

Gender Differences in Internet Addiction and Its Impact on Exposure to Pornography and Internet Gaming Disorder

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Abstract

Various studies have shown that internet addiction and its impact can vary by gender. Previous research has shown that excessive internet use in men is associated with addiction to video games, while in women it is linked to social media addiction. There is still little research on internet addiction that inferentially infers its impact on gender differences. The study aims to test gender differences in internet addiction and its impact on exposure to pornography and Internet Gaming Disorder (IGD) among adolescents. The data was collected through a survey of 242 students at one of the state high schools in Jakarta. The results of the study showed no gender differences in internet addiction, but there were gender differences in terms of the impact of Internet addiction on pornography exposure and IGD. MANOVA's results showed an association between internet addictions and pornographic exposure, and IGD. Male adolescents tend to be more exposed to pornography and experience IGD compared to female adolescents. This research brings early warning about the impact of excessive internet use on future online behavioural problems. Although the impact of internet addiction on adolescents is not at its highest level, we need to be careful about this. In the future, access to the Internet is becoming easier and cheaper, plus the world's educational pressure on adolescents students is increasing, fearing that adolescents will seek escape through excessive use of the Internet.

Keywords: Internet Addiction, Pornography, Internet Gaming Disorder, Adolescent, Online Behaviour

Abstrak

Berbagai penelitian menunjukkan bahwa kecanduan internet dan dampaknya dapat berbeda-beda berdasarkan gender. Penelitian sebelumnya menunjukkan bahwa penggunaan internet berlebihan pada pria dikaitkan dengan kecanduan video game, sedangkan pada wanita dikaitkan dengan kecanduan media sosial. Masih sedikit penelitian tentang kecanduan internet yang dapat disimpulkan dampaknya terhadap perbedaan gender. Penelitian ini bertujuan untuk menguji perbedaan gender dalam kecanduan internet dan dampaknya terhadap paparan pornografi dan Internet Gaming Disorder (IGD) di kalangan remaja. Pengumpulan data dilakukan melalui survei terhadap 242 siswa di salah satu SMA Negeri di Jakarta. Hasil penelitian menunjukkan tidak ada perbedaan gender dalam kecanduan internet, namun terdapat perbedaan gender dalam hal dampak kecanduan internet terhadap paparan pornografi dan IGD. Hasil MANOVA menunjukkan adanya hubungan antara kecanduan internet dan paparan pornografi, serta IGD. Remaja laki-laki lebih banyak terpapar pornografi dan mengalami IGD dibandingkan remaja perempuan. Penelitian ini memberikan peringatan dini tentang dampak penggunaan internet yang berlebihan terhadap masalah perilaku online di masa depan. Meski dampak kecanduan internet terhadap remaja belum mencapai tingkat tertinggi, namun perlu mewaspadaikan hal ini. Di masa depan, akses terhadap Internet menjadi lebih mudah dan murah, ditambah dengan tekanan pendidikan dunia terhadap siswa remaja semakin meningkat, karena adanya kekhawatiran bahwa remaja akan mencari pelarian melalui penggunaan Internet yang berlebihan.

Kata Kunci: Kecanduan Internet Pornografi, Internet Gaming Disorder, Remaja, Perilaku Online

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INTRODUCTION

In Indonesia, Internet usage increased by 39.22% times during the Covid-19 pandemic. (APJII, 2022). The Internet has been used as a supporter of daily activities such as work, school, and doing business in Indonesia and globally. All previously face-to-face activities have to transition into networking activities over the Internet. According to the APJII survey, the presence of a varied Smartphone or exercise and affordable prices for the entire element of the community make access to the Internet easier. 99.11% of Internet users in Indonesia access the Internet through exercise (APJII, 2022).

Internet penetration based on age was dominated by the 13-18-year-old group with a penetrating rate of 99.16% in 2021-2022 and the 19-34 year-olds ranked second with a 98.64% penetrable rate and with the group with the lowest internet penetrations being the age group over 55 years with the penetrative rate of 51.73% (APJII, 2022). It indicates that the adolescent age group is the highest Internet technology user.

Online education during the Covid-19 pandemic brings adolescents closer to internet technology. A variety of online teaching technologies are organized by educational organizers. Adolescents have a great sense of curiosity, and are therefore judged to be more adaptable to the development of Internet technology. In addition, adolescents have different motivations in using the Internet, such as searching for information, building relationships, and watching entertainment (Gayatri et al., 2015).

