

The Exploration Novelty Seeking Factors Associated with Online Gaming Addiction among Adolescents in Malaysia

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Published: 25 March 2025

To cite this article (APA): Muhamad Nor Bakri, S. N. S., & Mohamed, N. F. (2025). The Exploration Novelty Seeking Factors Associated with Online Gaming Addiction among Adolescents in Malaysia. *EDUCATUM Journal of Social Sciences*, 11, 1-14. <https://doi.org/10.37134/ejoss.vol11.sp.1.2025>

To link to this article: <https://doi.org/10.37134/ejoss.vol11.sp.1.2025>

ABSTRACT

Online gaming has become a common activity among adolescents in Malaysia. Hence, this study explored the novelty-seeking factors associated with online gaming addiction among adolescents in Malaysia. This study involved qualitative research in which 12 adolescents that were recruited through purposive sampling. Data were collected through interviews using several semi-structured questions after adolescents underwent a screening process using the Brief Sensation Seeking Scale (BSSS-8) and Internet Gaming Disorder (IGDSF-9). The interview transcript was analyzed using the thematic analysis method. The novelty-seeking factors that influence adolescents to become addicted to play online games have indicated three themes with eleven sub-themes, which are (a) experience-seeking factors, including enjoyable features, peer influence, skill development, making new friends, stress relief, role models, and generating side income, (b) thrill and adventurous seeking factors, including reward systems and challenging game features, and (c) boredom factors, including boredom and fulfilling leisure time. This research study can be a guideline to identify the factors that can influence adolescents to play Internet games and provide insight for early treatment that can be taken to prevent adolescents from becoming seriously addicted to games. Besides, this study also provides a depth understanding from the informant's perspective about the three significant novelty-seeking factors that may be associated with their gaming behavior.

Keywords: Online gaming addiction, novelty seeking factors, adolescents

INTRODUCTION

In this globalized era, the availability of the Internet, smartphones, and computers has become essential, especially for gamers. The popularity of Internet gaming has increased, making it a common leisure activity. According to Paulus et al. (2018), Internet gaming has become a common activity for adolescents, with some spending more than 11 hours per day playing online games. Based on the Entertainment Software Association, about 21% of online gamers consist of adolescents under the age of 18 years (Ling et al., 2021). The changes in lifestyle among adolescents influence them to use Internet games excessively, which may lead to Internet Gaming Disorder (IGD). Adolescents have a higher prevalence of IGD, exceeding 20% in many regions (Hong et al., 2022). In addition, a study by Torres-Rodríguez et al. (2018) reported that adolescence is viewed as a life stage where individuals usually experience psychological disorders due to Internet gaming addiction, such as hormonal imbalance, cognitive impairment, social dysfunctions, and neurobiological immaturities.

In the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; American Psychiatric Association [APA], 2013), the excessive playing of Internet games is indicated as a behavioral addiction condition referred to as Internet Gaming Disorder (IGD). The World Health Organization (WHO) recognizes Internet gaming disorder (IGD) as a condition that causes problems in daily life due to excessive interest in online games. According to Bekir and Çelik (2019), individuals

who have a tendency to develop online game addiction during adolescence can be attributed to sensation seeking (novelty seeking), allowing adolescents to pursue new opportunities for new experiences and risky behaviors. There are also a few studies that have examined the relationship between sensation seeking and online gaming addiction and found evidence on the positive effect of sensation seeking on adolescents' internet addiction (Bekir and Çelik, 2019 & Şalvarlı and Griffiths, 2021).

According to the study by Giustiniani et al. (2022), sensation seeking is characterized by a greater demand for novelty and exciting experiences and by thrill seeking regardless of associated risks. Idriyani et al. (2021) also argued that sensation seeking consists of four dimensions including (a) experience seeking that defined as the search for experiences through inappropriate mind and feelings, trips, and lifestyles, (b) thrill seeking which thrill and adventure seeking contains things that involved a desire to be in activities that have speed or danger and challenging gravity, (c) boredom which is an aversion to monotony, repetition, boring people, boredom and routine that not change, and (d) disinhibition that interpreted as behavior that ignores social barriers such as fighting and seeking social stimulation.

