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[OAMJMS] Editor Decision

2021-09-18 02:46 AM

Sitti Nur Djannah (Author):

We have reached a decision regarding your submission to Open Access Macedonian Journal of Medical Sciences, "Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study", Manuscript ID = OJS7209.

Our decision is: Revisions Required

Sincerely,
Prof. Dr Mirko Spiroski,
Editor-in-Chief, OAMJMS

Sasho Stoleski

Reviewer E:
Recommendation: Resubmit for Review

Comments to the Author
the reviewer comments have been written in text.

Reviewer F:
Recommendation: Revisions Required

Notifications



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2021-10-09 01:43 PM

Sitti Nur Djannah (Author):

We have reached a decision regarding your submission to Open Access Macedonian Journal of Medical Sciences, "Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study", Manuscript ID = OJS7209, submitted {\$submission}

Our decision is to: Accept your manuscript for publication in OAMJMS.

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Notifications**[OAMJMS] Editor Decision**

2021-10-09 01:43 PM

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Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study

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ABSTRACT

Background

Gaming disorder is one of the mental disorders when someone does his spare time activity by playing the game and is addicted to playing online games. This condition is more common in adolescents and eventually could harm their health. Hence, the researchers interested to study the teenagers' profiles and intentions to identify their efforts and obstacles in restricting online games.

Objective

This study aimed to explore the profile and addiction scales of teenagers with online gaming disorder and to identify their intentions, plans, and obstacles in reducing their addictions.

Method

The study employed qualitative research with a phenomenology approach. The research included six online gamer participants. The researcher selected the participants by using a purposive sampling technique. They were game-addicted teenagers according to the scale of gaming addiction. The researchers collected the data with a guided interview and an observation list. They analyzed the data using phenomenology analysis.

Results

The scale of addiction data showed that all informants were in a high category of addiction. This scale of addiction was in line with their profiles of playing games at least five hours a day because they perceived playing games as an urgent activity to relieve stress or as entertainment. When they played online games, they held back hunger and skipped their meals, even though they were hungry and often held back urinating. Besides, being actively playing at night made them sleep in the daytime. In addition, the data showed that four of the informants stated that they had some intentions and plans to reduce or quit playing, but they did not have specific plans. They had not followed up on their readiness and had not known when to reduce or stop playing online games. Some obstacles cause them to have no intentions.

Conclusion

The profiles of the teenagers with gaming disorders showed a high category of addiction scale. They played online games as stress-relieving entertainment. When

playing, they often held hunger, thirsty, urinating, and did not sleep at night. There were some teenagers with gaming disorders who had no intention of reducing or stopping the games. Meanwhile, some others were willing to reduce and quit the game, but they did not have any alternative activities and did not know when they will stop playing online games. Friends' invitation, the fun of playing games, problems of self-control/habits, the temptation of watching other gamers playing, boredom, and the new trend of the electronic game sport were the obstacles for the addictive teenagers to control their online gaming.

Keywords: Teenagers, profile, intention in restricting online gaming

1. INTRODUCTION

According to ICD-11, gaming disorder is a diagnosis for a person who has no control over their gaming habits for at least 12 months, prioritizes gaming over other interests or activities, and continues playing the game regardless of its harmful effects [1]. A game is an activity that can entertain and make people happy [2]. With the current information technology development, online games on the computer, PlayStation, and smartphones with Internet connections are in high demand, especially for young people [3]. Online games are interesting because the players can interact with other players from different places [4]. Playing online games continuously without control develops negative behaviors for players, for example losing track of time and becoming addicted, or gaming disorder [5].

Gaming disorder is excessive gaming with the main characteristic of playing for a long time [6]. The World Health Organization has categorized gaming disorder as a mental disorder [7]. In Indonesia, approximately 2.7 million gamers suffer from game disorder [8]. Based on observations on July 30, 2020, in a boarding house and rented house in the City of Yogyakarta, Indonesia, the researchers found teenagers playing online games as their daily needs. They play the game during the daytime (morning to afternoon).

Similarly, the researchers found that teenagers play online games on their smartphones at traditional and modern cafes. When they played online games, they often neglected their physical basic activities, such as eating, sleeping, and urinating [9]. The frequency of using smartphones to access online games has made teenagers awake during the night. The previous research stated that smartphone addiction shows poor sleeping quality. It means that online games also have the potential to adversely affect one's health [6], [10]. Sleep deprivation can risk an individual's health by having deficient hemoglobin. It can lead to heart disease due to overcompensation of the heart because of poor cardiac relaxation [11], [12].

Another previous study found game addicts result in neglecting drink and sleep and have poor health ratings, and are prone to suffer heart diseases [11],[13]. Hakim and Raj [14] found two categories of gaming impacts, namely positive and negative. They classify these impacts into social, clinical, academic, economic, and religious. However, it seems that the negative impact is more dominant than the positive impact [14]. Furthermore, the health effects of game addiction are changes in eating and in sleeping patterns that result in health effects such as ulcers and anemia [15].

This research aimed to explore the profiles of teenagers with gaming disorders and identify their plans or intention to quit playing or at least reduce their online game

habits. The urgency of this research emerges towards the Internet development might rapidly increase the online game disorders in society. Thus, it contributes to providing information for the public and policymakers to promote health issues of the people with gaming disorder and to define the intervention targets.