Adolescence is a phase of transition from childhood to adulthood, where adolescents still have a way of thinking like children but must begin to behave and think like adults. In addition, adolescence also includes the phases of biological, cognitive, and socio-emotional development that are the transition between childhood and adulthood. The circumstances that trigger the conflict often lead to strange and disturbing behavior that can turn into unfaithful behavior if allowed (Sarwono, 2011). With this

condition, adolescents are more prone to Internet addiction because of their early exposure and unstable emotional conditions that make the Internet one of the unabated needs of adolescents. Internet addiction in young adulthood occurred in the age group of 19-24 years at 28.6% (Hassan et al., 2020).

Excessive internet use or internet addiction can cause some kind of online behavior and psychiatric problems (Ioannidis et al., 2018). The impact of the Internet on online gambling is generic surfing, internet gaming, online shopping, use of online auction websites, social networking, usage of online pornography, online Gambling, Use of auction Websites, and streaming media. Attention-deficit hyperactivity disorder (ADHD) and social anxiety disorder. In adolescents, internet addiction can also affect academic competence. There is a negative correlation between the level of internet addiction with overall academic grades and academic competence (Leung & Lee, 2012). According to a study conducted in Hong Kong on children and adolescents, Internet addiction is more likely to occur in the male group (Leung & Lee, 2012). But in recent research, gender differences in internet addiction occur at a certain age. The gender gap related to internet addiction is gradually increasing between the ages of 16 and 18 (Stavropoulos et al., 2018).

The main concern of the impact of excessive internet use on adolescents in Indonesia is exposure to pornography. The National Commission for the Protection of Children (Komnas PA), based on a survey of 4,500 adolescents in 12 cities in Indonesia, stated that 97% of respondents have seen pornographic content either intentionally or unintentionally. This is because a long-known pornographic site has used a pop-up feature to trap internet users to see the content presented by the site (Paasonen, 2011). During the Covid-19 pandemic, as internet usage increased, access to pornographic sites also increased globally (Awan et al., 2021; Zattoni et al., 2021).

Furthermore, pornographic content in pe-

riodic intervals can have an impact on explicit sexual behavior, such as kissing, hugging and even sexual intercourse in adolescents (Suhwardi, 2022). Adolescents in high school and high school use online media such as websites, social media and games as the type of media used as the first medium to access pornographic content (Astuti, 2019).

In addition to pornography, excessive internet use in adolescents can also lead to online gaming addiction (Cole & Hooley, 2013; Evren et al., 2019; Leung & Lee, 2012). Playing the internet and video games has become one of the most popular recreational activities regardless of culture, age, and gender (Király et al., 2014; Kuss, 2013). Psychosocial factors such as low self-esteem, loneliness, depression, high anxiety, and stress appear to be common behavioral addictions (Griffiths et al., 2015). Based on the analysis of various studies on internet addiction, it shows that the relationship between internet addictions and online gambling addiction is the most researched topic (Lopez-Fernandez, 2015). Other research suggests that Internet addiction directly affects problems of social interaction and self-anxiety, which then increases online gaming addiction (Cole & Hooley, 2013).

The impact of internet addiction is not homogeneous; there are different effects on men and women. Excessive internet use in men is associated with addiction to video game use, while in women it is linked to social media use addiction (Griffiths et al., 2015). Other research suggests that women are more susceptible to online communication problems and the use of social media, whereas in men they are more vulnerable to online gaming problems, this makes men and women likely to become addicted to internet use through different channels (Su et al., 2020).

Pornography and online gaming addiction in adolescents are the main concerns of this study. We see both of the above problems potentially increasing as access to the Internet becomes easier and cheaper. This research wants to test how to suppress internet addiction to porno-

graphy and online gambling addiction. For early preventive measures, this study wants to analyze further the difference in the impact of excessive internet use on male and female adolescent.

LITERATURE REVIEW

Internet Addiction

Internet Addiction Disorder (IAD) or better known as Internet addiction is a disorder in which a person has an internet dependence, it is characterized by Internet users becoming compulsive and relying on the sophistication of the Internet to satisfy psychological needs as well as excessive use, this will then cause users to feel the need for the Internet in their daily life and can cause Problematic Internet Use or PIU (Longstreet & Brooks, 2017).

