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# The decline in intentions to stop watching pornography among young adults

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## ABSTRACT

Online pornography has grown tremendously in the past years worldwide including Asian countries. Thus, this study aimed to investigate if there have been any changes in Malaysians' attitudes toward pornography, subjective norms, perceived behavioural control and intentions to stop watching pornography between 2015 and 2019. Data from 160 participants in 2015 and 166 participants in 2019 between 18 and 30 years old were collected using online surveys. The quantitative analysis conducted has shown that attitudes and subjective norms toward pornography have significantly increased while intentions to stop watching pornography have decreased over time. Meanwhile, no significant difference was found on perceived behavioural control. These changes may be due to the influence of technological advancements and entertainment liberalisation. The increase in accessibility and frequency of sexual content *via* modern media has increased sexual desires within a society, which subsequently decreases their intention to stop watching pornography. As there are many potential risks that are associated with avid pornography watching, we believe that there is a need to incorporate a prudent sexual education within schools to ensure young adults better understand pornography-viewing phenomena.

## LAY SUMMARY

Comparing data between 2015 and 2019, we observed increased pornography attitudes and subjective norms, reduced intentions to quit pornography viewing, and unchanged perceived behavioural control. We recommend enhancing sexual education in schools to foster a better understanding of pornography-related concerns among young adults.

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## Introduction

The online pornography industry has been growing and flourishing in recent decades. Popular pornography websites such as Pornhub announced that their annual views had increased by over 20 million worldwide from the year 2015 to 2019 (Pornhub Insights, 2016; The 2019 Year in Review—Pornhub Insights, 2019). In 2019, the top 20 countries that accessed the website held 80% of pornography viewership worldwide, and 4 out of the 20 countries were from Asia. While this number is staggering, it is important to note that pornography legislations may vary between countries, and are even considered taboo in some due to religious and societal expectations (Person et al., 2016). One of such countries that holds negative views toward pornography is Malaysia that adopts Islamic teachings widely and takes a conservative stance in daily dwelling (Ali et al., 2021; Ashraaf & Othman, 2019). Due to this, the government has set restrictions to limit the access to internet pornography and blocked over 2000 pornography websites. Nevertheless, Malaysia was still identified as one of the largest pornography-viewing communities on Pornhub in 2017 (Cheema, 2021; Michelle, 2017). A possible explanation is that the banned pornography websites are still accessible through the use of third-party apps such as virtual private networks (VPNs; Khalili, 2020). This becomes apparent when it is reported that 75% of Malaysian college students have exposed to pornography (Ali et al., 2021), while young adults begin to watch pornography as early as 12 years old (M. Lim, 2017), questioning the effectiveness of erecting a firewall to limit the access to the pornographic material virtually.

Pornography is being perceived negatively as the benefits of watching porn are often overshadowed by many negative connotations, for example, harmful effects such as poor mental health (Svedin et al., 2023), rising in cyber-sexual addiction (Caponnetto et al., 2022), developing tendencies toward Internet-pornography-viewing-disorder (IPD; Angkau et al., 2020), addicting to pornography and perceived realism of pornography (Tan et al., 2022), extremes of online pornography decrease the desire of people to have real sex, and opt for digital pornography to satisfy sexual needs (Hirayama, 2019), risky sexual behaviour (Ali et al., 2021), decreased sexual satisfaction for females (Doornwaard et al., 2014), and unrealistic expectations of sex and the body of their sexual partners (Goldsmith et al., 2017). Problematic pornography usage is also linked to decreased life satisfaction scores (Štulhofer et al., 2020). Furthermore, exposure to pornography has been shown to have a negative influence on people's perception of sex as they begin to shift towards more abusive and rough behaviours (Rostad et al., 2019). The viewers may have watched unsuitable and dangerous content and began to emulate it, resulting in self-injury, or injuring their partners, especially females (Nicklin et al., 2020).

