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The Influence Of Academic Stress And Gender On Video Game Addiction Tendency On Elementary School Students Aged 9 To 12 Years

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Abstract

Academic demands on students today are getting heavier so they often cause stress. In times of student stress, both men and women often seek escape to reduce or eliminate stress. One way to do this is by playing games. Games are known to help cope with stress but can be dangerous because they can cause addiction. This study aims to determine the effect of academic and gender stress on the tendency of addiction to play games in elementary school students. From the analysis of data obtained using demographic cookies and academic stress scale it can be seen that academic and gender stress influences the tendency of video game addiction. Boys have a higher tendency to add video games than girls. Meanwhile, the higher the academic stress, the higher the tendency of video game addiction in children aged 9 to 12 years.

Keywords - academic stress, gender, addiction

I. PENDAHULUAN

Rapid technological advancements affect children's play and learning activities. Play is an activity that is most fun for children, adolescents, and adults. Piaget explained that play is a repeated response to functional pleasure [1]. Children's games offered today are very diverse, ranging from physical to audio-visual. The development of an era, the more technology that is around, the game for children is no exception. Games that are very popular, especially among children at this time are video games.

Video games are one means of playing individuals to reduce stress in this digital era. Easy access to facilities for playing video games such as PCs, laptops, smartphones and other devices makes video games increasingly popular with various age groups. In addition to easy access in terms of devices, the internet features also make video games more popular. This feature allows the players to play with many other players at the same time even if they are not in the same place.

Apart from its function to reduce stress, video games also have several risks that need to be considered. Apart from the content that needs to be adjusted to the age of the player, excessive use of video games has the potential to make users addicted or addicted. This is evident from several studies before which state that playing time has a positive relationship with the level of video game addiction [2], [5].

Video game addiction has come to the attention of various parties including experts. At present, this disorder has been officially entered into the International Classification of Diseases (ICD-11) list by WHO [6]. This disorder has several other terms

with similar definitions, such as internet gaming disorder [7], [6]. Video game addiction is a pattern of video game playing behavior characterized by disruption of control over game play behavior, increased priority for playing games over other activities to exceed interest in other things and daily activities, as well as continuing or increasing game play behavior despite the consequences negative for the behavior [6].

that there are nine criteria for video game addiction based on the criteria of the American Psychiatry Association; or fantasize about the game when not playing; (2) Tolerance, which is an increase in time spent playing games so that the individual feels a pleasant sensation that he felt before; (3) Withdrawal, i.e. symptoms (discomfort, anger, frustration, etc.) that arise when individuals cannot play or try to reduce or stop playing games; (4) Persistence, which is the desire to play continuously or failure in an effort to stop, control, or reduce playing games; (5) Escape, which is playing video games to escape or reduce negative mood states such as hopelessness, guilt, anxiety, or depression; (6) Problems, i.e. continued gaming behavior despite being aware of the negative consequences of the core aspects of life; (7) Deception, which is the behavior of lying or covering up about the game play activities of others; (8) Displacement, which is a condition where the behavior of playing games dominates daily life so that other social and recreational activities disappear; and (9) Conflict, which is the emergence of problems due to playing games such as the loss of important relationships with other people and opportunities related to school or workplace [4], [7].

The process of the occurrence of addiction so that individuals can have various characteristics mentioned above. These stages include the stages of pre-contemplation, contemplation, preparation, action, and maintenance. The pre-contemplation stage is the stage where the child does not yet know the thing that causes addiction, in this case, video games. At the stage of contemplation, children have started to recognize video games, but do not or do not have a strong desire to play. In the preparation stage, children explore video games by playing them continuously. The child is still weighing whether the consequences he will receive are more severe than the pleasure he has. At the action stage, children begin to form more intensive play patterns. At this stage there are two possibilities, namely the child develops into addiction because he is not able to control his behavior, or the child has a high attachment even though he can control his behavior. High engagement with good behavior control is seen in

professional gamers. The last stage, the maintenance stage is the stage where the child is said to be addicted. The addiction criteria described earlier will appear more at this stage [8].

Video game addiction is indeed found in many teenage boys, especially those in the Asian region [7]. Previous research also stated that boys tend to have greater addiction potential than girls [3], [4], [9].

Adolescent boys are indeed more susceptible to video game addiction but, at this time younger children also have the risk of experiencing addiction due to exposure to the gadget they use [10], [11]. A study of video games found that 233 out of 260 elementary school students (89%) were active video game players [11]. This shows the high penetration of video games in the pre-teen age group.

Things that motivate the video game players to reach the stage of addiction are primarily escapism or the desire to escape from stressors in the real world and immersion or appreciation of the game [9], [12]. This stress can be experienced by individuals from various age groups, including children.

