. They are represented by inward-directed and outward-directed disorders such as impulsivity, lack of obedience and defiance, aggression, and excessive stubbornness, all of which are behaviors directed to the external environment (Hinshaw & Lee, 2003).

Adolescents with ODD are rebellious, argue with adults, refuse to obey, have angry outbursts, and find it difficult to control their temper. They are also uncooperative and hostile most of the time, and symptoms of ODD also include verbal aggression and extreme physical aggression. Typically parents, authority figures, peers, and others, self-harm and behaviors most commonly practiced by children and adolescents with ODD such as defiance, hate, passivity, verbal and physical aggression (Gomez et al., 2022).

Many mental disorders are common among adolescents with ODD, specifically mood disorders such as anxiety and depression, and this disorder gives warning of many serious consequences, especially for boys, where drug abuse, murder, armed assault and theft (Hinshaw & Lee, 2003).

### ***Suicidal Tendencies***

Suicide refers to the deliberate act of ending one's life, while suicidal behavior refers to thoughts of suicide, attempted suicide, and suicide planning. Suicide plans refer to more than just thoughts. They are a more active method of execution, as they involve both the mental and physical behavior of the action (Zayas, 2011).

Thoughts related to death and suicide, dangerous self-harm behaviors, and thinking about getting rid of life dominate, as the suicidal idea crystallizes in the individual, which expresses killing oneself with varying degrees of severity and judgments. In

addition, suicidal tendencies indicate a feeling of exhaustion because of life, and that life is not worth living in. Eventually, the suicidal idea turns into actual suicide attempts (Harmer et al.,2022)

Also, many people with mood disorders have suicidal thoughts, and may engage in some suicidal behavior, as more than half of the people who kill themselves are depressed when they do this act, as most of those who kill themselves suffer from a mental disorder (Harmer et al.,2022). Evidence indicates that conduct disorder in adolescents coincides with depression and suicidal tendencies(Linker et al.,2012;Ortin et al.,2019).

### ***Depression***

Depression is a problem that hinders the individual's compatibility and development, and when the individual reaches a high degree of depression represented by emotional disturbance, the individual records higher degrees of inability to love, self-hatred, and actual suicidal ideation (Chomon,2022). With the increase of depression among adolescents, suicide is starting to become a real problem(Chomon,2022).

### ***Attention-Deficit Hyperactivity Disorder***

Since the release of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) in 2013, ADHD has been generally considered a disease that affects individuals throughout their life cycle. Compared with children and adolescents, adult ADHD is more difficult to identify, has more comorbidities, has a wider range of impairments to individual social function, and has a greater medical, economic, and social impact, and has gradually become a major public health issue (Banna, & Eissa,2019).

People with this condition have difficulty integrating into school classes and learning from their teachers, and they do not abide by the rules of class, which leads to the deterioration of the school performance of these children because of their inability to focus and not because they are not intelligent, so the majority of people think that they are naughty by nature (APA,2013).

This condition is the most common psychological condition in the world; The number of people with attention deficit hyperactivity disorder is about 5% of the total people of the world, and the percentage exceeds that in developed countries (first world countries).These statistics made some researchers believe that the composition of developed countries and their atmosphere may be a cause for the state of attention deficit and hyperactivity in their people. Thus, the interaction of people in their civilization may be a cause of attention deficit and hyperactivity, depending on the type of civilization and the individual's reaction to it (Eissa,2017; Kader& Eissa,2016; Khalifa,2013).

## **Hypotheses**

H1. There will be a significant relationship between oppositional defiant disorder, violent electronic games, depression and suicidal tendencies addiction among adolescents with attention-deficit hyperactivity disorder. Some studies indicated that ADHD was a predictor of the development of VEGs (Ferguson & Ceranoglu, 2014; Peeters et al., 2018).

H2. There will be a predictive role of oppositional defiant disorder and violent electronic games on depression and suicidal tendencies addiction. Evidence indicates that conduct disorder in adolescents coincides with depression and suicidal tendencies (Linker et al., 2012; Ortin et al., 2019).