2. RESEARCH METHOD (reformatted the text with passive point of view)

2.1. Research Design

This study employed a qualitative method with a phenomenology approach to explore the profiles of teenagers with online game disorder and to identify their plans or intention to stop playing or at least reduce their online game habits.

2.2. Research Subject

The researchers determined the research subject by purposive sampling technique that considers characteristics according to inclusion criteria. There were six informants in this study.

2.3. Data Collection Method

The researchers collected the data from a semi-structured interview (in-depth interview) with open questions to obtain the gaming addiction scale and the informants' opinions. The research instrument was human with validated interview guidelines by experts.

2.4. Data Credibility

Members checking and data triangulation guaranteed the research data credibility. The researchers reported the results to the informants to ensure the information's accuracy. Furthermore, there was peer-checking to discuss the results of the interview. Then, the triangulation was measuring the scale of gaming addiction. The scale is the standard scale by Lemmens et al., [4], modified by Bai [16]. The researchers removed the neutral option to avoid neutral answers. As a result, all informants were in the high category of game addiction (Table 2).

2.5. Data Analysis

The researchers began the data analysis by examining the available data from interviews and triangulation. Then, they proceeded with phenomenology analysis by Creswell [17]. The researchers took the data analysis steps, such as organizing the data, reading the data, coding, developing themes and the data description, connecting the themes, and interpreting the data.

2.6. Ethical Approvals

This research uses an *Ethical Clearance* from the Ethics Committee of Ahmad Dahlan University number: 012010055.

Who examine the pulse, conjunctiva, and other status generalis? These were not explained in methods.

Where is table 1 cited??

3. RESULTS

3.1 The Informants' Profile

Table 1 presents the profile of the informants based on the interview. **Who examined the physical examination??? Why did the researcher do this examination??**

Table 1. The Profile of Teenagers with Gaming Disorder

Category	Informant 1	Informant 2	Informant 3	Informant 4	Informant 5	Informant 6
Age	23 years old	23 years old	24 years old	24 years old	24 years old	24 years old
Sex	Male	Male	Male	Male	Male	Male
Occupation	Student	Student	Student	Student	Student	Student
Blood Pressure	120/70 mmHg	110/70 mmHg	110/80 mmHg	100/60 mmHg	110/80 mmHg	120/80 mmHg
Pulse	85 x/minute	78 x/minute	80 x/minute	80 x/minute	82 x/minute	90 x/minute
Conjunctiva	Anemia	Anemia	Anemia	Anemia	Anemia	Anemia
Urine Color	Light yellow	Light yellow	Light yellow	Light yellow	Light yellow	Light yellow
Start playing game	Five years ago	Three years ago	Three years ago	Four years ago	Last year	Five years ago
Duration of playing game	More than five hours	19 hours	5 hours	6 hours	5 hours	More than 5 hours
Purpose of gaming	Game is really important, stress reliever, relaxing	Game is important, spare time activity	Entertaining, and feel entertained.	Game is important, as entertainment, spare time activity.	Game is really important, as entertainment, spare time activity.	Game is really important, spare time activity.
Gaming Habits	Playing games until dawn, when he plays the game, he often feels dissatisfied, so he can't stop playing. He stays up late every night, holds back his hunger, and delays his meals even though he feels hungry while playing.	He feels useless if he doesn't play the game. He feels he can use his time well if he plays games. Always actively playing games at night and sleep in the daytime. The most influencing factor why he plays games is because he is surrounded by gamers, too. He delays meals even though he feels hungry. He	He plays longer than the game time, doesn't want to stop playing, and keeps playing regardless of sore eyes. He always delays urinating until he finishes the game. He only goes urinating when he really can't hold it. He always plays along the night, sleeps in the morning, and wakes up in the afternoon.	He always stays up late to play games, delays his meals, and urinates when playing the games. And, he never pays attention to the time he takes on gaming.	He always feels tempted when he watches other people playing games and when he listens to the sound of the games. He cannot control himself when playing games. He stays up late at night and always delays his meals when playing.	He plays games in his spare time and always forgets time. He always stays up late at night and delays his meals and urinates when playing. Game is like his daily needs, and he thinks of it every time.

		plays also follows the trending e- sport.				
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Table 1. explains that the profile of teenagers with gaming disorders. Their ages, 23 to 24 years old, put them in the late teen's category as students. Their physical health indicators such as blood pressure, pulse, conjunctiva, and urine color were normal. They had been playing games for more than one year. Their gaming duration, which was more than three hours per day, categorized them as gaming disorder. They perceived gaming as enjoyable entertainment, a stress reliever, and a spare time activity. They proved to hold back their meals and said that they could not quit online games.

3.2 The Informants' Addiction Scale

There were 40 items to measure seven criteria of the online game addiction scale. The seven criteria are *saliency*, *tolerance*, *mood modification*, *withdrawal*, *relapse*, *conflict*, and the *problem* with the range of one to four favorable options. The total score of the 40 questions categorizes the test taker into low, moderate, and high. The researcher calculated the addiction scale with Sturges formula:

$$CI = \frac{Range}{C}$$

Notes:

CI: Class of Interval

Range: The difference between the highest and the lowest data

C: The number of Class

$$CI = \frac{(40 \times 4) - (40 \times 1)}{3}$$

$$CI = \frac{160 - 40}{3} = 40$$

Categories:

1. Low for scores 40-80
2. Moderate for scores 81-120
3. High for scores 121-160

Table 2. presents the research result on the informants' addiction scale.