Nevertheless, pornography can yield positive outcomes if it is being used moderately and in good terms and control. For instance, it can be used as a medium for sex education by providing the audiences with a form of sexual identification and promoting healthy sexual conduct (Böthe et al., 2021). On top of that, pornography can be used to relieve stress as young adults begin to face more stressors in their daily lives, which may have resulted in a surge in pornography viewing behaviour

(Bóthe et al., 2021). The stressful phenomena that young adults in Malaysia have to deal with include the rising costs of living. In 2015, Malaysia implemented the Goods and Service Taxes, which is a major contributing factor to the rising prices of goods, making it more stressful to manage savings and spendings, especially for university students who have limited income (Mohamed Abdul Kadir et al., 2016). Similarly, today's university students are under more stress than in the past as they are seen as more capable, particularly in terms of technological competence; subsequently, expectations are raised for them in job searching after graduation (Hj Ramli et al., 2018). While young adults' stress has increased, their self-esteem has been shown to have decreased over the years. This could be due to the pervasiveness of technology in our daily lives, resulting in an increase in internet and social media usage for enjoyment; both have been shown to have negative impacts on self-esteem (Mathew & Krishnan, 2020). Past studies found that the use of social media could lead to social comparison, which will lower one's self-esteem and cause bad feelings (Jang et al., 2016; Jiang & Ngien, 2020). Because pornography use is linked to high stress and low self-esteem, the current phenomenon would facilitate the increase in pornography viewing over time (Camilleri et al., 2020; Prihadi et al., 2020).

Humans are carnal beings, and as pornography is shown to be able to help alleviate sexual desires, it was also found that it is difficult to stop watching pornography (Regan, 2016). This is evidenced *via* the long-lasting existence of porn industry, attesting to the human desire for such content. Based on Ajzen's Theory of Planned Behaviour (TPB; Ajzen, 1991), intention must first be formed to change a certain behaviour. According to TPB, there are three main factors that influence one's intention: (i) attitudes, (ii) subjective norms (SN) and (iii) perceived behavioural control (PBC). Attitude is defined as the positive or negative evaluations of the behaviour; SN is defined as the perceptions of pressure from others to perform the behaviour; and PBC is defined as an individual's perceptions of the ease or difficulty of performing the behaviour of interest (White et al., 2015). Derived from TPB, attitudes, subjective norms and PBC toward pornography have a significant relationship with the intention to stop pornography viewing among Malaysian young adults in 2015 (M. Lim, 2017).

Pornography usage and its prevalence among Malaysians have increased over the years (Ali et al., 2021). Despite the negative views on pornography, society tends to believe pornography as a healthy source of sexual life (Fathin et al., 2018). Rapid economic growth has enabled more Malaysians to experience a better lifestyle as they can afford online entertainment and technology such as smartphones and computers, which increases accessibility to pornography, thus influencing their perceptions (Fathin et al., 2018; GDP Growth (Annual %)—Malaysia, 2022). We observed two major changes due to the economic growth during this period of time that affected individual psychological well-being, namely (i) technology advancement and (ii) entertainment liberalisation. Technology advancement and economic growth have strong positive relationships, as research and development of technology are essential in enhancing the economy and innovation of a country (Saeed & Awan, 2020). The advancement of technology and economic growth also led to an improvement in the entertainment media such as online streaming of movies and music (Chao et al., 2016; Rahimi & Park, 2020). Due to these changes, people may have formed new

attitudes and norms to adapt to these changes naturally, which might have affected the porn watching phenomenon. We believe that these advancements have created complications where it is more difficult to stop porn watching behaviours if the changes alter one's attitudes, subjective norms and PBC towards pornography.

### ***Technology advancement***

Technology advancement is a process of improvement upon existing technology which often leads to a paradigm shift, including an increase in smartphone and internet usage. In 2015, there were 19.71 million smartphone users, which continued to increase to 27.94 million by 2019 in Malaysia (Gong, 2020). On the other hand, broadband prices have decreased by over 40% from 2017 to 2019, resulting in a larger portion of Malaysians to have access to the Internet (Statista, 2019), which in turns allowed more accessible pornography watching. These phenomena might have had an influence on one's attitudes, SN and PBC. Increased access to smartphones has also led to an increase in the use of dating apps which can be used to arrange casual sex (Chan, 2017, 2018). These have contributed to the changing perceptions towards casual sex within society, leading to a higher acceptance of sexual activities, which could in turn lead to higher tolerance towards pornography viewing (Chan, 2017, 2018).