Most gamers immerse themselves in gaming because it gives the adolescent an instant gratification which providing a sense of achievement and makes them become addicted due adrenaline rush when facing a new challenge in a game. Therefore, the pleasure of Internet gaming can fulfill their needs of adventure, novelty seeking, and obstacles when winning or reaching some level of achievement in the game and influence them to play more and to win it again and again. Adolescents also addicted to online gaming because they can escape from real life interaction due to Internet gaming which involves virtual interaction with other players which make them ignore the surrounding relationships. The issue of longer time spent in playing Internet gaming can develop symptoms of compulsive online gaming players leading to psychological distress and negative health consequences due to long hours of playing online games, lack of sleep, sleep problems, and ignoring meals. Hence, the problem arises from the Internet gaming addiction that needs to be examined to identify the factors causing novelty seeking among adolescents with addiction to online gaming in the Malaysia. Therefore, this study aims to explore the novelty seeking factors associated with addiction to online gaming among adolescents in Malaysia.

MEHODOLOGY

Research Design

This study employs a qualitative research design, utilizing in-depth individual interviews with semi-structured questions to investigate the novelty-seeking factors associated with online gaming addiction among adolescents. This research design aims to elucidate, provide a deeper understanding of, and enhance exploration into the opinions, behaviors, and experiences of the informants regarding online gaming addiction. The interview questions were open-ended, facilitating the collection of information. Teng et al. (2021) argued that a qualitative approach involving interviews can contribute to obtaining research findings based on real scenarios and generate numerous ideas for future research. This research not only identifies novelty-seeking factors leading to online gaming addiction among adolescents but also serves as a catalyst for uncovering additional factors. Consequently, it paves the way for the exploration of novel factors influencing online gaming addiction among adolescents in the future.

Sample Size and Population

According to Vasileiou et al. (2018), qualitative research recommends a minimum sample size of at least 12 interviews to achieve data saturation. In line with this guidance, Balakrishnan and George (2020) recruited 15 adolescents, aged 13 to 17 years with high Internet Gaming Disorder (IGD) scores, for semi-structured interviews. These interviews aimed to extract comprehensive information from participants, and data related to their gaming behavior, as well as its impact on social skills, emotional well-being, and critical thinking, were found to be saturated. Therefore, based on the precedent set by Balakrishnan and George (2020), a sample size of 12 informants exhibiting high sensation-seeking scores and symptoms of Internet gaming addiction was deemed sufficient for qualitative analysis in this

study. The target population comprises secondary school students aged 16 to 17 years who engage in online gaming. Data collection through semi-structured interviews was conducted face-to-face in Langkawi and via online interview.

Sampling Method

This study was conducted in an area in Langkawi, Malaysia and the purposive sampling method was employed to recruit informants. In qualitative research, a small, purposively selected sample is a suitable method for selecting informants to enhance the depth of understanding (Campbell et al., 2020). Campbell et al. (2020) also noted that purposive sampling can help meet required criteria and provide a deeper knowledge of the phenomena under study. Therefore, this research study was purposive sampling to select informants based on inclusion and exclusion criteria. The inclusion and exclusion criteria are as follows:

The inclusion criteria for this study encompass adolescents aged between 16 and 17 years who attend schools during the study, possess the ability to read and understand Bahasa Malaysia or English, have access to a smartphone or computer at home, and have previously played Internet games. Adolescents must also self-identify as having Internet gaming addiction, scoring a minimum of 9 on the Internet Gaming Disorder Scale (IGDS9-SF) and more than 16 on the Brief Sensation Seeking Scale (BSSS-8). According to Qin et al. (2020), a minimum score of 9 indicates symptoms of Internet gaming addiction in adolescents. Additionally, Merino-Soto et al. (2022) stated that scores of 16 and above on the Brief Sensation Seeking Scale (BSSS-8) indicate high sensation seeking. The exclusion criteria for this study consist of adolescents from boarding schools, adolescents with special needs, and adolescents who are unable to read.

Instruments

There are four instruments used in this study:

Demographic Questionnaire

This questionnaire was provided to informants to collect demographic data. The form is designed to gather information on informants' age, gender, ethnicity, religion, parent/guardian details, time spent on Internet games, and relationship status with parents/guardians and friends. Informants were required to fill in their information in the provided Google form.

