**Journal of Novel Applied Sciences**
Available online at www.jnasci.org
©2020 JNAS Journal-2020-9-2/26-29
ISSN 2322-5149 ©2020 JNAS

# The effectiveness of computer games on reducing the symptoms of aggression in adolescents

**Zohre Taghizade Shool**

Islamic Azad university, Varamin-Pishva branch

***Corresponding author*:** Zohre Taghizade Shool

**ABSTRACT:** The aim of this study was to investigate the effectiveness of computer games on reducing the symptoms of aggression in adolescents. The design of the present study is quasi-experimental and pre-test-post-test with a control group. The statistical population of this study was high school adolescents in Tehran in 2020. The number of these adolescents was 75, of which 30 were screened by the Adolescent Symptoms Questionnaire (Baadi, 2000). Out of 30 high school boys with aggression, 15 were in the control group and 15 in the experimental group by accident. The sampling method of the present study was available. The treatment intervention program was performed only for the experimental group. The list of aggression was completed by the educators for one week, the degree of aggression of each child was determined. The teens were then screened. Subjects were then replaced in experimental and control groups. After a week, computer game therapy sessions began on the experimental group and the control group waited. After 4 weeks (8 sessions) play therapy (twice a week for one hour each session), then post-test was performed. The obtained data were analyzed using the relevant statistical software. The results of this study showed that computer game intervention reduces aggression in high school adolescents ($p < 0.05$).

***Keywords*:** Computer games, Signs of aggression, High school teens.

## INTRODUCTION

Games are a natural means of expression, says Adeler, a famous psychologist in 1937: "Games should never be seen as a way to waste time." Landers stated in 1995 that playing for a child is the same as talking to an adult, games and toys are the words of teenagers. One of the most popular teen games is computer games. With the increasing advancement of technology, we will see computers becoming more ubiquitous in the coming years. Given the importance of the role of computers in today's life, computer literacy or having computer skills is essential for human beings today (Lange, 2015). Computer games are one of the most important entertainment tools in today's world and have snatched the lead from other media such as television, movies and music and are the most popular entertainment for children and adolescents. In today's world, we all see that having fun with devices such as laptops, PCs, mobile phones and tablets has replaced interpersonal relationships (Alen et al, 2017). In fact, every technology has both beneficial and destructive effects, and computer games are no exception. But it is worth noting that, like television and the Internet, computer games can change the way we live our lives. Our knowledge of the game category and how to use it(Lander, 2013). Computer games are influential in this development (Lander, 2013). There are now dozens of games that teach reading and math skills. In addition, computer games improve visual function, concentration, increase learning and attention skills, and help people develop multitasking skills. Improve (Ahmadi 2015). Research by Vasil, Estriton, Webster and Hamond (2015) found that combining digital social skills training for children with parenting training is more successful than cognitive-behavioral skills training alone. Behavioral education based on digital games is the most common and successful treatment approach for children with behavioral disorders, and most parents are satisfied with these programs. As noted by Veller, Sayna, Sancho, Manch (2018), aggressive behaviors are common in patients with conduct disorder, attention deficit hyperactivity disorder,

coping disorder, and pervasive pervasive developmental disorders. Numerous theories have claimed to explain the etiology of aggression in these disorders, but so far no theory has been able to distinguish between different types of aggressive behaviors. Because aggressive behaviors are a hallmark of conduct disorder and one of its central characteristics, they can be exacerbated and become more severe antisocial behaviors. Early and early detection and treatment can be effective in preventing conduct disorder (weller et al, 2018). Studies of such studies show that a variety of games have been indirectly effective in the treatment of behavioral disorders in children such as selective lameness disorders, aggression and other disorders in children(Lander, 2015). Research conducted in Iran also shows the usefulness of this treatment for children with aggression. Internal research focuses on aggressive behaviors that have been conducted due to the indigenous conditions of our country and the large number of preschool children (Arezomanian, 2014), Given that statistics show that about one-third to one-half of children and adolescents referred to psychology and psychiatry centers have behavioral problems and aggression, we intend to investigate the effect of computer games on these children. Therefore, and according to the mentioned measures, the main issue of the present study is whether the use of computer games reduces the symptoms of aggression in preschool children?