Although instilling the belief that parents disapprove of viewing pornography during adolescence may reduce pornography usage (Rasmussen et al., 2016), technology advancements have made it more difficult for parents to control their children's access to the internet, as they may not fully understand how the technology works (KHOLISOH et al., 2021). Furthermore, when it comes to pornography viewing, friends have more influence than parents (Nieh et al., 2020). Communication about the topic with parents was only at 7%, while communication with their friends was at 19% (Widman et al., 2021). The advancements in technology have led to an increase in online sexual behaviour among adolescents and their friends, such as sexting, pornography use and online dating (Widman et al., 2021). Hence, this might alter one's perception towards the approval of parents or friends when it comes to pornography viewing.

Lastly, the increase in accessibility provided by smartphones and better internet connection makes it more convenient to watch porn privately. The increased accessibility leads to more avid porn watching for individuals with lower level of self-control especially when they have lesser supervision from parents, hence developing a more positive attitude toward pornography (Potenza, 2018; Svedin et al., 2023).

### ***Entertainment liberalisation***

In Malaysia, the movie "Hustlers" was banned in cinemas because of its heavy erotica and nudity scenes, but it is available on online streaming platform, Netflix (Raj, 2019). In the past, people could only access traditional media such as national television or radio programs which are highly controlled by local authorities (WM et al., 2009). However, the establishment of newer media platforms such as social media

and online streaming have made it impractical for local authorities to control or censor content. This is because most of the companies are not located within the country and operate from overseas, thus are not subjected to Malaysian censorship laws. In 2019, the popular online streaming platform Netflix garnered over 14.1 million subscribers, which is about 50% of the Malaysian population at that time (Yunus, 2020). Not only is the number continuing to grow, but other media platforms such as Youtube and HBO Max are also gaining popularity, which would popularize movies or scenes that may have been previously censored in Malaysia. Due to the liberalisation of government control, sexually explicit media content has become widely accessible to the general public (Dillman Carpentier et al., 2017; Isa et al., 2019; Ward et al., 2016). Around 58.5% of music videos (Turner, 2011) and lyrics (Ward et al., 2016) contain sexual imagery and language. We suspect that entertainment liberalisation plays a role in altering one's attitudes, SN and PBC towards pornography. Sexually explicit media has become the norm in society as part of adolescent growth (Yu et al., 2021), and as people have a tendency to create their own set of rules and reasons for what is customary and acceptable, there would slowly be a shift within people's perceptions in society to become more open towards sexual content (Coyne et al., 2019). Due to the increase of sexual content on social media, parents may be more aware of the dangers of early exposure to pornography. However, depending on their intervention, it can either positively decrease unwanted behaviour or unknowingly increase it instead (Efrati & Boniel-Nissim, 2021). Moreover, sexual media consumption has also changed the way people fulfill their sexual needs such as involving in noncoital sex (Pirrone et al., 2022).

From 2015 to 2019, Malaysia has made progress especially in technological advancement and entertainment liberalisation. Previous research has suggested that this progress might have altered one's TPB factors in intention to stop pornography viewing. The objective of this study is to determine the significant differences in the four variables (attitudes, subjective norms, perceived behavior control, and intentions to stop pornography viewing) between 2015 and 2019.

## Method

### *Study design*

This study utilized a repeated cross-sectional design where two surveys were carried out in 2015 and 2019 in Malaysia. We deemed this study as exploratory due to the sensitivity of the topic among the studied population.

### *Respondents*

In 2015, there were a total of 160 respondents consisting of 110 males (68.75%) and 50 females (31.25%) from 18 to 30 years old, with a mean age of 23.05 ( $SD=3.13$ ). In 2019, there were a total of 166 respondents consisting of 103 males (62.05%) and 63 females (37.95%) from 18 to 25 years old, with a mean age of 19.87 ( $SD=1.17$ ). All respondents self-reported for having experienced pornography viewing (Table 1).

**Table 1.** Demographic information of the respondents.

Year	2015		2019	
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	110	68.75	103	62.05
Female	50	31.25	63	37.95
Education				
Diploma/High School/ Pre-University	45	28.13	110	66.27
Degree	98	61.25	46	27.71
Others	17	10.63	10	6.02
First pornography watch				
Before 12 year old	47	29.38	76	45.78
13–15 year old	71	44.38	70	42.17
16–17 year old	21	13.13	19	11.45
18–19 year old	13	8.13	0	0.00
Not specify	8	5.00	1	0.60
First pornography exposure				
Accidentally	104	65.00	111	66.87
On Purpose	56	35.00	55	33.13

## Measurement

The scales to measure all the Theory of Planned Behaviour variables were developed and validated previously (M. Lim, 2017). All scales were rated from strongly disagree to strongly agree using a 7-point Likert scale.