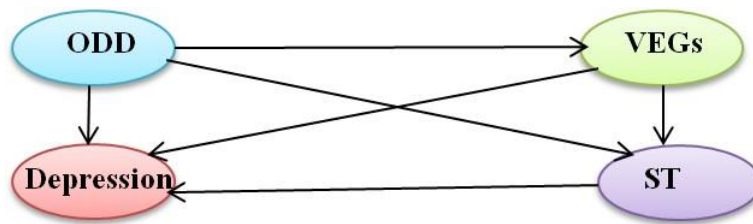
H3. oppositional defiant disorder and violent electronic games will collectively contribute to depression and suicidal tendencies addiction.

H4. There are gender differences(males, females) in ODD in the favor of males with ADHD.

## Research method

### Research model

In this study, it was assumed that ODD and VEGs addiction will predict depression and ST , and based on this, a research model as shown in [Figure 1] was established.



**Figure 1. Research model**

### Sample

The study included 80 adolescents from both sexes(males and females). All participants were from Saudi Arabia. Subjects included children aged 16–18 years (M=17.2, S.D. =4.2 years) with a diagnosis of ADHD. Criteria for inclusion were as follows: a) inattention, b) hyperactivity-impulsivity that interferes with functioning or development, c) drug-free for at least 6 months or who never used any medication for ADHD, and d) had a current suicidal ideation . Exclusion criteria included: substance dependency or abuse, cardiovascular diseases and intake of psychoactive drugs.

### Data collection tools

**ODD Symptoms.** Ten Items were used to rate ODD symptoms by parents and teachers. Sample items included —Often loses temper and —Is often touchy or easily annoyed. The scores of eight items were summed to create a total score (ranged from 0 to 8), with higher scores indicating severe ODD symptoms. The Cronbach's  $\alpha$  of the scale was 0.89. Teacher and parent's ratings were calculated . They were significantly correlated ( $r = 0.19$ ,  $p < 0.05$ ).

Kutcher Adolescent Depression Scale. It is an 11-item measure specifically designed to assess the cognitive, behavioural, affective and somatic symptoms of depression by self-report among students 12–17 years of age. Subjects are asked to circle the number associated with the statement that most accurately describes their feelings. In this study, the KADS has a internal consistency reliability coefficient( $\alpha = 0.82$ ).

The SBQ-R scale is a 4-item(Osman et al.,2001). The scale has four items. They assess the frequency and severity of suicide ideation, suicidal attempts in the past year, and the possibility of suicide behavior in the future. The cut-off score of  $\geq 8$  can identify high and low risk groups. The Cronbach's alpha of 0.85 was reported in this study.

Game Addiction Scale (GAS) (Lemmens et al.,2009). It includes seven Items in seven subscales: Salience, Tolerance, Mood modification, Withdrawal, Relapse, Conflict, Problems. The scale is scored with a 5-point Likert scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, and 5 = very often).

Adult ADHD Self-Report Scale for Adolescents (ASRS-A). ADHD symptoms were assessed using self-ratings and parental ratings on the adolescent version of the ASRS (Sjölander et al.,2016). The scale contains 18 items, corresponding to the diagnostic symptoms of each ADHD domain (i.e., inattention and hyperactivity/impulsivity). The occurrence of each symptom is measured on a 5-point scale from 0 (never) to 4 (very often), with higher scores indicating more symptoms. The total score of this scale ranged from 0 to 72.

## **Research Design**

This research study is quantitative, based on a predictive relational design.

## **Data Analysis**

The survey data were analyzed in SPSS (v. 22.0). The data were analyzed with Pearson correlation and multiple regression. Multiple regression was used to explore the relative contributions of oppositional defiant disorder and violent electronic games to the prediction of depression and suicidal tendencies.