Table 2. The informants' addiction scale

No.	Participant Code	Score	Category
1	P1	143	High
2	P2	151	High
3	P3	146	High
4	P4	145	High
5	P5	150	High

Table 2. explains that 100% of the informants were a high category of online game addiction scale. It indicates that the informants are addicted to online games. Afterward, the researchers measured the informants' intentions to reduce their game addiction level.

3.3. The Informants' Intention to Quit or Restrict the Online Gaming

Table 3. provides information about the informants' intentions and plans to reduce or quit online games.

Table 3. The distribution of the informants' intentions to reduce or quit online games

Informant	The result of the interview: Intention Questionnaire			
	Readiness	Time	Preparation	
	Plan to reduce or quit online games (maximally one hour per day) Yes/No	The amount of time to reduce or quit online games (maximally one hour per day): ... months/day	Preparation to quit online games: (checklist)	
Preparation: Set friendship boundaries with gamers? (Yes/No)			Preparation: Alternative activities to online games (hobbies or sports)? (Done, Not yet)	
1	No	-	Yes, still be friends	Not yet
2	No	-	Yes, still be friends	Not yet
3	Yes	Do not know. It's hard to decide.	Yes, still be friends	Not yet
4	Yes	Not sure	Yes, still be friends	Not yet
5	Yes	Don't know	Yes, still be friends	Not yet
6	Yes	Not for now. Do not know when.	Yes, still be friends	Not yet

The data in Table 3. clarifies that four of the six teenagers with gaming disorder stated that they were willing to restrict the online games even though they did not have fixed plans to alternate gaming and did not know yet when they would quit online games.

Meanwhile, the other two informants stated that they were not willing to quit online games. Conclusively, none of the teenagers with gaming disorder has intentions to restrict online games as they did not have any alternative activities to gaming, like hobby or sport. Furthermore, they could not think of when to quit online games.

3.4. The Obstacles in the Restriction of Online Gaming Intention

Table 4. presents the result of the interview on the obstacles in restricting online gaming.

Table 4. The interview result on the obstacles in restricting online gaming

The interview result on the obstacles in restricting online gaming					
Informant 1	Informant 2	Informant 3	Informant 4	Informant 5	Informant 6
<i>Friend's invitation, boredom, fun, free time, and self-control.</i>	<i>Friend's invitation, irresistible fun of gaming, the e-sport trend, target-oriented, difficulty in changing habits, and self-control.</i>	<i>Friend's invitation, the fun of gaming, data or wifi availability, the current trend of e-sport, target-oriented in the game, and difficulty in changing habits.</i>	<i>Surrounded by game lovers, self-control, always focus on the game, friend's invitation, boredom, difficulty in changing habits, irresistible fun of gaming, keep gaming despite feeling sick.</i>	<i>Friend's invitation, irresistible fun of gaming, problems of self-control, too detached to gaming, temptation on watching people playing games, forget the time.</i>	<i>Dissatisfaction, too detached to gaming.</i>

Table 4 summarizes that the obstacles in restricting online gaming by the teenagers with gaming disorder were their friend's invitation, the irresistible fun of playing games, problems of self-control or changing their habits, and the temptation of watching other people playing games. Five of six informants stated so. Meanwhile, other obstacles were boredom and the current trend of e-sport.

4. DISCUSSION

The data showed that all informants suffered from game addiction and excessive gaming [18]. The result of a study by Miswanto, Armitasari, dan Muhazir [19] with six male informants reveals that the scale of game addiction among male students was moderate in 68.84%. Similarly, a study by Chen, Oliffe, and Kelly [20] with male teenagers and early adults participants suggests that online game was addictive. Other studies also discover that male was prone to game addiction as much

as 97% [21], and male-dominated online game players as much as 95% [22]. These data indicate that male experiences game addiction than females.

The age of all of the informants was in the late teen category, as stated in the National Family Planning Coordinating Board [23]. According to data from Newzoo in 2017, the majority of gamers are millennials aged 21-35 years [8]. A study by Yosephine and Lesmana [24] elaborates a positive correlation between parenting style and online game addiction in late teenagers. Another study confirms that game addiction is mostly experienced by teenagers [25]. This study explains that late teenagers are more vulnerable to experience game addiction as they are still searching for their self-identity and are surrounded by people adapting to the current development.

The online game is a hobby by not only teenagers but also adults [8]. Informants 1, 2, 3, 4, and 6 said that game was their favorite hobby. Informant 5 did not say that he loved gaming, but he and his friends shared the same hobby. A hobby is a pleasant activity that can grow into a habit or routine. Based on some observations, the researchers know that every informant had a smartphone with gaming applications. It signifies that the informants have the supporting facilities for their hobby. A game is an activity that makes people feel happy and comforted [2]. Therefore, it is undeniable that playing games can make someone eager to play regardless of the time. Yet, playing games every day can make people addicted to it [27]. In addition to playing games as their hobbies, all informants had played games for more than six months.