### Attitudes toward pornography

This scale consists of 15 items and measures one's attitudes toward pornography. Item 1, 4, 6, 10, 11, 14 and 15 are reverse-scored. A sample item that includes *pornography leads to an unhealthy view of women in our society*. Higher scores indicate positive attitudes toward pornography. This scale has good reliability with Cronbach's alpha value of .90 for the year 2015 and .89 for the year 2019.

### Subjective norms toward pornography

This scale consists of 5 items that measure subjective norms toward pornography. An example of the items includes *I think my parents know I am watching pornography and they could accept it*. Higher scores indicate low social pressure from parents, society or friends in the viewing of pornography. This scale has acceptable reliability with Cronbach's alpha value of .72 for the year 2015 and .64 for the year 2019.

### Perceived behavioural control towards pornography

This scale consists of 6 items that measure one's perceived behavioural control towards pornography. Example items include *when I have the desire to watch pornography, I could tell myself to stop watching* and *when I have the desire to watch pornography, I could divert my attention to doing something else like jogging, reading books etc.*



**Table 2.** Descriptive statistics.

Variables	<i>n</i>	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Attitudes toward pornography					
2015	160	64.18	18.91	−0.207	−0.543
2019	166	70.74	16.36	−0.293	−0.411
Subjective norms					
2015	160	20.62	6.31	0.035	−0.436
2019	166	24.07	5.59	−0.522	0.47
PBC					
2015	160	23.88	8.93	0.347	−0.596
2019	166	25.75	8.48	−0.092	−0.499
Intentions to stop pornography viewing					
2015	160	31.74	10.87	−0.417	−0.584
2019	166	28.39	11.15	0.087	−0.949

Higher scores indicate an easier effort of stopping pornography viewing. The scale has good reliability with Cronbach's alpha value of .88 for the year 2015 and .82 for the year 2019.

### ***Intentions to stop pornography viewing***

This scale consists of 7 items that measure one's intention to stop watching pornography. An example item includes *I am willing to delete the pornography available in my computer*. Item 2 is reverse-scored. Higher scores indicate higher desire or motivation to stop viewing pornography. This scale has good reliability with Cronbach's alpha value of .89 for the year 2015 and .87 for the year 2019.

## **Procedure**

This study has been approved by the university's ethics committee. Firstly, recruitment advertisements for the study were placed on social media platforms such as Facebook and physical posters were placed in public places in various universities in Klang Valley. Respondents who are interested can visit the survey page. On the survey page, all information about the study was presented. If the respondent is eligible and willing to participate, they will imply consent by checking the consent box provided. Respondents will then answer all the questions.

### ***Data analysis***

The data was analyzed using SPSS. To determine if the data is normally distributed or not, we could examine if the skewness and kurtosis scores for each variable are within +1 and −1 (Mishra et al., 2019). Referring to Table 2, the skewness and kurtosis for all variables fall within the normal range, thus, we concluded that our data are normally distributed. Independent samples t-tests were conducted to compare the scores of attitudes, subjective norms, perceived behavioural control (PBC) towards pornography and intention to stop pornography viewing between 2015 and 2019.



## Results

### *Attitudes toward pornography*

Malaysian youths are having a more positive attitude towards pornography in 2019 as compared to 2015 as shown by the mean score in Table 3. A significant difference between 2015 and 2019 with a small effect was found,  $t(324) = 313.79$ ,  $p = .001$ ,  $d = 0.37$ .

### *Subjective norms toward pornography*

Malaysian youths are having more positive subjective norms toward pornography in 2019 as compared to 2015 as shown by the mean score in Table 3. A significant difference between 2015 and 2019 with a medium effect was found,  $t(324) = 316.28$ ,  $p < .001$ ,  $d = 0.58$ .

### *Perceived behavioural control towards pornography*

As displayed in the mean score in Table 3, there was no significant differences in PBC towards pornography among Malaysian youths between 2015 and 2019,  $t(324) = 321.45$ ,  $p = .054$ ,  $d = 0.21$ .