Internet Gaming Disorder Scale (Short Form) (IGDS9-SF)

The IGDS9-SF was distributed to participants to identify the level of Internet gaming addiction, specifically tailored for Malaysian adolescents. It consists of nine core criteria of Internet Gaming Disorder (IGD), including developing preoccupation with online gaming, experiencing withdrawal symptoms or tolerance, a desire to escape adverse life events, continuous use despite resulting psychosocial problems, deceitful behavior regarding gaming habits, failed attempts to control, neglecting other interests, and psychosocial impairments (Jaafar et al., 2021 and Ling et al., 2021). Each of the nine items in IGDS9-SF is rated on a Likert scale: 1 (never), 2 (rarely), 3 (sometimes), 4 (often), and 5 (very frequent). According to Ismail et al. (2021), the prevalence of Internet gaming disorder (IGD) among 237 participants in Malaysia is 2.5%, indicating that a small number of participants in Malaysia obtain high scores in IGDSF-9. Therefore, this study will assess participants who exhibit symptoms of Internet gaming addiction. Based on a study by Qin et al. (2020), a score of 9 and above indicates symptoms of Internet gaming.

Brief Sensation Seeking Scale (BSSS-8)

The BSSS-8 was distributed to participants to identify the level of novelty. The BSSS is an 8-item questionnaire adapted from the Sensation Seeking Scale with four subscales to assess individual

differences in the optimal level of stimulation to measure sensation seeking in adolescents, including Experience Seeking, Thrill Seeking, Disinhibition, and Boredom. The eight items are combined to create a total sensation-seeking (SS) score, rated on a five-point Likert scale ranging from 1 (Disagree Strongly) to 5 (Agree Strongly). Total scores are summed up, with the lowest and highest possible scores being 4 and 16, respectively. In this study, higher scores indicate higher levels of sensation seeking (Merino-Soto et al., 2022).

Semi-Structured Questions sheet

Semi-structured questions were used as a guide for the interview session. These questions were drafted based on the questionnaires in the Internet Gaming Disorder Scale (Short Form) (IGDS9-SF) to explore distinct themes of novelty-seeking factors associated with Internet gaming addiction, such as demographic details, types of games played, duration of game plays, opinions, and experiences in playing games. Below are some sample of the interview question:

Table 1 Semi-Structured Interview Questions

Constructs	Key Questions
Internet Gaming	1. In your opinion, what are the factors that influences you to play online games? 2. What benefits do you get while playing online games? 3. How is your feelings when play online games?
Experience Seeking Factors	4. What makes you think the online games is interesting? 5. In your perspective, what kind of experience do you looking for when you playing online games? 6. Who influence you to play online games? 7. What are the skills did you get from the games?
Thrill Seeking Factors	8. What are the challenges that you face in the Internet game that make you continue to play it? 9. What does the game provide or offer when you play the game?
Boredom Factors	10. Why do you use online game to relieve the boredom? 11. How do you overcome your boredom or loneliness?
Disinhibition Factors	12. How is your relationship with family and friends? 13. How do you feel when someone forbids you to play this game?

Procedures

In this study, the purposive sampling methods were used for the recruitment of participant. Data were collected using an online survey, including socio-demographic, IGDS9-SF, and BSSS-8 questionnaires distributed to potential informants via Google Form. Informants were selected based on scores exceeding 9 on the Internet Gaming Disorder Scale (IGDS9-SF) indicated to have symptoms of Internet gaming addiction (Qin et al., 2020) and scores exceeding 16 on the Brief Sensation Seeking Scale (BSSS-8) are indicated to have high sensation seeking based on the study by Merino-Soto et al. (2022) were undergo the one-to-one interview session using several semi-structured questions. After that, informed consent was granted from the participant and parent of the informant that fulfilled the inclusion and exclusion criteria.

The questionnaires given to the participant were in Malay and English language. All the participant invited to involved in the study and the interview was conducted using semi-structured

questionnaires in Langkawi at the suitable place or online interview for the participant who have difficulty to present physically. The interview involved 12 adolescents with durations of 45-60 minutes for each informant. The interview session was carried in Malay language. All the informants who volunteered were provided with consent forms for audio recording, and after obtaining consent, interview session was taped and audio recordings were transcribed for analysis. Then, interview transcript was translated into English language. Meanwhile, ethical approval was granted by the Human Research Ethics Committee at Sultan Idris Education University (2020-0171-106-01).