***Method***

The present study follows a quasi-experimental design of pre-test-post-test with a control group. The statistical population of this study is high school male adolescents. The number of adolescents was 75, of which 30 were screened. Out of 30 preschool boys with aggression screened by the CSI questionnaire, 30 were selected, 15 in the control group and 15 in the experimental group. Sampling of the present study was done in an accessible manner so that the treatment intervention program was performed only on the subjects in the experimental group. The list of adolescent aggression based on Dsm5 criteria was completed by educators for one week, and the level of aggression in each child was determined. The teens were then screened. Subjects were then replaced in experimental and control groups. After a week, computer game therapy sessions began on the experimental group and the control group waited. After 4 weeks (sessions) of play therapy (twice a week for one hour each session), the aggression list was completed again by the same coaches and the evaluation and scoring was done again.

***Research tools***

- **Adolescent Symptoms Questionnaire**

The CSI 5 Symptoms Questionnaire is a screening tool for the most common psychiatric disorders, the terms of which are based on the Dsm5 diagnostic criteria. According to various information sources, this questionnaire has two checklists of parents (child caregivers) and teachers, which has shown its effectiveness in comparison with other scales and methods, and is a suitable alternative as an acceptable psychiatric interview in It also saves time (Baedi, 2000).

- **List of teen aggression(vahedi et al2014)**

The researcher-made aggression questionnaire was prepared by Vahedi, Fathi Azar Hosseini Nasab and Moghadam (2008) and included 43 items. This questionnaire includes 4 subscales. . To evaluate the reliability of this questionnaire, Cronbach's alpha method was used and its value for the whole questionnaire was equal to 0.98, which indicates the good reliability of the questionnaire.

To analyze the data, the aggression score of the subjects in the aggression checklist was analyzed using SPSS. Due to the nature of the design and the use of two sample groups (control and experimental) in addition to descriptive statistics, analysis of covariance was used.

Results

- **Descriptive Statistics**

Descriptive characteristics of the subjects' birth order are presented in Table 1.

Table 1. Descriptive characteristics of the subjects' birth order.

| variable | Arrrange | Abundance | Frequency |
|---|---|---|---|
| Birth Order | Fisrt | 11 | 36.7 |
| | Second | 10 | 33.4 |
| | Third | 9 | 30 |
| Total | | 30 | 100 |

Table 2 shows the mean and standard deviation of the scores of the subscales of the research variables by group.

Table 2. Descriptive characteristics of the difference in the change of subscales of research variables by two groups.

| variable | Examination Group | | | | Control Group | | | |
|---|---|---|---|---|---|---|---|---|
| | Pre-exam | | Post-test | | Pre-exam | | Post-test | |
| | M | SD | M | SD | M | SD | M | SD |
| Verbal aggression | 40.13 | 4.3 | 33.5 | 3.4 | 37.5 | 4.1 | 38.2 | 4.3 |
| Physical aggression | 31.06 | 4.5 | 24.4 | 3.6 | 33.2 | 3.3 | 32.6 | 3.2 |
| Relationship aggression | 19.9 | 5.3 | 20.4 | 5.4 | 20.8 | 4.7 | 21.5 | 4.2 |
| Anger | 15.9 | 3.2 | 9.2 | 2.9 | 16.7 | 2.4 | 17.3 | 1.9 |
| Aggression | 107.06 | 7.6 | 87.6 | 6.7 | 108.4 | 6.9 | 109.3 | 7.2 |

- **Inferential statistics**

Table 3 presents the results of the Kolmograph-Smirnov test to investigate the normality of the distribution of scores related to the studied variables in the pre-test and post-test. As can be seen, the results indicate that the distribution of scores is normal (P <0.05).

Table 3: Colmograph-Smirnov test to check the normality of the distribution of scores

| variable | Colmograph-Smirnov | P |
|---|---|---|
| Verbal aggression | 1.07 | 0.21 |
| Physical aggression | 0.867 | 0.44 |
| Relationship aggression | 0.921 | 0.260 |
| Anger | 1.02 | 0.134 |
| Aggression | 0.789 | 0.401 |

Table 4. Analysis of covariance for a significant test of the difference between the mean scores of aggression between the two groups

| Group | | M | SD | F | Degree of freedom1 | Degree of freedom2 | Significance level | $^{2}\mu$ |
|---|---|---|---|---|---|---|---|---|
| Test | Pre-test | 107.6 | 7.6 | 350.5 | 1 | 28 | 0.001 | 0.83 |
| | Post-test | 87.6 | 6.7 | | | | | |
| Control | Pre-test | 108.4 | 6.9 | | | | | |
| | Post-test | 109.3 | 7.2 | | | | | |

Table 5 shows the results of analysis of covariance for each of the subscales of pediatric aggression subscales. As can be seen in all subscales between experimental and control groups in pretest and posttest, after removing the effect of pretest, there is a significant difference (0.05)