## **Results**

### ***Correlation of research variables***

To understand the general characteristics of the major research variables, the mean and STD of the variables were calculated, and skewness and kurtosis were calculated and presented in table 1 to check whether the multivariate normal distribution

assumption was satisfied. The results of correlation analysis between variables are presented in table 1. As a result of the correlation analysis, all variables were correlated positively and significantly at  $p < .001$ ). The absolute values of skewness and kurtosis do not exceed 3 and 10, respectively, it can be judged that the normal distribution assumption is satisfied, and kurtosis ranged from .11 to .83, indicating that there was no problem with multivariate normality.

**Table 1.**

*Correlation of study variables*

Variable	1	2	3	4
ODD				
VEGS	.321***		.401***	.344***
Depression	.392***			.332***
ST	.384***			
Average	6.4	28.6	22.5	12.7
STD	2.51	2.12	2.00	2.16
skewness	.54	.40	.43	.47
kurtosis	.59	.70	.61	.59

\*\*\* $p < .001$ .

### **Prediction**

Results presented in table 2 show that the two independent variables (ODD, VEGs) when put together yielded a coefficient of multiple regression (R) of 0.646 and a multiple correlation square of 0. 639. This shows that 63.9% of the total variance in depression and ST addiction of those who participated in the study is accounted for by the combination of ODD, VEGs. Table 3 indicates that the analysis of variance of the multiple regression data produced an F-ratio value significant at 0.01 level ( $F(2, 77) = 102.553$ ;  $P < 0.01$ ).

**Table 2.**

*The regression results of the Predictor Variables and the Outcome Measure.*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.684a	0.546	.543	3.73833	0.546	154.0285	1	78	.000
2	.689b	0.646	.639	3.38171	0.085	29.4204	2	77	.000

a. Predictors: (Constant), ODD

b. Predictors: (Constant), ODD, VEGs

a. Dependent Variable: depression and suicidal tendencies addiction

**Table 3**

# Multiple Regression Analysis

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1392.331	1	1392.331	125.011	.000a
	Residual	1022.771	78	13.1124		
	Total	2411.392	79			
2	Regression	1623.024	2	811.512	102.553	.000b
	Residual	1052.368	77	13.667		
	Total	2641.119	79			

a. Predictors: (Constant), ODD

b. Predictors: (Constant), ODD, VEGs

c. Dependent Variable: depression and suicidal tendencies addiction

As shown in table 4, each of the two independent variables made significant individual contributions to the prediction of depression and suicidal tendencies addiction. The results indicated that the following beta weights which represented the relative contribution of the independent variables to the prediction were observed. ODD ( $b = .388$ ,  $t = 4.500$ ;  $P < 0.01$ ) and VEGs ( $b = .374$ ,  $t = 5.424$ ,  $P < 0.01$ ).

Although the two variables made significant relative contribution to the prediction of depression and suicidal tendencies addiction, ODD is a more potent predictor.

**Table 4.**

*Relative Contribution of the Independent Variables to the Prediction of depression and suicidal tendencies addiction*

## Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	95.0% Confidence Interval for B				
	B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
(Constant)	10.848	1.878		5.778	.000	7.133	14.563
ODD	.668	.054	.739	12.411	.000	.561	.774
(Constant)	7.336	1.521		5.11	.000	6.102	9.221
ODD	.388	.077	.399	4.500	.000	.194	.494
VEGs	.374	.066	.393	4.424	.000	.228	.490

## Gender differences(males, females) in ODD

As shown in table 5. ,there are gender differences(males, females) in ODD in the

favor of males with ADHD(  $t=6.28$ ,  $P < 0.01$ ).

**Table 5.**

*Gender differences(males, females) in ODD*

Variable	Group	Mean	STD	T	P.
ODD	Males	7.2	1.22	6.28	.000
	Females	4.1	1.63		

## Discussion

Oppositional defiant disorder (ODD) is characterized by frequent hostility and rebellion. It is one of the common behavioral disorders in children and the most common comorbidity with ADHD. About 26.1% of ADHD patients suffer from ODD (Banna& Eissa ,2019; Gunes et al.,2018).