The term was first introduced by Ivan Goldberg in 1995, and Goldberg described internet addiction as pathology, an abnormality, an excessive use of technology that covers a variety of behaviors and problems with impulse control (Salicetia, 2015). While Griffiths (1996) mentions that internet addiction is a behavioral addiction that involves interaction between human and machine relationships (Pan et al., 2020).

Addiction is defined as an act performed repeatedly in a particular activity or using a particular substance, although the adverse impact can be detrimental to physical, social, mental, spiritual, and financial health. Instead of dealing with problems in life, coping with everyday stress, or facing past or present trauma, people with addictions tend to respond ineffectively to them by relying on false management strategies (Young, 2015).

Internet addiction is characterized by several indications, namely: increased resource investment in Internet-related activities; unpleasant feelings when offline; declamation of online activity; and rejection of problematic behavior. Individuals who show such symptoms often face underlying psychological problems (Kandell, 1998).

Internet addiction is caused by addictive behavior, which has behavioral patterns and

biological causes similar to substance addiction. Recently, behavioral addictions have been identified using the same criteria as substance dependence, including tolerance, withdrawal, repeated failures to reduce or stop behaviors, and disruptions in everyday life. Neuroimaging studies of behavioral addiction also showed a relationship between changes in brain structures and brain functions related to emotions, executive functions, attention, decision-making, and cognitive control (Rakhmat, 2021).

One of the signs of internet addiction is when one spends hours or even days in front of a computer or other electronic device connected to the internet. It can make one lose focus on life around him (Young, 2015). Young also mentioned that there are several factors that make a person addicted to the Internet, such as: (1) interaction between other Internet users; (2) low self-control; (3) ease of accessing the Internet; (4) lack of external supervision and control; and (4) escape from problems.

According to Saliceti (2015), according to the American Center for Online Addiction, there are several types of Internet users who suffer from Internet addiction seen from their activities on the Internet itself, namely: First, Cyber Sexual Addiction is a condition in which individuals tend to be addicted to downloading, using, disseminating and even trading pornographic content through the virtual world and people of this type are often engaged in forums related to adult chat, sex as well as cyber pornography material. Second, Cyber Relationship addiction is the condition of individuals who have an addiction to interpersonal relationships online. Third, Information Overload is a state of individuals using the Internet to do compulsive search for information. Fourth, Net Gaming Addition is an individual tendency to online games that will cause problems in their lives. The fifth, Social Network Addiction, is a virtual networking community where one can create a public or semi-public profile. Sixth, Net-Compulsion, individuals in this category enjoy online gambling, online shopping, as well as online trading that can

cause behavioral changes and psychological discomfort.

Internet addicts come from different backgrounds, but adolescents are considered to be the most vulnerable to Internet addiction because they are in a critical phase (Neverkovich et al., 2018).

Another impact of internet addiction is the inability of individuals to communicate face-to-face, as they are used to interacting online. Besides, the impact of internet addiction can also affect psychological and interpersonal factors such as loss of control over behavior, insomnia, and difficulty in timing (Hassan et al., 2020).

Rakhmat (2021:434-444) mentions a number of implications of problems caused by Internet addiction such as: Physical diseases such as wrist marrow due to nervous stress called Carpal Tunnel Syndrome for a long period of time due to continuous computer use; Insomnia, obesity, and vision problems; Brain damage in parts involving emotional processes, executive attention, decision-making and cognitive control; Disrupting social relationships due to decreased productivity and sacrificing interpersonal relationships as well as loss of social skills; and financial problems due to compulsive buying.

Exposure to Pornography

The Webster New World Dictionary defines pornography as writing, an image, which has the purpose of arousing sexual excitement in those who listen, watch and enjoy it (Syarifah, 2006). Pornography is derived from the combination of two Greek words " pornos " and " graphics ". Pornos refers to unclean or adulterous acts related to sexuality, while graphics refer to images or writing, including sculptures, containing or depicting something that is adultery or violates the moral norms of society (Ashton et al., 2019).

Pornography is an implication of new technology as it is expanding to access, content, interaction, and virtual reality. According to its context, pornography is also referred to as content that is considered sexual and intended to arouse consumer sexual enthusiasm and is

produced and distributed with the consent of all parties involved (Ashton et al., 2019). Pornography is material displayed through certain media that has the potential to arouse public sexual enthusiasm or exploit sex (Armando & Aziz, 2004). Based on the exposure related to the definition of pornography from some of these sources, it can be concluded that pornography is a material containing erotic and sexual images or acts that have the purpose of arousing sexual passion, feelings, and thoughts to the audience.