Participants

There were 12 informants were recruited from two different school in Langkawi, Kedah. In the results, it was observed that the participants belonged to the same race and fulfilled all inclusion and exclusion criteria. The online survey revealed that the sample group consisted of 9 male informants (75%) and 3 female informants (25%) in Table 2. The majority of the interviewed informants were aged 17 (33.3%), while the remaining informants were aged 16 (66.6%). Most of the informants reported having a good relationship with their parent or guardian. Regarding relationships with friends, 10 informants reported having a good relationship (83.3%), while 2 informants reported having a moderate relationship with friends (16.7%). This demographic information required to indicate the relationship of the adolescent with their surrounding relationships and factors for them to escape from real life interaction due to Internet gaming which involves virtual interaction with other gamers.

Table 2 Demographics information of informant and the relationship status with parent/guardian and friends.

Informant	Gender	Age	Race	Relationship with Parent/Guardian	Relationship with Friends
1	Male	16	Malay	Good	Good
2	Female	17	Malay	Good	Good
3	Male	17	Malay	Good	Moderate
4	Male	17	Malay	Good	Good
5	Male	16	Malay	Good	Good
6	Male	16	Malay	Good	Good
7	Female	17	Malay	Good	Good
8	Female	17	Malay	Good	Good
9	Male	17	Malay	Good	Good
10	Male	17	Malay	Good	Good
11	Male	17	Malay	Good	Moderate
12	Male	17	Malay	Good	Good

In Table 3, the demographics information of parent or guardian details of informants are required to indicate the parent or guardian hostility toward the child, ability to give affection and supervision to monitor the tendency to play games in the child due to their career commitment and status. Based on Ankara and Baykal (2022), family income affecting digital gaming addiction due to having an internet connection in the house. Therefore, the parent or guardian income was included to discover present internet connection and ability to buy additional items in the Internet games which can leads to the time spent on Internet games. The sample group in the results also showed that 5 informants had a father who worked, and the mother was a housewife (41.7%), while the other 7 informants had both parents working (58.3%). Regarding the status of the parent or guardian, the majority of the informants reported that their parents were still together (100%). Approximately 5 informants were categorized under B40 (41.7%), while 7 informants were under M40 (58.3%) in terms of parent income.

Table 3 Demographics information of parent or guardian details of informants

Informant	Occupation of parent/guardian	Status of parent/guardian	Category of parent/guardian's income
1	Both are working	Still together	B40
2	Father works, mother is a housewife	Still together	M40
3	Both are working	Still together	M40
4	Father works, mother is a housewife	Still together	M40
5	Father works, mother is a housewife	Still together	M40
6	Father works, mother is a housewife	Still together	M40
7	Both are working	Still together	B40
8	Both are working	Still together	B40
9	Both are working	Still together	B40
10	Both are working	Still together	B40
11	Both are working	Still together	M40
12	Father works, mother is a housewife	Still together	M40

RESULTS

Descriptive statistics and study variables

Table 4 indicates the time spent playing Internet games by informants during school days and weekends. During the school day, 10 informants spent about 3-4 hours a day, and 2 informants spent more than 7 hours (16.7%). On weekends, 3 informants spent about 3-4 hours a day (25%), 7 informants spent about 5-6 hours a day (58.3%), and 2 informants spent more than 7 hours (16.7%). This demographic information was used to discover the adolescent's tendency to develop online game addiction based on the time spent on Internet games.

Table 4 Demographics information of time spent play Internet games by informants

Informant	Time spent during the school day	Time spent in a day on weekends
1	More than 7 hours a day	More than 7 hours a day
2	3 - 4 hours a day	5 - 6 hours a day
3	3 - 4 hours a day	5 - 6 hours a day
4	3 - 4 hours a day	3 - 4 hours a day
5	3 - 4 hours a day	3 - 4 hours a day
6	3 - 4 hours a day	5 - 6 hours a day
7	3 - 4 hours a day	3 - 4 hours a day
8	3 - 4 hours a day	5 - 6 hours a day
9	More than 7 hours a day	More than 7 hours a day
10	3 - 4 hours a day	5 - 6 hours a day
11	3 - 4 hours a day	5 - 6 hours a day
12	3 - 4 hours a day	5 - 6 hours a day

The mean score and standard deviation of the Brief Sensation Seeking Scale were (M=18.3, SD = 0.33), while the mean score and standard deviation of Internet Gaming Disorder were (M=18.2, SD = 0.67). Based on these results, the informants (n=12) qualified for the interview session because the majority scored more than 16 on the Brief Sensation Seeking Scale and more than 9 on the Internet Gaming Disorder Scale, indicating symptoms of Internet gaming addiction.