According to its definition, game addictions refer to people who meet the criteria of addiction for six months [4]. Besides, all informants usually played games for more than three hours per day. Indeed, playing games is so fun that people can forget the time when playing. However, playing games for more than three hours per day can make someone addicted [28]. Anggarani points out that game addiction is persistence and continuous participation in a game for a long time [18]. In the current research, a triangulation method with the addiction scale showed that all informants experienced game addiction in the high category (100%).

Game addiction had also made the informant skipping their meals, urinating, and staying up late at night, so they experienced fatigue, dizziness, and low concentration. This finding is suitable with research conducted by Eijiden, et al. [29] in which there was a symptom of the game disorder and the use of social media that bring negative impacts to teenagers. Fitria mentions that there is a positive correlation between online gaming and sleeping pattern disorder [30]. Likewise, the current study found that the informants usually stayed up late at night when playing games. Sinanto and Djannah confirm that game addiction makes the informants neglecting their physical health [15].

The informants also skipped their meals when playing for more than three hours per day. This finding is similar to a study by Susanti et al. [31] in which she found the correlation between the online game on smartphones and eating habits. Moreover, a study by Angkow, Robot, dan Onibala [32] proves that there is a significant correlation between eating patterns and gastric incidents. On the other hand, delaying to urinate also results in serious health problems. Sari [33] discovers a correlation between the habit of holding urine and urinary tract infections. Ghuman and Griffiths [34] say that playing games have a negative impact, such as health problem, and Novrialdi [35] says that game addiction harms teenagers. Conclusively, the informants who had game addiction were at risk of health problems.

The current study identified that the informants did not want to quit the game because they felt challenged, dissatisfied, and could not control themselves when playing, even though they did not feel well. This data confirms the statement of the Ministry of Health in which a game-addicted person would continue playing despite knowing the negative impacts [36]. According to Hussain dan Griffiths, [37] some people usually play games excessively to escape from their life. An online game-addicted teenager is more interested in an online game than any other activity [38]. This notion is similar to Edrizal's [27] that online game addictions led to negative impacts, such as spending more time playing games on a computer or in the Internet cafe, so someone might skip studying and other activities that can harm their health. A study discovers that when the behavior of playing online games is repeated and accustomed, the dopaminergic pathways in the brain will be stronger and persist, causing addiction, which will strengthen the reactive system and weaken the reflective system. Hence, cognitive abilities decline, and someone would be difficult to control himself [39]. It is related to the behavior of informants who did not want to quit the game because they cannot control themselves in playing the game.

Every informant had known about the negative impacts of game addiction. Moreover, they had also experienced the effects of playing for a long time. They had understood the importance of time restriction of playing games on their health. Nevertheless, they found some problems reducing their gaming hours because of friendship, gaming hobbies, and game addiction. Darmawan, Nurwati, dan Gutama observe that a friendship circle strongly influences someone's behaviour [40]. Although the informants already had a good perception of the impacts of excessive gaming, they still had difficulties restricting themselves from gaming as they did not have a strong willingness to do it. The intention is an indication of an individual's readiness to perform positive behavior [41].

All informants are not yet ready to improve their behavior. According to the theory of the transtheoretical model, there are six stages of change, namely: pre-contemplation, contemplation, preparation, action, maintenance, termination. In this case, all informants are in the first stage as they did not have plans to start a healthy lifestyle soon (within six months) and probably do not realize the need to change [41]. The theory suggests that there should be health education for the informants to help them initiating healthy behavior. Behavior is the result of experience and the process of interaction with the environment which is manifested in the form of knowledge, attitudes, and actions [42]. According to Trijayanti, one's knowledge will stimulate a person to think, so he will be motivated to take action [43]. It implies that knowledge influences behavior change. Another thing that is no less important is that when a game addict enters a treatment, their survival must be considered after the process [44]. So that more severe mental illness will not infect them.

5. CONCLUSION

The research found that the overall profile of the informants was male, students, 21 to 24 years old, and experienced a high category of game addiction scale. For these teenagers, the game was an entertaining media of stress relief, can make them happy, and a spare time activity that can make them skipping meals, delaying urinary, staying up late, and difficult to quit playing. They did not want to restrict their gaming habit because of some obstacles, such as friend's invitations, the irresistible fun of playing games, problems in self-control, the temptation of seeing other people playing games, boredom, and the current e-sport trend.

6. SUGGESTION (should be inserted in the end of discussion)

This study suggests that parents of adolescents could review the functions of the family in providing education, affection, and protection to the teenagers, including proper arrangements from parents to their adolescent peers. Besides, other related parties may also encourage the health promotion efforts of teenagers in understanding the importance of online game restrictions to help them find various positive hobbies or activities.

Funding Statement

This research received funding from Universitas Ahmad Dahlan with the grant number PDUPT-001/SKPP.TJ/LPPM UAD/VI/2020.

Acknowledgments

Our appreciation goes to Universitas Ahmad Dahlan and the informants.

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Title: Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study

Thank you for giving me a chance to review the paper. The manuscript provides essential knowledge for teenagers and their parents.

The introduction provides the importance of the global problem, especially dealing with teenagers and online game.

The methodology is clear enough. Although, the manuscript has to recheck the guideline of the journal.