Many factors cause stress in children. The causes are conflict with parents, peers, as well as parents' expectations that are too high in their children's achievement [13]. In addition, children can also experience stress because of their daily activities, one of which is from school, such as the weight of the burden given by the school in improving children's learning achievement. Depression clearly has a negative impact on children, both physically and psychologically. Stress can have effects similar to aging in the brain [14].

National Commission for Child Protection revealed, the cause of stress in children, 82.9 percent came from the lack of parental communication, parental demands related to the academic value of children in school, the relationship of children with friends, wrong parenting style, and malnutrition problems. Stress is also caused by children's activities that are very dense and result in the loss of children's right to play and recreation.

The most common stress experienced by children is academic stress. Academic stress is defined as a condition when individuals experience pressure arising from perceptions and judgments about stressors (causes of stress) in academic activities, or matters relating to science and education [15]. The concept of academic stress on students according to Kumaran and Javid [16] is the result of their cognitive assessment with stressors in the environment around the child or requests related to academic regulations.

One cause of academic stress is intense competition in the classroom and demands to master a lot of material in a short time. Exams and grades, homework, expectations about academic achievement are some of their biggest sources of stress [16].

Academic stress if left unchecked will have a negative impact on children. Academic stress not only has a negative impact on the learning process but also on physical health. As stress is feeling physically and psychologically depressed clearly will have a negative

impact on children, both physically and psychologically [17], [14], [18].

Various causes of stress, especially academic stress, naturally come from schools. The workload, long study hours, and various kinds of examinations are the main causes. The situation is coupled with the expectations of parents who are too demanding their children to always excel at school. The coping process is ultimately carried out by the child himself to release his stress, even though the process must be done properly so as not to cause new problems.

Playing games becomes an escape to forget about temporary problems such as a lot of homework burden and long study time. Behavior to deal with stressful situations is coping. Coping is a conscious response, in the control of the individual, and involves conscious effort [19]. Coping that is not done correctly will also cause new problems besides stress itself, one of which is the addiction or addiction to the game [20].

Some of the characteristics of social development in late childhood include that during schooling children learn to gain skills and knowledge about what to do and how to do it [1]. If you succeed in getting it, there will be a sense of being able and passionate. But if a failure is encountered and an adult finds out, a sense of inferiority will arise. Erikson in his theory of social development states that the development of late childhood is in the industry versus inferior stages which are characterized by the readiness of individuals in dealing with given tasks, busy with productive situations and can do things together with people others which in this case leads to peers [21].

Erikson further explained that at this stage children will learn to collaborate and compete in academic activities and in relationships through games that are done together. Children always try to achieve something they want so that children at this age are diligent in doing something. If in this stage the child is too demanding from his environment and the child is unable or successful in achieving these demands, there will be a feeling of inferiority or inferiority. Reinforcement from parents or others is so important to strengthen the feeling of success in doing something [21].

Video games as a means of coping with stress will be a means to reduce stress on children, but if used excessively will plunge children into addiction. Therefore, researchers are interested to see the effect of academic stress on the tendency of video game addiction in boys and girls with age groups under teenagers, which is 9-12 years.

II. RESEARCH METHOD

This research was conducted with a quantitative method using a cross-sectional approach. The subjects of this study consisted of 222 elementary school students aged 9-12 years (113 boys and 109 girls) in the Special Region of Yogyakarta who played video games for at least the past 6 months. Data was collected using several instruments, namely demographic cake, academic stress scale, and parent and teacher support

34 scale. The academic stress scale is the result of an adaptation of the Scale for Assessing Academic Stress (SAAS) [22], while the tendency scale for video game addiction is adapted from Lemmens, Valkenburg and Peter the Internet Gaming Disorder Scale [4].

Before being used in data collection, this scale was first tested on 30 elementary school students aged 9-12 years who had characteristics in accordance with the subject of this study. The scale is then selected for the items by aborting unsuitable items so that only quality items are still used in data collection. This academic stress scale consists of 20 items with a reliability coefficient of $\alpha = 0.894$. The scale of video game addiction tendencies consists of 21 items with a reliability coefficient of $\alpha = 0.901$. The data obtained were then analyzed using a hierarchical multiple regression analysis technique.

III. RESULTS AND DISCUSSION

After confirming the assumption test, it is known that the data have fulfilled the assumptions, namely the absence of multicollinearity, the absence of outliers, normal and wild data. The results of data analysis using hierarchical multiple regression techniques showed the ability of academic stress to predict the tendency of video game addiction after controlling for gender variables. Gender was included in step 1 and explained 3.8% of the variance tendency for video game addiction. After entering the academic stress variable into step 2, the total variance of video game addiction trends explained by the model as a whole was 10.8%, with $F(2, 199) = 11.99, p = 0.006$. The academic stress variable explained an additional 7% for the variance in the tendency of video game addiction with R square change = 0.070 and $F \text{ change}(1, 199) = 15.616, p = 0.000$. In the final model, gender and academic stress both have a significant effect with a beta value of academic stress (beta = 0.265, $p = 0.000$) which is greater than gender (beta = 0.179, $p = 0.008$).