Summary of Theme

From the information obtained from 12 adolescents (9 males and 3 females), there three themes were emerged on novelty seeking factors associated with Internet gaming addiction among adolescent which were experience seeking, thrill seeking and boredom. In addition, there was evidence the presence of sub-themes that contributed to each theme. Table 5 summarizes the key themes and their respective sub-themes.

Table 5 Theme and sub-theme of novelty seeking factors related with Internet gaming addiction among adolescents

Theme	Sub-theme	Transcripts
1. Experience Seeking Factor	1.1 Enjoyable features	"The action in the game. Interesting action and interesting power that available in the game." (Informant 4) "The capacity of the players are big, so we don't have to choose who we want to play with and we can play with everyone. So that's why I enjoy playing." (Informant 10)
	1.2 Peer Influence	"For me, the one who makes me feel the best to play is my friend, who always plays with me." (Informant 4) "Another factor... Invitation from friends to play games together... and try games..." (Informant 6)
	1.3 Skill development	"When play games, we must face person who like to angry in game and It make me to learn be a patience person by trying to hold back anger and do not get too angry at them." (Informant 1) "Learn to communicate more so that our voice is heard or it's easy to communicate with people... Communicate like to give ideas to talk to people we don't know to get more knowledge from foreigners." (Informant 4)
	1.4 Make new friend	"I able to meet new people and... This game also can make friends with the people that closest to us." (Informant 3) "It's also fun to make new friends and chat with people. Make new friends." (Informant 4)
	1.5 Stress relief	"Playing games is the way I choose to entertain myself. So I'm not stressed." (Informant 10) "A reason I play games is to relieve stress." (Informant 11)
	1.6 Role model	"My family play a lot of games. So, that make me interested in playing that game." (Informant 10) "So the second reason I downloaded the game because I follow my sister." (Informant 11)
	1.7 Generate side income	"Because when I playing games, I can earn a lot more money. The token, the support, the teammates that support us

continued

		in the game actually it can sell to get money" (Informant 12)
2. Thrill Seeking Factor	2.1 Reward system	"There is a next level. Every game, it will level up when we win. So, we can go to the next level." (Informant 2)
	2.1 Challenging features	"When I win, I will get something like... like a score or points to become the global top. For example, right now I have been able to reach number 2000 in this world." (Informant 3)
3. Boredom Factor		"The challenge is usually because of the players, sometimes there are people from outside country who good in play games" (Informant 2)
	3.1 Bore	"The reason is for me to improve myself when play with my friends because their level is too high for me. So I have to play and grind to be at the same level as them." (Informant 4)
		"Chance to play games during school holidays. Because it is a bit boring after studied and finished the homework" (Informant 11)
	3.2 Fulfill leisure time	"Because of bore like... there's nothing to do hmm, like the homework is done, I just sit down and relax. So I play the game. If I am bored, I just play it." (Informant 12)
		"For me, I play the game to fill my free time." (Informant 3)
		"Filling free time during the PKP. Because of the PKP, we cannot do activities at outside" (Informant 10)

Theme 1: Experience Seeking Factor

Under the experience-seeking factor, seven sub-themes emerged, highlighting aspects crucial to adolescents engaging in online gaming.

1.1 Enjoyable Game Features

A captivating and enjoyable element in the gameplay can contribute to sustained engagement and enhances adolescents' excitement. The variety in designs and colors in online games also elevates the enjoyment, showcasing the impact of visual elements on adolescents' engagement. According to one informant, the visual and artistic elements of internet games, including designs and colors, were identified as essential factors in enhancing adolescents' gaming experiences, attracting them to engage since early age.

"I've been playing since the 1st and 2nd grade because the game is so interesting... The most interesting thing is that the game has a variety of designs and colors." (Informant 8)

1.2 Peer Influence

Peer influence emerged as a vital factor, with adolescents expressing the desire to play games to connect with friends and avoid feeling left out. In this matter, the popularity of the game among peers and the encouragement to play together significantly influenced adolescents' decisions to engage in online gaming.