The degree of exposure to pornography is a classification developed by the Education and Culture Policy Research Center Team, Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia to measure the level of pornographic exposure among adolescents (Maisya & Masitoh, 2020).

In determining the level of exposure to pornography in adolescents, indicated in exposure degrees consisting of 3 groups i.e. not exposed groups, degree 1, degree 2 and degree 3. The meaning of the grouping is as follows (Maisya & Masitoh, 2020): 1) Categories not exhibited. Adolescents in this group are characterized by, never seen pornographic material in any form. However, more attention should be paid to the history of the first access to pornography; 2) Grade 1 category. Adolescents in this group are said to have been exposed to porn in the form of pictures, videos, sculptures and audio. Though only occasionally through pop-up ads on the Internet or by accidental viewing; 3) Grade 2 category. In this group individuals are stated to have seen pornography several times, either intentionally or unintentionally, and have an intensity to repeat pornographic access that has ever been done before; 4) Grade 3 category. In this category, individuals are already indicated to be addicted to pornography with an increasing frequency. Under these circumstances, the respondent increases access to pornography continuously to reach the limits of his own satisfaction.

Internet Gaming Disorder

Internet addiction is characterized by excessive

use of the Internet. Individuals who are addicted to the Internet can spend 40 to 80 hours a week, with sessions that can last 20 hours (Young, 2004). Some of the characteristics of individuals with Internet addiction are: sleep patterns disrupted by late night logins; regularly spending a lot of time online to satisfaction; often associated with increasingly painful stress and anxiety that disappears after finishing using the internet; using the Internet as a run from emotional or personal problems (Young, 2004).

Gambling addiction becomes a pathological problem when gambling interferes with a person's social, work, family, school and psychological functions (Gentile et al., 2011). Game games that become pathological are characterized by constant, repetitive, and excessive involvement with uncontrollable computers or video games, even though there are related problems (Griffiths et al., 2015).

In 2013, the American Psychiatric Association recommended that Internet Gaming Disorder (IGD) be included as a prerequisite for further study in the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The DSM-5 defines IGD as the presence of behavioral dysfunction in online gaming characterized by at least five suggested symptoms: annoyance, psychological withdrawal, tolerance, failure to reduce or stop, loss of interest in previously enjoyable activities, continuous gaming. Despite the consequences, lying about the time spent playing games, using games to cope with the negative impact, and the possible or actual negative impact on work and social relationships due to playing games (Lopez-Fernandez, 2015).

IGD is defined as, "continuous and repeated use of the Internet to play games, often with other players, causing clinically significant disturbance or stress" and is categorized as "a condition for further study" in DSM-5 Part III (American Psychiatric Association, 2013). Then the World Health Organization (WHO) in 2019 included internet gaming disorder in the International Classification of Diseases (ICD-11) 11th edition.

Research Hypothesis

Previous research has shown that Internet addiction is associated with the possibility of exposure to pornography (Alexandraki et al., 2018; Paasonen, 2011). Therefore, this study proposed the research hypothesis as follows:

H1: Internet addiction is associated with exposure to pornography

Previous studies have proven that excessive internet use is associated with online game addiction (Andreassen et al., 2016). Therefore, this research proposed the research hypothesis as follows:

H2: Internet addiction is associated with online gaming addiction

As in the description above, the impact of excessive use of the Internet has an impact on men and women (Spilkova et al., 2017; Su et al. 2020; Van Den Eijnden and al., 2018). The impact on women is more on the use of online communication such as excessive use of social media, while on men it is more on pornography consumption and online game addiction (Griffiths et al., 2015; Leung & Lee, 2012; Su et al., 2020). Therefore, this study proposed the research hypothesis as follows:

H3: There is a difference in the impact of internet addiction on exposure to pornography in male and female adolescents.

H4: There is a difference in the impact of internet addiction on online game addiction in male and female adolescents.

METHOD

This research was conducted using a cross-sectional survey of 248 students from a public high school in Jakarta. The respondent's age meets the criteria for adolescence according to the definition of the World Health Organization (WHO), namely the range between 10 – 19 years. Data collection was carried out on June 12 2023.