Although the association between playing violent electronic games and depression has not been well studied (Tortolero et al.,2014),in this study VEGs was found to be positively and significantly correlated with depression. High exposure to both violence and violent events is associated with increased levels of depression among children and adolescents (Tortolero et al.,2014).

A positive correlation was found between depression and suicidal tendencies and oppositional defiant disorder symptoms in male and female adolescents who are addicted to violent electronic games. It is concluded that ODD is associated with depression and suicidal tendencies, as it appeared as one of the common factors between males and females who are addicted to violent electronic games, indicating the synchronization of ODD in both sexes. It is noted that oppositional defiance disorder is one of the most important behavioral disorders that adolescents with addiction to violent electronic games are exposed to, as these games and their practice affect the adolescent's behavior and dealing with himself and others. He does things aimed at the stubbornness of others in various ways, hostility and violence directed at others, and behaviors that challenge those in authority(Przybylski &Weinstein,2019).

Studies have indicated that oppositional defiance disorder in adolescents who are addicted to violent electronic games coincides with the most important mood disorders such as depression(Przybylski &Weinstein,2019) .This is related to what appears in these adolescents also of suicidal tendencies and thoughts, which can turn into actual suicide attempts, as reported by the result of Lemola et al.(2015.) who indicated that the more time spent in violent electronic games, the higher the degree of suicidal tendencies, which explains the association of symptoms of depression and suicidal tendencies with oppositional defiant disorder, in general, adolescents who are

addicted to violent electronic games of both sexes, and their depressive symptoms may reach actual suicide as well.

It was observed through the media, as well as symptoms of stubbornness, controversy and violence to others as a result of the change in behavior towards aggression and the shift of thinking towards counter-behaviour. deliberately disturbing others (Krahe & Moller, 2004), where depression is a major factor and cause of the high rate of suicide risk among adolescents who are addicted to violent electronic games of both sexes (Messias et al., 2011).

This indicates the importance of the conditions for these games on the part of their designers, as only the adolescent who gets high scores in depression through psychological measures on the Internet is accepted, and then a rise in suicidal tendencies, as the stages of application of these games include dangerous and extremely harmful conditions for self and others to measure the extent of compliance to orders and complete obedience and robbed the will of the teenager so that he is completely under control until the game ends with his suicide (Vidal

et al.,2020)

Studies have shown that death games, which have become the focus of adolescents' attention today, are a link between behavioral disorders (ODD) and mood disorders (depression, suicidal tendencies ). This may reveal the possibility of developing positive solutions to the problems faced by adolescents who are addicted to violent electronic games, which takes away the severe psychological and social effects that any family with a teenager may suffer from and who is absent from parental supervision of what he does, as we do not pay attention to them except through media fanfare to indicate the number of Teenage suicides in response to one of the orders of violent electronic games (Sousa, 2017).

The presence of ODD symptoms were associated with suicidal ideations(Lawrence& Mcfield,2022)The results of this study in in the same line with previous literature . It was found that adolescents with ODD symptoms often endorse suicidal ideations (Boekamp et al., 2018)

In agreement with the findings of this study regarding correlation between VEGs addiction and depression, Andreassen et al. (2016) found that depression was positively correlated with video game addiction. Mikuska & Vaszonyi(2017) support the hypothesis made by this research study and show that video games are in fact a predictor for depression. Playing video games was a significant predictor of developing depression later in life (Mikuska & Vaszonyi, 2017). Coyne et al.(2020) showed that pathological (or obsessive) gaming is a predictor of negative behaviors in the future.

It is also found that VEGs addiction levels of male adolescents were higher than girls . Previous research came to the same conclusion(Sprong et al.,2019).

There are gender differences(males, females) in ODD in the favor of males with ADHD. Males with violent electronic game addiction appeared to show ODD symptoms more clearly than females, as males are more at risk of concurrent disorders of violent electronic game addiction with high levels of emotional petrification, lack of feelings, property damage, cruelty towards people and animals, and insensitivity remorse, unemotional outbursts with peers and parents, their stubbornness and defiance in various matters(Lawrence & Mcfield,2022).