"The main factor is, of course, because I enjoy watching my friends play the game. I also want to join play the game with them because I don't want to be different from other people." (Informant 5)

1.3 Skill Development

Online games serve as a platform for adolescents to develop social skills and overcoming introversion through interactions with diverse individuals. The medium offers in the online games motivate the adolescent promoting courage and communication skills that can help them in future. According to Informant 7:

"It helps to encourage myself to communicate... communicate with other people... make myself more courageous to take on challenges in various matters." (Informant 7)

1.4 Making New Friends

Online games foster a sense of friendship and engagement with new friends, allowing adolescents to build meaningful connections. Adolescents use online gaming as a platform to make new friends, particularly during periods of increased screen time, such as the Movement Control Order (MCO) season and school holiday. This has been agreed upon by most of the respondents from the interview session.

"I might be able to meet new people and still be able to do that when playing the game. I can make friends with the people closest to us." (Informant 2)

1.5 Stress Relief

Gaming serves as a stress reliever for adolescents, offering an escape from real-life challenges and providing a positive and entertaining experience. The immersive and entertaining nature of online games contributes to stress alleviation, with adolescents finding solace in the camaraderie of online friends.

"Can reduce stress. Being able to spend time with friends... Due to schooling, studying, homework." (Informant 6)

1.6 Role Model

Family members, particularly siblings, play a significant role as role models, influencing adolescents to imitate their gaming behavior. Family gaming behaviors, especially among siblings, inspire adolescents to engage in gaming to avoid feeling left out.

"I started playing since I was little... got it from my brother. Even my father used to sometimes play games... it's like an inheritance." (Informant 1)

1.7 Generate Side Income

The potential to earn income through online gaming, such as selling game accounts or in-game items, emerged as a motivating factor. As mentioned by Informant 11, adolescents tend to engage in online gaming with the goal of generating side income, showcasing the economic opportunities within the gaming environment.

"I play the ML (Mobile Legend) game because the account... of the game can be sold to generate income... I'm also a collector... of that thing to sell, and it can generate income." (Informant 11)

Theme 2: Thrill Seeking

Within the thrill-seeking factor, two sub-themes were identified: reward system and challenging game features.

2.1. Reward System

The reward system, such as receiving valuable items or points, acts as positive reinforcement, encouraging continued engagement and excitement among adolescents. The informants stated that rewards positively impact adolescents' engagement, motivating them to pursue achievements and level up within the game.

"Because the game is fun... if we play, we can get a reward... it's like the game is giving money as rewards." (Informant 1)

2.2 Challenging Game Features

Overcoming challenges, especially from formidable opponents, serves as a source of encouragement, fostering motivation and arousal to enhance gaming skills. Few narratives provided by informants support that the interactive and competitive nature of modern online games, coupled with challenging features, motivates adolescents to persevere and improve their performance.

"The challenge is from the opponent... difficult to defeat... I want to try my best to fight them." (Informant 1)

Theme 3: Boredom

Under the boredom theme, two sub-themes emerged: boredom and fulfilling leisure time.

3.1 Boredom

Online gaming provides an avenue for adolescents to combat boredom, particularly during idle times or when faced with monotonous activities. Adolescents turn to gaming to alleviate boredom, seeking an engaging and entertaining alternative to mundane routines.

"When my school work is done and the TV channel is boring too... I play games." (Informant 3)