The research independent variable is internet addiction which is measured using an instrument developed by K. S. Young, (2009), name-

ly the Internet Addiction Test (IAT), consisting of 20 question items (Cronbach's Alpha = 0.896). This instrument uses a Likert scale: 1 – 5. The level of addiction is measured based on the total score, namely: values 0 – 30 are classified as normal; 31 - 49 is classified as mild addiction; 50 – 79 are classified as moderately addicted; and 80 – 100 are classified as severe internet addiction.

The Dependent Variable consists of two variables, namely exposure to pornography and addiction to online games. Exposure to pornography was measured using an instrument developed by Astuti, (2019), consisting of 27 question items (Cronbach's Alpha = 0.877). This instrument has two parts, in the first part items 1 – 7 look at the history of first exposure to pornographic material. In the second part, items 8 – 27 measure the level of exposure to pornography, with a scale: 0 – 3. The degree of exposure to pornography is classified based on the total score: 0 = not exposed; 1 – 37 = Degree 1; 38 – 74 = Degree 2; 75 – 111 = Degree 3.

Meanwhile, online game addiction was measured using the Internet Gaming Disorder Scale-Short-Form (IGDS9-SF) instrument developed by Pontes (2022) consisting of 9 question items (Cronbach's Alpha = 0.884).

RESULTS AND DISCUSSION

Results

Univariate analysis of the pornography exposure variable aims to identify and view the track record of exposure to pornographic material in adolescents and the level of exposure. In the following table, data is presented regarding the history of the respondent's first exposure to pornographic material.

First Time Exposure to Pornography	Number (n)	Frequency (%)
Age of first viewing of pornography		
Under 12 Years	38	15.7 %
12 – 15 Years	147	60.7 %
16 – 18 Years	57	23.6 %

The first form of exposure to pornography		
Painting	5	2.1 %
Picture	38	15.7 %
Statue	3	1.2 %
Photo	48	19.8 %
Videos	63	26 %
Comic	18	7.4 %
Reading	16	6.6 %
Games	6	2.5 %
Animation/Hentai	13	5.4 %
Advertisement	28	11.6 %
Book	4	1.7 %
The first medium of pornographic exposure		
Print media	10	4.1%
Internet site	104	43 %
Social media	110	45.5 %
Electronic media (TV, Radio, Video)	18	7.4 %
Online media commonly used to view pornographic content		
WhatsApp	3	1.2 %
Twitter	91	37.6 %
TikTok	23	9.5 %
Facebook	8	3.3 %
Instagram	27	11.2 %
Line	1	0.4 %
Internet Site	89	36.8 %
Online media often displays pornographic content unintentionally		
WhatsApp	4	1.7 %
Twitter	57	23.6 %
TikTok	48	19.8 %
Facebook	20	8.3 %
Instagram	45	18.6 %
Line	3	1.2 %
Internet Site	65	26.9 %
Location of first exposure to pornography		
House	156	64.5 %
Cafe	31	12.8 %
School	12	5 %
Cinema	5	2.1 %
Other locations (hangout places, base camps, etc.)	38	15.7 %
The initial reason for viewing pornography		
Not deliberate	151	62.4 %

Curiosity	62	25.6 %
Invite other people	26	10.7 %
Coercion by others	3	1.2 %
The first partner looks at pornography		
Alone	158	65.3 %
Friends of the same age	73	30.2 %
Family	5	2.1 %
Another adult	6	2.5 %
Total	242	100%

Table 1. History of Pornography Exposure

Source: Researcher Data (2023)

Based on the table above, the history of exposure to pornography in adolescents can be identified and known through the age of first exposure to pornography, the form/material of pornography that was first seen by the respondent, the initial medium of exposure to pornography, the online media usually used to view pornographic content, then the media used often brings up pornographic content unintentionally, the location where the respondent viewed pornography, and the reason for viewing pornography for the first time, as well as with whom the adolescents viewed pornography for the first time.

The history of exposure to pornography among 242 respondents found that the majority of students saw pornography for the first time at the age of 12 - 15 years, namely 147 students (60.7%), as many as 57 students (23.6%) saw it at the age of 16 - 18 years. and it was found that 38 students (15.7%) had viewed pornography before the age of 12 years.

The form of pornographic material that is most often viewed as pornography by these students is video with 63 respondents answering or 26% of all respondents, photos with 48 respondents (19.8%), then pictures with 38 respondents and other forms of pornographic material. the least viewed as a first exposure to pornography was a statue at 1.2%.