The result and conclusion of this manuscript mention the benefit of adolescent parenting.

The manuscript is better having proofread with a native professional.

Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study

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ABSTRACT

Background

Gaming disorder is a kind of mental disorder that applies to people who spend most of their spare time playing games and are addicted to playing online games. This condition is more common in adolescents and eventually could harm their health. Thus, the researchers are interested in studying teenagers' profiles and intentions to identify their efforts and obstacles in restricting the time spend playing online games.

Objective

This study aimed to explore the profile and addiction scales of teenagers with online gaming disorder and to identify their intentions, plans, and obstacles in reducing their addictions.

Method

The study employed qualitative research with a phenomenological approach. The research included six online gamer participants. The researchers selected the participants by using a purposive sampling technique. According to the scale of game addiction, the participants were game-addicted teenagers. The researchers collected the data with a guided interview and an observation list. They analysed the data using phenomenological analysis.

Results

The scale of addiction data showed that all informants were in a high category of addiction. This scale of addiction was in line with their profiles, which explained that they played games at least five hours a day because they perceived playing games as an urgent activity to relieve stress or as entertainment. When they played online games, they held back hunger and skipped their meals even though they were hungry, and they also often held back urinating. Moreover, their active gaming at night caused them to sleep in the daytime. In addition, the data showed that four of the informants stated that they had some intentions and plans to reduce or quit playing, but they did not have specific plans. They had not followed up on their readiness and had not known when to act. Some obstacles also prevented them from forming intentions to reduce or stop playing online games.

Conclusion

The profiles of the teenagers with gaming disorders showed a high level of addiction. They played online games as stress-relieving entertainment. When playing, they often tolerated hunger and thirst, refrained from urinating, and did not sleep at night. There were some teenagers with gaming disorders who had no intention of reducing or stopping their playing. Meanwhile, others were willing to reduce or quit playing, but they did not have any alternative activities and did not know when they would stop playing online games. Friends' invitations to play games, the fun of playing games, problems of self-control/habits, the temptation of watching other gamers playing, boredom, and the new trend of electronic game sports were the addictive teenagers' obstacles for controlling their online gaming.

Keywords: Teenagers, profile, intention in restricting online gaming

1. INTRODUCTION

According to ICD-11, gaming disorder is the diagnosis for a person who has no control over their gaming habits for at least 12 months, prioritises gaming over other interests or activities, and continues playing the game regardless of its harmful effects [1]. A game is an activity that can entertain and make people happy [2]. With the current development of information technology, online games on the computer, PlayStation, and smartphones with Internet connections are in high demand, especially for young people [3]. Online games are interesting because the players can interact with other players from different places [4]. Playing online games continuously without control leads to the development of negative behaviours for players, such as losing track of time and becoming addicted or gaming disorder [5].

Gaming disorder is characterized by excessive gaming for long periods of time [6]. The World Health Organization has categorized gaming disorder as a mental disorder [7]. In Indonesia, approximately 2.7 million gamers suffer from gaming disorder [8]. Based on observations on July 30, 2020 in a boarding house in Yogyakarta, Indonesia, the researchers found teenagers playing online games to meet their daily needs. They played the game during the daytime (morning to afternoon).

Similarly, the researchers found that teenagers play online games on their smartphones at traditional and modern cafes. When they played online games, they often neglected basic physical activities, such as eating, sleeping, and urinating [9]. The frequency of using smartphones to access online games has made teenagers stay awake at night. Previous research has stated that smartphone addiction shows poor sleeping quality, which means that online games also have the potential to adversely affect one's health [6], [10]. Sleep deprivation is a risk to an individual's health as it can cause a deficiency in haemoglobin. It can also lead to heart disease due to an overcompensation of the heart as a result of poor cardiac relaxation [11], [12].

Another previous study found that game addicts typically neglect drinking and sleeping, have poor health ratings, and are prone to suffering heart diseases [11], [13]. Hakim and Raj defined two categories of gaming impacts, namely positive and negative, and classified each impact in terms of its social, clinical, academic, economic, and religious relevance. However, it seems that the negative impacts outnumbered the positive ones [14]. Furthermore, additional health effects of game addiction include changes to eating and sleeping patterns that result in afflictions such as ulcers and anemia [15].

This research aims to explore the profiles of teenagers with gaming disorders and identify their plans or intentions to quit playing or at least to reduce their online

game habits. Because the Internet's constant development might rapidly increase online gaming disorders in society, there is a sense of urgency in this research and its findings. Thus, this study helps to provide information for the public and policymakers to increase awareness surrounding the health issues of the people with gaming disorder and to define the intervention targets.

2. RESEARCH METHOD

2.1. Research Design

A qualitative method with a phenomenological approach was used in this study to explore the profiles of adolescents with online gaming disorders. The method examined the individuals' age, gender, occupation, how long they've been playing games, the duration of their gaming, game functions, game habits, and physical conditions (such as blood pressure, pulse, conjunctiva, and urine colour). We also sought to understand their intentions of stopping or restricting their online gaming.

2.2. Research Subject

Purposive sampling was used to select informants in this study using inclusion criteria. In total, six informants were recruited in this study.