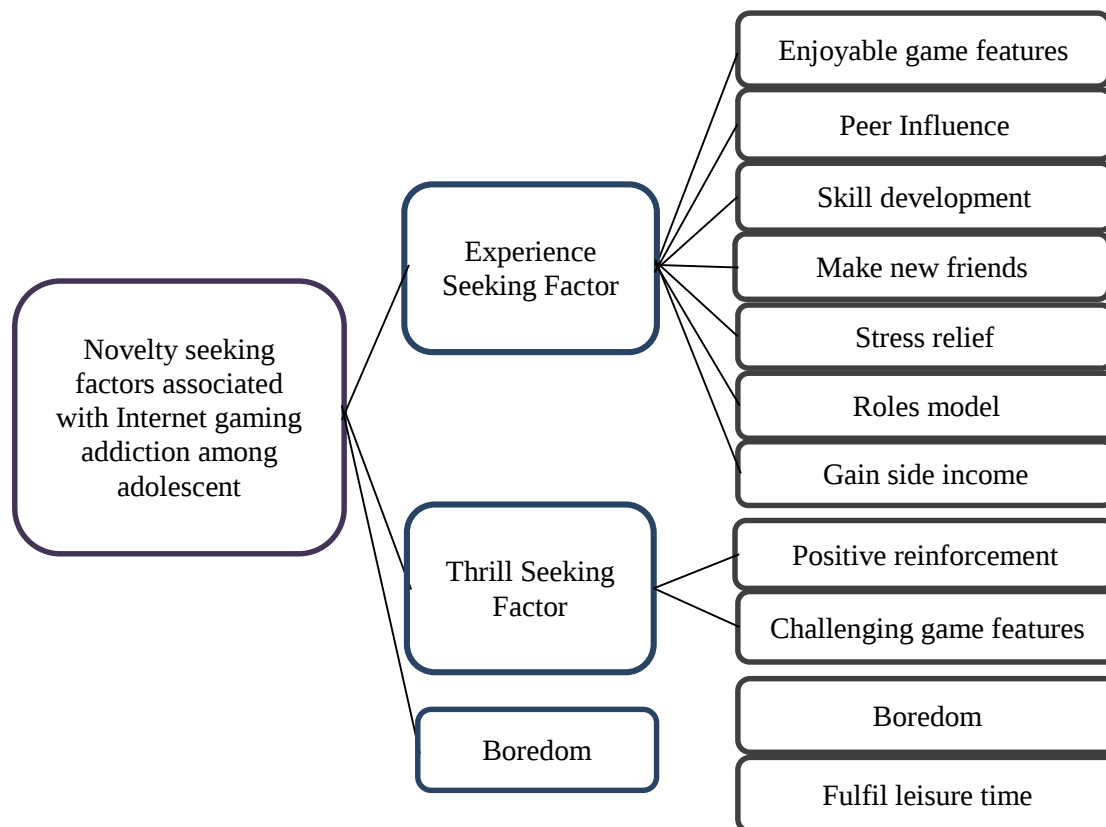
3.2 Fulfill Leisure Time

Internet gaming serves as a leisure activity, enabling adolescents to efficiently utilize their free time and engage meaningfully. Adolescents choose online gaming to fulfill their leisure time, optimizing their use of free time and enhancing their overall gaming experience.

"It allows us to spend a lot of time... waiting for food, so we can play the game in the meantime." (Informant 2)

The framework illustrated in Figure 1 encapsulates the emerged themes and sub-themes, providing insights into novelty-seeking factors related to online gaming addiction among adolescents in Malaysian secondary schools. This framework highlights local factors influencing adolescents' engagement in online gaming, contributing to a deeper understanding of the phenomenon.

Figure 1 The main themes and subthemes elicited from thematic



DISCUSSION

In the interview session with 12 informants, three themes emerged, with most sub-themes being saturated, indicating that over 50% of informants reiterated relevant information about the novelty-seeking factor associated with Internet gaming addiction among Malaysian adolescents. The qualitative research method revealed three themes and eleven sub-themes linked to critical novelty-seeking factors: (a) Experience-seeking factors - enjoyable features, peer influence, skill development, making new friends, stress relief, role models, and generating side income; (b) Thrill-seeking factors - reward system and challenging game features; and (c) Boredom factors - boredom and fulfilling leisure time. Two sub-themes not saturated but identified as new were role model, where adolescents imitate family members, and generate side income, where adolescents work hard to collect valuable in-game items for sale.

Qualitative analysis indicated that playing online games for experience-seeking purposes creates positive emotions in adolescents. Research by Bekir and Çelik et al. (2019) supported this, highlighting that online games fulfill psychological needs, leading to feelings of success and pleasure. Adolescents also play games for enjoyment, exploring various aspects, including storyline and gameplay elements (Arbeau et al., 2020).