Furthermore, it was also found that the media that mostly exposed adolescents to pornographic material for the first time was social media, this was proven by 110 students

(45.5%) admitting to viewing pornographic material via social media. Meanwhile, another 104 students (43%) saw pornography for the first time through internet sites and as many as 18 students (7.4%) through electronic media such as TV, radio and video, and 10 students (4.1%) saw it for the first time through media print.

The online media commonly used by adolescents to view pornographic content is Twitter with the number of respondents choosing as many as 91 students (37.6%), the second media with the largest percentage used to view pornographic content is internet sites, namely 89 students choosing (36.8 %) and another 25.6% of respondents viewed pornography through other social media such as Facebook, Instagram, Line, TikTok and Whatsapp.

Apart from that, online media have also been found which often display pornographic content or materials unintentionally by their users. A total of 65 students (26.9%) admitted that the internet often produces undesirable pornographic material. Social media such as Twitter was chosen by 57 students (23.6%) as online media that often presents pornographic content unintentionally. 48 students (19.8%) chose TikTok, 45 students (18.6%) chose Instagram and 27 students (11.2%) chose other social media such as Facebook, Line and Whatsapp.

The locations most often used by students to view pornographic material for the first time are at home and in other places such as hangouts, basecamps and so on. This is stated by the number of respondents who chose home as many as 156 students (64.5%) and as many as 38 students (15.7%) who chose other places such as hangouts, basecamps.

These students who are adolescents also have reasons to see pornography for the first time. Most of the respondents said the reason was because they accidentally saw it, namely 151 students (62.4%) chose this reason. Other reasons were curiosity (25.6%), invitation from other people (10.7%) and coercion from other people (1.2%).

When viewing pornographic material for the

first time, most respondents viewed it alone (65.3%) but 73 students (30.2%) also admitted to viewing pornography with their peers, another 5 students (2.1%) viewed it with their family and 6 students (2.5%) saw with other adults.

Based on descriptive analysis, the majority of respondents' levels of internet addiction were at a mild level, both in the male and female groups, as in Table 2. The next highest proportion of internet addiction levels was the moderate level, in both the male and female groups. From the data, it can be seen that the difference in internet addiction levels between men and women is quite small.

SEX	Internet Addiction				Total
	Normal	Light	Medium	Heavy	
MALE	15	60	38	1	114
	13.2%	52.6%	33.3%	0.9%	100.0%
FEMALE	14	67	44	3	128
	10.9%	52.3%	34.4%	2.3%	100.0%
TOTAL	29	127	82	4	242
	12,0%	52,5%	33,9%	1,7%	100,0%

Table 2. Internet Addiction Levels
Source: Researcher Data (2023)

Respondents' level of exposure to pornography was highest at Degree 2 at 64.0%, then at Degree 1 at 34.7% and finally at Degree 3 at 1.2%, as in Table 3. The data shows a significant difference in the percentage of degrees of exposure to pornography. large between male and female groups.

SEX	Level of Exposure			Total
	Degree 1	Degree 2	Degree 3	
MALE	27	84	3	114
	23.7%	73.7%	2.6%	100.0%
FEMALE	57	71	0	128
	44.5%	55.5%	0.0%	100.0%
Total	84	155	3	242
	34.7%	64.0%	1.2%	100.0%

Table 3. Degree of Exposure to Pornography
Source: Researcher Data (2023)

The level of online game addiction is at a mean value of 17.955, as in Table 4. The male group has a higher mean value than the female group by a fairly large margin.

	Mean	Std. Deviation	SEX	Mean	Std. Deviation
ALL	17,955	6,983	Boy	20,781	7,15908
			Girl	15,438	5,77634

Table 4. Levels of Internet Gaming Disorder (IGD)
Source: Researcher Data (2023)

Furthermore, through the Manova test the following results were obtained:

Based on Table 5, Internet Addiction is significantly associated with the Degree of Exposure to Pornography, so Hypothesis 1 is proven. Furthermore, Internet Addiction is also significantly associated with Internet Gaming Disorder, so Hypothesis 2 is also proven.

Factor	Dependent Variable	Sig.
IAT	Degree of Exposure	.000
	IGD	.000

Table 5. Manova Test Results
Source: Researcher Data (2023)

To analyze gender group differences in the Degree of Pornography Exposure and Internet Gaming Disorder variables, this was done one by one.