2.3. Data Collection Method

Qualitative data were collected by semi-structured interviews. Questions in an open-ended format were asked with the aim of determining the level of gaming addiction, as well as understanding the point of view and opinions of the informants. The in-depth interview guide was first validated by experts before being utilized in the study. During the interview, measurements of blood pressure, pulse rate, conjunctiva, and urine colour of the informants were taken by researchers who work as nurses.

2.4. Data Credibility

Triangulation and checking between informants were carried out to guarantee the credibility of the data taken by the researchers. After each data collection, the researchers provide a summary of the data taken to ensure its truth and accuracy. Triangulation was also carried out to measure the gaming addiction scale, which followed the standard protocol provided by Lemmens et al. [4] and modified by Bai [16]. In this study, the neutral option was removed by the researchers to prevent respondents from being inclined to choose this option when filling out the scale.

2.5. Data Analysis

The data were analysed in several steps. First, the researcher checked the available data. Then, the phenomenological analysis was carried out by following the Creswell method [17], which consists of organizing data, reading, coding, developing themes, describing the data, connecting the theme, and interpreting the data.

2.6. Ethical Approvals

This research received an *Ethical Clearance* from the Ethics Committee of Ahmad Dahlan University number: 012010055.

3. RESULTS

3.1 The Informants' Profile

Table 1 outlines the profile of teenagers with gaming disorders. Their ages (23–24 years old) put them in the late teen/student category. Their physical health indicators such as blood pressure, pulse, conjunctiva, and urine colour were normal. They had each been playing games for more than one year. Their gaming duration, which was more than three hours per day, confirms the gaming disorder diagnosis. They perceived gaming as enjoyable entertainment, a stress reliever, and an activity to play in their

spare time. They admitted to abstaining their meals while playing and said that they could not quit online games.

Table 1. The Profile of Teenagers with Gaming Disorder

Category	Informant 1	Informant 2	Informant 3	Informant 4	Informant 5	Informant 6
Age	23 years old	23 years old	24 years old	24 years old	24 years old	24 years old
Sex	Male	Male	Male	Male	Male	Male
Occupation	Student	Student	Student	Student	Student	Student
Blood Pressure	120/70 mmHg	110/70 mmHg	110/80 mmHg	100/60 mmHg	110/80 mmHg	120/80 mmHg
Pulse	85 x/minute	78 x/minute	80 x/minute	80 x/minute	82 x/minute	90 x/minute
Conjunctiva	Anemia	Anemia	Anemia	Anemia	Anemia	Anemia
Urine colour	Light yellow	Light yellow	Light yellow	Light yellow	Light yellow	Light yellow
Started playing games	<i>Five years ago</i>	<i>Three years ago</i>	<i>Three years ago</i>	<i>Four years ago</i>	<i>Last year</i>	<i>Five years ago</i>
Duration of gaming	<i>More than 5 hours</i>	<i>19 hours</i>	<i>5 hours</i>	<i>6 hours</i>	<i>5 hours</i>	<i>More than 5 hours</i>
Purpose of gaming	<i>Game is really important, stress reliever, relaxing</i>	<i>Game is important, spare time activity</i>	<i>Entertaining, and feel entertained.</i>	<i>Game is important, as entertainment, spare time activity</i>	<i>Game is really important, as entertainment, spare time activity</i>	<i>Game is really important, spare time activity.</i>
Gaming habits	<i>Playing games until dawn; when he plays the game, he often feels dissatisfied, so he can't stop playing; he stays up late every night; holds back his hunger and delays his meals even though he feels hungry while playing.</i>	<i>He feels useless if he doesn't play the game; he feels he can use his time well if he plays games; always actively playing games at night and sleeps in the daytime; the most influencing factor why he plays games is because he is surrounded by gamers, too; he delays meals even though he feels hungry; he also plays and follows the trending e-sports.</i>	<i>He plays longer than the game time, doesn't want to stop playing, and keeps playing regardless of sore eyes; he always delays urinating until he finishes the game; he only urinates when he really can't hold it; he always plays at the night, sleeps in the morning, and wakes up in the afternoon.</i>	<i>He always stays up late to play games, delays his meals and urination when playing the games; he never pays attention to the time he takes on gaming.</i>	<i>He always feels tempted when he watches other people playing games and when he listens to the sound of the games; he cannot control himself when playing games; he stays up late at night and always delays his meals when playing.</i>	<i>He plays games in his spare time and always loses track of time; he always stays up late at night and delays his meals and urination when playing; game is like a daily need and he thinks about it all the time.</i>

3.2 The Informants' Addiction Scale

There were 40 items to measure seven criteria of the online game addiction scale. The seven criteria were *salience*, *tolerance*, *mood modification*, *withdrawal*, *relapse*, *conflict*, and the *problem*, with the options of one to four favourable options. The total score of the 40 questions categorizes the test-taker into the low, moderate, or high category. The researcher calculated the addiction scale using the Sturges formula:

$$CI = \frac{Range}{C}$$

Notes:

- CI : Class of Interval
 Range : The difference between the highest and the lowest data
 C : The number of classes

$$CI = \frac{(40 \times 4) - (40 \times 1)}{3}$$

$$CI = \frac{160 - 40}{3} = 40$$

Categories:

1. Low: scores 40–80
2. Moderate: scores 81–120
3. High: scores 121–160

Table 2 presents the results on the informants' addiction scale. As expected, 100% of the informants scored in the highest category on the online game addiction scale, which indicates that they are addicted to online games. Afterwards, the researchers measured the informants' intentions to reduce their game addiction level.