This finding is supported by Odgers et al.'s(2008) who indicate that the emergence of the chronic type of oppositional defiant disorder is increasing in males by (19.5%) more than in females by (17.4%). Males feel the symptoms of ODD in a more severe way, and this may also be due to the difference between males and females in the extent to which they are affected by violent games and the formation of abnormal and antisocial behavior from committing violations and serious violations. to others.

This is because violent games depend on the challenge to do very difficult things, which provokes the teenager to finish the stages of this game, and this is commensurate with the characteristics of the age stage of adolescents, especially males. He is a person who suffers from many psychological problems and disorders and does not know how to get rid of them. (Rostad , Basile & Clayton,2021)

## **Limitations**

This study had some limitations. First, the cross-sectional research design of the study could not confirm potentially causal relationships among the studied variables. Second, the sample was small; hence, some meaningful associations may not have been detected as statistically significant and the findings may not be generalizable. Third, lack of control for other confounding variables may have affected the results. Future studies should evaluate and control for social support, and other personality characteristics.

## **Conclusions**

This study showed that males spend more time playing video games than females. In addition, participants presenting violent electronic games addiction comorbid with attention-deficit hyperactivity are more susceptible to and affected by oppositional defiant disorder , depression , and have suicidal tendencies . Ultimately, larger longitudinal studies would be useful to understand cause and effect. More research is needed to clarify the temporal relationships between the studied variables.

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## الدور التنبئي لاضطراب المعارض المتحدي والألعاب الإلكترونية العنيفة على الاكتئاب والميل إلى الانتحار والإدمان لدى المراهقين ذوي نقص الانتباه وفرط النشاط

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### المستخلص

**الخلفية:** إن التغير السريع الذي شهده العالم مع بدايات الألفية الثالثة صاحبه تغير في مفهوم اللعب لدى الشباب، حيث ارتبط اللعب بارتفاع صراخهم وضحكهم الجماعي في حديقة المنزل مع بعضهم البعض، إلا أن الأجيال الحالية غارقة في ألعاب الفيديو كنتيجة حتمية للطفرة المعلوماتية التي شغلت حياتنا بكل تفاصيلها. **الأهداف:** الهدف هو معرفة الدور التنبئي لاضطراب المعارض المتحدي والألعاب الإلكترونية العنيفة على الاكتئاب والميل إلى الانتحار والإدمان لدى المراهقين ذوي نقص الانتباه وفرط النشاط. **المنهجية:** شملت الدراسة ٨٠ مراهقاً من كلا الجنسين (ذكور وإناث). هذه الدراسة البحثية كمية، تعتمد على تصميم تنبؤي علائقي، والذي يبحث فيما إذا كانت بعض المتغيرات تتنبأ بمتغيرات معيارية. في هذه الدراسة، المتغيرات التنبؤية هي اضطراب المعارض المتحدي والألعاب الإلكترونية العنيفة. المتغيرات التنبؤية هي الاكتئاب والميل إلى الانتحار. تم تحليل البيانات باستخدام معامل ارتباط بيرسون والانحدار المتعدد. تم استخدام الانحدار المتعدد لاستكشاف المساهمات النسبية لاضطراب المعارض المتحدي والألعاب الإلكترونية العنيفة في التنبؤ بالاكتئاب والميل إلى الانتحار. **النتائج:** ارتبطت جميع المتغيرات بشكل إيجابي ودال عند مستوى ( $p < 0.001$ ) المتغيران المستقلان اضطراب المعارض المتحدي (ODD)، والألعاب الإلكترونية العنيفة (VEGs) عند وضعهما معاً أسفرا عن معامل انحدار متعدد  $0.646 (R)$  ومربع ارتباط متعدد  $0.639$ .

الكلمات الرئيسية: اضطراب المعارض المتحدي، الاكتئاب، الميل إلى الانتحار، إدمان الألعاب الإلكترونية العنيفة، المراهقون ذوي نقص الانتباه وفرط النشاط.