Based on the data in Table 6, the crosstab results between gender and Degree of Pornography Exposure show a significant difference ($p=0.001$). These results prove Hypothesis 3 that there is a difference in the impact of internet addiction on online game addiction in male and female adolescents. Then the crosstab results of gender with the IGD variable showed a significant difference ($p=0.001$). These results prove Hypothesis 4 that there is a difference in the impact of internet addiction on online game addiction in male and female adolescents. Meanwhile, the Chi-square test between genders with the IAT showed that there were no significant differences, meaning that in terms of the level of internet addiction, both male and female groups had almost the same level of addiction.

Variables	Approximate Significance	Contingency Coefficient
IAT	.788	.066
Degree of Exposure to Pornography	.001	.234
IGD	.001	.443

Table 6. Gender Crosstab with Chi-square Test
Source: Researcher Data (2023)

Discussion

The rate of internet addiction among adolescents has only reached 1.7%, where the proportion of female adolescents is greater than

that of male. Furthermore, the level of internet addiction among adolescents is mostly at mild and moderate levels with a proportion of 52.5% and 33.9% respectively. This figure can be considered a warning of the potential for internet addiction in the future. Currently, they are not yet suffering from internet addiction, but if prevention is not taken, they could become addicted (Neverkovich et al., 2018).

Pornography has exposed all adolescents to varying degrees. As many as 34.7% of adolescents were exposed to pornography at Degree 1, meaning they were exposed to pornography accidentally. As stated by Paasonen (2011), pornographic sites trap users through pop up features, it is possible that adolescents accidentally view pornographic content because of these types of features. Meanwhile, as many as 64% of adolescents are exposed to pornography at Degree 2, meaning that adolescents have the intention to view pornographic content again. This needs to be a serious concern for parents, school educators and the government. As internet access becomes easier and cheaper, the potential for internet addiction among adolescents may increase, and the possibility of exposure to pornography will also increase. Then as many as 1.2% of adolescents have been exposed to Grade 3 pornography, meaning they have entered the category of pornography addiction. Based on research data, those identified as addicted to pornography are male adolescents.

The results of the research above further show the influence of internet addiction on exposure to pornography and online game addiction (IGD). This is in line with previous research which states that internet addiction is associated with the possibility of being exposed to pornography (Alexandraki et al., 2018). These results also confirm the existence of a positive association between internet addiction and IGD (Evren et al., 2019; Griffiths et al., 2015; Lopez-Fernandez, 2015; Su et al., 2020). Pornography and IGD are online behaviors as a result of excessive internet use (Ioannidis et al., 2018).

Based on the research results above, the level of internet addiction does not recognize gender differences. These results strengthen previous research that excessive internet use occurs in both men and women (Griffiths et al., 2015; Su et al., 2020). There are different impacts between male and female adolescents in terms of the impact of internet addiction. Male adolescent had a significant association with pornography exposure and IGD, whereas in female adolescent there was no significant association. This supports previous research that internet addiction in men brings problems with pornography and online game addiction, while in women it causes problems with online shopping and online communication behavior (Griffiths et al., 2015; Spilkova et al., 2017; Van Den Eijnden et al., 2018).

CONCLUSION

Internet addiction is an issue that continues to grow and attracts the attention of researchers. Previously internet addiction was only considered a technology addiction, now it is developing as a psychiatric disease after the American Psychiatric Association included internet addiction in DSM-5 Part III in 2013 and the World Health Organization (WHO) in 2019 included internet gaming disorder in the International Classification of Diseases (ICD-11) 11th edition.

The impact of internet addiction on adolescents needs to receive great attention. This research shows the impact of internet addiction on pornography exposure and IGD. Even though the impact of internet addiction on adolescents is not yet at the highest level, we need to be aware of this. In the future, access to the internet will become easier and cheaper, plus the pressure in the world of education on adolescents students is increasing, it is feared that adolescents will seek escape through excessive use of the internet.

The impact of internet addiction based on gender shows that male adolescents are more susceptible to pornography problems and IGD. More attention needs to be paid to male ado-

lescent regarding their online behavior. But this does not guarantee that female adolescents are free from the problems caused by internet addiction. Various studies have shown the problem of online shopping and spending excessive time on social media among female adolescents.

This research has the weakness of measuring limited research variables. In the future, research into the impact of internet addiction needs to include other online behavior variables so that we get a more complete picture of the impact of internet addiction. Apart from that, our attention also needs to shift to lower age groups. As we know, from when they were toddlers, parents have given their children gadgets and internet access. In the future, the impact of internet addiction will become more complex and increasing.

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