Table 2. The informants' addiction scale

No.	Participant Code	Score	Category
1	P1	143	High
2	P2	151	High
3	P3	146	High
4	P4	145	High
5	P5	150	High
6	P6	144	High

3.3. The Informants' Intention to Quit or Restrict Online Gaming

Table 3 clarifies that four of the six teenagers with gaming disorder stated that they were willing to restrict the time spent playing online games even though they did not have fixed plans to do so and did not yet know when they would quit playing online games.

Meanwhile, the other two informants stated that they were not willing to quit online games. Conclusively, none of the teenagers with gaming disorder had intentions to restrict online games as they did not have any alternative activities to gaming like a hobby or sport. Furthermore, they could not think of a time to quit online games.

Table 3. The distribution of the informants' intentions to reduce or quit online games

Informant	The result of the interviews: Intention Questionnaire			
	Readiness	Time	Preparation	
	Plan to reduce or quit online games (maximally one hour per day) Yes/No	The amount of time to reduce or quit online games (in hour per day/month)	Preparation to quit online games: (checklist)	
Preparation: Set friendship boundaries with gamers? (Yes/No)			Preparation: Alternative activities to online games (hobbies or sports)? (Done, not yet)	
1	No	-	Yes, still be friends	Not yet
2	No	-	Yes, still be friends	Not yet
3	Yes	Do not know. It's hard to decide.	Yes, still be friends	Not yet
4	Yes	Not sure	Yes, still be friends	Not yet
5	Yes	Don't know	Yes, still be friends	Not yet
6	Yes	Not for now. Do not know when.	Yes, still be friends	Not yet

3.4. The Obstacles in the Restriction of Online Gaming Intention

Table 4 summarizes that the obstacles in restricting online gaming for the teenagers with gaming disorder were their friend's invitation to play, the irresistible fun of playing games, problems of self-control or changing their habits, and the temptation of watching other people play games. These obstacles were reported by five of the six informants. Additional obstacles mentioned were boredom and the current trend of e-sports.

Table 4. The interview results on the obstacles of restricting online gaming

Informant 1	Informant 2	Informant 3	Informant 4	Informant 5	Informant 6
Friend's invitation, boredom, fun, free time, and self-control.	Friend's invitation, irresistible fun of gaming, the e-sports trend, target-oriented, difficulty in changing habits, and self-control.	Friend's invitation, the fun of gaming, data or Wi-Fi availability, the current trend of e-sports, target-oriented in the game, and difficulty in changing habits.	Surrounded by game lovers, self-control, always focus on the game, friend's invitation, boredom, difficulty in changing habits, irresistible fun of gaming, keep gaming despite feeling sick.	Friend's invitation, irresistible fun of gaming, problems of self-control, temptation on watching people playing games, losing track of time.	Dissatisfaction, too detached to gaming.

4. DISCUSSION

The data showed that all informants suffered from game addiction and excessive gaming [18]. The previous study which investigated six male informants, revealed that the scale of game addiction among male students was moderate (68.84%) [19]. Similarly, a study by Chen, Oliffe, and Kelly [20] suggested that online game was addictive for male teenagers and early adults. Other studies also discovered that males were prone to game addiction as much as 97% [21], and male-dominated online game players as much as 95% compared to female [22]. These data indicate that males experience more game addiction than females.

The age of all the informants was in the late teen category, as defined by the National Family Planning Coordinating Board [23]. According to data from Newzoo in 2017, the majority of gamers are millennials aged 21–35 years [8]. A study by Yosephine and Lesmana [24] described a positive correlation between parenting style and online game addiction in late teenagers. Another study confirms that game addiction is mostly experienced by teenagers [25]. This study explains that late teenagers are more vulnerable to experiencing game addiction as they are still searching for their self-identity and are surrounded by people adapting to their own current development.

Playing online games is a hobby of adults as well as teenagers [8]. Informants 1, 2, 3, 4, and 6 said that playing games was their favourite hobby. Informant 5 did not say that he loved gaming, but that he and his friends shared the same hobby. A hobby is a pleasant activity that can grow into a habit or routine. Based on some observations, the researchers know that every informant had a smartphone with gaming applications, which signifies that the informants have the supporting facilities for their hobby. A game is an activity that makes people feel happy and comforted [2]; therefore, it is undeniable that playing games can make someone eager to play regardless of the time of day. However, playing games every day can lead to addiction [27]. In addition to characterizing games as hobbies, all informants had regularly played games for more than six months.

According to its definition, game addictions refer to people who meet the criteria of addiction for six months [4]. In addition, all informants usually played games for more than three hours per day. Indeed, playing games is so fun that people can lose track of time while playing. However, playing games for more than three hours per day can someone to become addicted [28]. Anggarani points out that game addiction is understood as persistence and continuous participation in a game for a long time [18]. In the current research, a triangulation method with the addiction scale showed that all informants experienced game addiction to a high degree (100%).