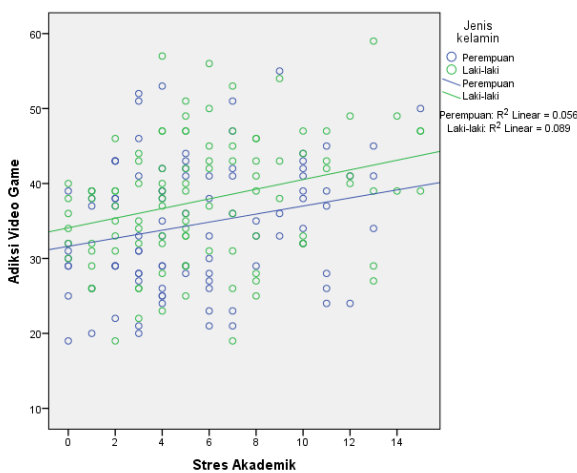


Figure 1. Graphic academic stress on the tendency of video game addiction by sex

Figure 1 shows a scatterplot chart with lines showing models for male and female participants. Based on these graphs it can be seen that men tend to have a tendency to add video games higher than women.

41 based on the results of the analysis, it was found 53 that gender and academic stress influence the tendency of video game addiction in students aged 9 to 12 years. The higher the academic stress, the higher the tendency of video game addiction to be experienced. This is in line with the results of Indahtiningrum's research which states that academic stress is correlated with video game addiction. This is because playing video games is a means of coping with stress received. However, coping with stress by playing excessive games raises the risk of video game addiction [23].

Academic stress is a feeling of discomfort felt by children due to academic factors such as the expectations of parents, teachers, children's performance at school, and others. The higher the academic stress, the child will be triggered to reduce the discomfort by looking for things that make the pressure reduced or forgotten. Video games become a solution that is very easily accessed in this digital era.

When an individual experiences stress, the individual will do something to reduce stress and eliminate stress called stress coping. As explained by Duckworth in [24] that coping behavior as a form of process occurs when individuals try to meet the demands arising from obstacles and difficulties encountered. That escape is the highest criterion in children, the cause is because children in Indonesia have educational demands that make a heavy burden on children, such as the number of homework assignments given by teachers, use of study time is quite long and less than optimal [10].

This result is in line with research conducted by Indahtiningrum which states that the behavior of playing games is an activity to divert from the stress experienced. The higher the level of stress a person has, the longer the amount of time needed to play the game. Someone who plays video game frequency is in the high category, it is possible that they play video games to escape the problems that exist in their lives rather than compared to people who play video games on low frequency. When individuals play videogames, more to get a sense of calm and escape from the problems at hand [23].

The higher the stress, children who have coping strategies by playing video games will need a high duration of play as well. This is done to achieve a level of pleasure that can overcome the academic stress they experience. As mentioned earlier that the higher the playing time, the greater the risk of video game addiction [3], [4], [25]. However, it should be noted also that although the duration of play is a predictor of video game addiction, the duration alone cannot be used as a benchmark to say a child has addiction. The context of why the child plays also needs attention [26], for example he spends much of his time working as a professional game player and he shows no symptoms of video game addiction as mentioned by Lemmens, Valkenburg, and Peter [4].

22 Based on the results of the analysis in this study, boys tend to have a higher tendency to addiction than girls. This is consistent with previous studies in which

men tend to spend more time with a higher attachment than women in terms of playing video games [3], [4], [9]. Gentile [3] states that boys spend their time playing video games more often and longer than girls. Hellström et al. Stated that boys play MMORPG (Massively Multiplayer Online Role Playing Games) games more often and longer than girls. Lemmens, Valkenburg, and Peter [4] found that boys had higher internet gaming disorder scores than girls. These findings show that boys do have a greater risk of video game addiction than girls.

This can be traced from the history of the development of the video game engine itself. Development of video games since its emergence in the 1970s. At that time, the video game machines were very large and could only be played in a male-dominated game center. As time goes by, video game machines have developed into various sizes, both large and small. The place to play video games is also no longer tied to the game center. Currently, the game can be played anywhere. These changes have only occurred about the last 2 decades or starting in the 2000s. Before that, video games did become male domination [27].

The cause of the level of video game addiction in boys is higher than girls can also be traced in terms of its neuroscience. When playing video games and being able to complete a given mission, areas of the brain that stimulate satisfaction in men appear to be more active than the same parts in women. Therefore, boys feel more pleasure than women when they get stimulation related to video games [28].

IV. CONCLUSION

This study aims to determine the effect of academic and gender stress on the tendency of video game addiction in elementary school students aged 9 to 12 years. The results of data analysis show that academic and gender stress influences the tendency of video game addiction. Boys have a higher tendency to add video game than girls. Meanwhile, the higher the academic stress, the higher the tendency of video game addiction in children aged 9 to 12 years.

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