Table 5: Analysis of covariance under the Child Aggression Symptoms Scale

| variable | Sum of squares | Averege square | F | Df1 | Df2 | Significance level | $^{2}\mu$ |
|---|---|---|---|---|---|---|---|
| Verbal aggression | 386.06 | 386.6 | 133.7 | 1 | 28 | 0.001 | 0.84 |
| Physical aggression | 184.2 | 184.2 | 35.5 | 1 | 28 | 0.001 | 0.59 |
| Relationship aggression | 0.06 | 0.06 | 0.0332 | 1 | 28 | 0.86 | 0.001 |
| Anger | 0.331 | 0.331 | 171.4 | 1 | 28 | 0.001 | 0.87 |

***Discussion and conclusion***

The results of this study showed a significant improvement in the subscales of aggression symptoms compared to the beginning of the study. The results of this study with the researches of Azadimanesh, hosseinkhanzadeh, Hakim javadi et al (2017), Hassan nataj, taghi pour, faramarzi et al (2015), akbari and rahmati (2015), stulmarker and ray (2015), Ming cheng (2013) and Amory (2010) is consistent. Explaining the result, it should be said that according to the theoretical and practical foundations of aggression and various therapies, aggression is a complex form of human behavior in human societies. Aggression is a reaction to inaction and suppression of desires. In a variety of games, environmental barriers such as parents are removed and adolescents can easily express their aggression. Therefore, the child manifests his accumulated coma in a suitable context through aggression and learns and internalizes how to control it with appropriate reflection (akbari et al, 2018). The attractiveness and usability of age-appropriate computer games has made this method an efficient and popular method. On the other hand, combining traditional methods with new methods will contribute to lasting effectiveness, because learning based on computer games due to its visual structure and Listening will create long-term longevity, so this method can be considered as one of the effective methods in educating children (Petkov and Rogers, 2019). Computer games give the child the freedom to be independent in tasks such as choosing the characters to play, choosing the color, type of clothing, graphic designs, the necessary directions to move in the game space, adjusting the game's audio features, and choosing the language. Choose how to advance the game. Also, since this method uses special techniques and

methods such as facial games, smiling watermelon, smiling dolphin, etc., each of them in turn can reduce some of the behavioral problems in children. For example, during computer games, adolescents lose their defensive state to express their feelings and find more opportunities to express their feelings and become more familiar with various moods such as anger, fear, etc. The lack of conditions for conducting the follow-up stage in the present study and the limited research to the city of Tehran was one of the limitations of the present study , It is suggested that other research be conducted in different cities so that the possibility of generalizations to other cities is not limited.

## REFERENCES

Ahmadi,M.(2015).the effect of child- Centered play therapy on aggression,tarbiat modares university:Mscthesis. (in parsian).

Alen .J,Mckay .T, Loeber, R. and stouthamer – leober, M. (2017). Development of jhrenile aggression and violence. American psychologist, Vol 53, pp 242 – 259 .

Arezomanian,C.(2014).The effect of indirect play therapy on behavioral disorders in children.islamic azad university –roodehen university,Msc thesis.(in parsian).

Baadi,Z.(2000).Evaluation of the effectivenessof cognitive – behavioral play therapy on reducing aggression in children with reducing aggression in children with behavioral disorders,Msc thesis :iran university of medical Sciences.(in parsian)

Frick, p.j., Lahey, b.b., Loeber, R, Tannenbaum, L.E., Van Horn, Y. and Christ, M.A.G. (2019). Oppositional defiant disorder and conduct disorder, A meta-analytic review of factor analyses and cross-validation in a clinic sample. Clinical psychology review. Vol. 40, P.P. 340 – 357.

Lander. F .(2012). Play therapy with learning Disabled children. Journal of clinical child psychology. Vol .11, p. 242 – 245.

Lange E. (2015). Behavioral observation of children during play therapy, University of Colorado Journal of personality Assessment, 1981, 45, 2, p. 168 – 179.

Mitcham, Taylor, Nancy (2018), Developmental play therapy. journal of Counseling and Development, Vol. 65, pp. 320 – 325

stamer, T .(2015). Developmental play therapy. journal of Counseling and Development, Vol. 65, pp. 320 – 325

Vasil,t, Estriton ,K, Webster ,Eand Hamond P. (2015). The use of play therapy with the mentally Retarded, The journal of special education, Vol .19, No 4. p. 409 – 474.

Weller, Elizabeth, BRowan.A, Ela, J.Weller, K.A. (2018). Aggressive behavior in patients with attention deficit hyper activity disorders, Conduct disorder Perrasive developmental disorders, American journal of psychotherapy, Vol, 25, pp, 412 – 418.