Game addiction also caused the informants to skip their meals and urination and stay up late at night, so they experienced fatigue, dizziness, and a low ability to concentrate. This finding is suitable with research conducted by Ejjiden et al. [29], which described the negative impacts of game disorder symptoms and social media use on teenagers. Fitria mentioned that there is a positive correlation between online gaming and sleeping pattern disorder [30]. Likewise, the current study found that the informants usually stayed up late at night when playing games. Sinanto and Djannah confirmed that game addiction causes the informants to neglect their physical health [15].

The informants also skipped their meals when playing for more than three hours per day. This finding is similar to a study by Susanti et al. [31] in which a correlation was found between online games on smartphones and eating habits. Moreover, a study by Angkow, Robot, and Onibala [32] proves that there is a significant correlation

between eating patterns and gastric incidents. On the other hand, delaying urination also results in serious health problems. Sari [33] discovered a correlation between the habit of holding urination and urinary tract infections. Ghuman and Griffiths [34] stated that playing games have negative impacts such as health problems, and Novrialdi [35] explained that game addiction harms teenagers. Conclusively, the informants who had game addiction were at risk of health problems.

The current study observed that the informants did not want to quit the game because they felt challenged, dissatisfied, and could not control themselves when playing even though they did not feel well. This data confirms the statement by the Ministry of Health on game addiction that explains how a game-addicted person will continue playing despite knowing its negative impacts [36]. According to Hussain and Griffiths [37], some people usually play games excessively to escape from their lives. An online game-addicted teenager is more interested in an online game than any other activity [38]. This notion is similar to Edrizal's [27] findings, which state that online game addictions have negative impacts, such as spending more time playing games on a computer or in the Internet cafe, so someone might skip studying or other activities that can harm their health. A study also discovered that when the behaviour of playing online games is repeated and normalized, the dopaminergic pathways in the brain will be stronger and persist, thus causing addiction, which will then strengthen the reactive system and weaken the reflective system. This leads to the decline of cognitive abilities decline, making it difficult for individuals to control themselves [39]. This reflects the behaviour of the informants who did not want to quit the game because they cannot demonstrate self-control and keep themselves from playing.

Every informant was aware of the negative impacts of game addiction. Moreover, they had also experienced the effects of playing for long periods of time and understood the importance of time restriction when playing games regarding their health. Nevertheless, they found some problems in reducing their gaming hours because of friendship, gaming hobbies, and game addiction. Darmawan, Nurwati, and Gutama observed that a friendship circle strongly influences one's behaviour [40]. Although the informants already perceived the impacts of excessive gaming, they still had difficulties restricting themselves from gaming as they did not have a strong willingness to do so.

All informants are not yet ready to improve their behaviour. According to the theory of the transtheoretical model, there are six stages of change: pre-contemplation, contemplation, preparation, action, maintenance, and termination. In this case, all informants are in the first stage since they did not have plans to start a healthy lifestyle soon (within six months) and probably do not realize the need to change [41]. The theory suggests that there should be some type of health education for the informants to help them in initiating healthy behaviours. Behaviour is the result of experience and the process of interaction with the environment which is manifested in the form of knowledge, attitudes, and actions [42]. According to Trijayanti, knowledge will stimulate a person's thinking, which in turn motivates them to take action [43]. It implies that knowledge influences behavioural change. Another important aspect to consider is that when a game addict begins treatment, their well-being must be considered after the process as well [44] so that more severe mental illness will not infect them.

This study suggests that parents of adolescents could review the functions of the family in providing education, affection, and protection to teenagers. This includes providing rules or signs for making friends with peers. Additionally, other related parties may also encourage the health promotion efforts for teenagers in understanding

the importance of online game restrictions to help them find alternative hobbies or activities that have more positive effects.

5. CONCLUSION

The research found that the overall profile of the informants was male students aged between 21 to 24 years old who experienced a high level of game addiction. For these teenagers, the game was an entertaining activity that relieved stress and made them happy and that they played in their spare time, but that caused them to skip meals, delay urination, stay up late, and have trouble quitting. They did not want to restrict their gaming habits because of some obstacles, such as friend's invitations to play games, the irresistible fun of playing games, problems regarding self-control, the temptation of seeing other people playing games, boredom, and the current e-sports trend.

Funding Statement

This research received funding from Universitas Ahmad Dahlan with the grant number PDUPT-001/SKPP.TJ/LPPM UAD/VI/2020.

Acknowledgments

We are appreciative of the Universitas Ahmad Dahlan for funding this research and the informants who involved in this study.

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<p>To the editorial board of the journal Macedonian Journal of Medical Sciences,</p> <p>First, I would like to thank the editors and reviewers for our article entitled Exploration of the Profile and Intention in Restricting Online Game in Teenagers with Gaming Disorder: A Qualitative Study.</p> <p>Furthermore, the article has been revised according to the input and proofread to the native (the certificate is attached). If there is anything else we need to improve, please let me know.</p> <p>Furthermore, we hope that there is a positive possibility for our article to be published in this journal.</p> <p>Thank you, Sitti Nur Djannah.</p>	<p>sittinur_93 2021-10-03 01:46 AM</p>

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Furthermore, the article has been revised according to the input and proofread to the native (the certificate is attached). If there is anything else we need to improve, please let me know.

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