Thrill-seeking factors emerged as a crucial driver for adolescents' continued engagement in Internet gaming. Competition and challenges make adolescents eager for success, spending more time playing. This aligns with research by Larche and Dixon (2020), who reported that more challenging games trigger a stronger desire to play. Games become less boring with increased difficulty, increasing arousal and the desire to surpass abilities (Larche and Dixon, 2020). The research by Arbeau et al. (2020) noted that individuals become thrilled with online games due to a sense of accomplishment tied to success, ranging from small achievements to leveling up or winning.

The study also revealed that the boredom factor can impact online game addiction, as adolescents seek ways to overcome boredom through gaming. This aligns with research by Liao et al. (2020), where sensation seeking overcomes boredom, serving as a positive reinforcement for adolescents with online gaming addiction. Similarly, the study by Achab et al. (2022) supported that sensation seeking offers a coping mechanism to overcome boredom. Many adolescents spend a significant amount of time playing online games for entertainment purposes during their free time, seeking to use their time efficiently.

Additionally, the study provided in-depth insights from adolescents' perspectives on novelty-seeking factors associated with their gaming behavior, using theoretical models such as the Theory of Planned Behavior and Cognitive-Behavioral Theory. When adolescents play online games, their attitudes influence prolonged gaming, and subjective norms, including family and friends, boost the urge to play, aligning with the Theory of Planned Behavior (Teng et al., 2021). Paulus et al. (2018) highlighted, based on Cognitive-Behavioral Theory that external characteristics in online games lead to increased gaming due to impulse control deficiencies. The study offers significant insights for practitioners and researchers.

The research study can guide parents, teachers, and practitioners in identifying factors influencing adolescents to play Internet games. It provides insight for early treatment to prevent serious addiction and the diagnosis of Internet gaming disorder (IGD). IGD can lead to serious health issues, impairing daily functions, personal relationships, education, and careers (Paulus et al., 2018). This research also helps identify potential benefits from online games, assisting adolescents in building life skills such as communication and social skills, crucial for adulthood.

In Asian culture, especially Malaysia, there is a lack of research on factors influencing adolescents to play Internet games compared to studies in Western cultures. Future research should explore other factors contributing to adolescent Internet game addiction, given the increasing trend among adolescents who engage with Internet games anytime and anywhere to gain more knowledge. As stated in Chatfield (2020), the use of preexisting data can help researchers explore new questions. Therefore, future researchers can develop a questionnaire based on these themes, adding the disinhibition factor and two new themes found in the study, namely (a) role model and (a) generate side income. This allows researchers to develop more detailed and appropriate semi-structured questions as guidance during their data collection process.

However, this study does not demonstrate national representativeness, focusing on one specific area, limiting insights into the crucial novelty-seeking factor associated with Internet gaming addiction among adolescents in Malaysia. According to Liao et al. (2020), the novelty-seeking and Internet gaming addiction of informants may be affected differently in different regions. Future research should recruit participants more demographically diverse from different areas and states, reducing generalizability issues (Ling et al., 2021). Thus, a more diverse set of informants should be studied to discover more themes and extend the conclusions of the research to develop a locally based novelty-seeking model.

CONCLUSION

In conclusion, this study identified three novelty-seeking factors related to online gaming disorder among adolescents in Malaysia. These factors include experience-seeking factors involving enjoyable game features, peer influences, skill development, making new friends, gaining new knowledge, stress relief, role models, and generating side income. Additionally, thrill-seeking factors encompass rewards and challenging game features, while boredom factors relate to feelings of boredom and the desire to fulfill leisure time. The study provides a in-depth understanding from the informants' perspective about novelty-seeking factors associated with their gaming behavior. All the outcome themes from the study were supported by findings from previous research in the Western and Asian contexts, except for the disinhibition theme, which differs from previous findings. Despite numerous studies on the consequences of online game addiction across various generations, research on the factors influencing online gaming addiction among adolescents, using qualitative approaches from various perspectives,

remains insufficient. These studies are crucial for gaining deeper insights and understanding the potential factors associated with internet gaming addiction.

ACKNOWLEDGEMENT

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was funded by Universiti Pendidikan Sultan Idris, under the grant titled “Geran Penyelidikan Universiti Fundamental (GPUF) 2020”, grant number 2020-0171-106-01. We would like to thank all participants and everyone who has contributed to this research. In addition, the authors want to thank the journal’s editors and reviewers for their contribution to the revision of the paper.

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