### *Intentions to stop pornography viewing*

Malaysian youths are having less intention towards stopping pornography viewing in 2019 as compared to 2015 as shown by the mean score in Table 3. A significant difference between 2015 and 2019 with a small effect was found,  $t(324) = 323.96$ ,  $p = .006$ ,  $d = 0.30$ .

## Discussion

Upon evaluating the pros (Böthe et al., 2021) and cons (Ali et al., 2021; Goldsmith et al., 2017; Štulhofer et al., 2020) of pornography consumption, we conclude that

**Table 3.** Independent samples *t*-test results of variables.

	<i>n</i>	<i>M</i>	<i>sd</i>	<i>df</i>	<i>t</i>	<i>p</i>
Attitudes toward pornography				313.79	−3.35	.001
2015	160	64.18	18.91			
2019	166	70.74	16.36			
Subjective norms				316.28	−5.23	<.001
2015	160	20.62	6.31			
2019	166	24.07	5.59			
PBC				321.45	−1.93	.054
2015	160	23.88	8.93			
2019	166	25.75	8.48			
Intentions to stop pornography viewing				323.96	2.75	.006
2015	160	31.74	10.87			
2019	166	28.39	11.15			

there are more harms than benefits to pornography consumption. Based on this argument, we believe it is important to consider what can help an individual to stop watching pornography. From a social psychological perspective by using Ajzen's Theory of Planned Behaviour, in order to stop pornography consumption, one must first identify an intention to stop and this intention could be influenced by their attitudes, subjective norms (SN) and perceived behavioural control (PBC) toward pornography (Ajzen, 1991). Between 2015 and 2019, we witnessed rapid technological advancements and increased liberalisation of the entertainment industry in Malaysia. During this period, we also noticed a corresponding rise in the usage and prevalence of pornography (Ali et al., 2021). These observations motivated us to conduct a comparison between the years 2015 and 2019 among its youth population. We found that the intention to stop watching pornography has decreased in 2019 as compared to 2015 while the young adults are having increased SN and a more positive attitude towards pornography. This study also found that there were no differences in PBC between the years 2015 and 2019.

### ***Intention to stop watching pornography***

Compared to 2015, there is a reduced likelihood of individuals forming an intention to stop pornography consumption in 2019. This finding is consistent with numerous similar phenomena observed both locally and internationally. For example, although men have historically constituted the predominant consumers of pornography globally, in conservative countries like Malaysia, female adolescents face growing challenges in refraining from pornography consumption (Sarnon et al., 2020). These challenges could stem from factors such as internet attraction and loneliness. On the other hand, such a phenomenon is also observed worldwide, where the consumption of pornography is high or on the rise (Ahorsu et al., 2023; Sanz-Barbero et al., 2023; Shrivastava et al., 2022) and leads to concerns such as problematic porn-use and other behavioural misconducts like addiction and compulsive behaviours (Oke, 2023; Revanth et al., 2023; Shrivastava et al., 2022). In line with the literature, we speculate that our environment has made it more difficult to stop pornography consumption may be due to the influence of omni-present media and personalised technological advancement, which has significantly improved the ease of access to pornography over time by removing limitations that may prevent pornography usage (George et al., 2019). A narrative review study that reviewed past studies from various countries such as Spain, China, Italy and France discovered that technological advancement is the main reason for the increase in pornography viewing (Qadri et al., 2023). Thus, it is more challenging to curb pornography viewing due to the advancement of technology. The difficulty in stopping excessive pornography consumption might lead to more serious problems such as marital dissatisfaction (Kumar et al., 2021; Perry, 2017). Hence, this result suggests two issues that need solutions: (i) how can we assist individuals who suffer from excessive pornography consumption, and (ii) what needs to be done to help individuals to stop watching pornography unhealthily.

### ***Subjective norms (SN)***

Subjective norms (SN) are usually being referred as the perceptions of pressure from others to perform the behaviour, which in this case would be watching pornography (White et al., 2015). We observed that between 2015 and 2019, SN has increased which shows that young adults are experiencing less pressure from their surroundings regarding pornography viewing. Such finding indicates that friends and family are more like to give a tacit approval over the act of pornography viewing, thus leading to a decrease in the intention of stopping pornography viewing. Peer pressure can be observed in the case of Romania (Böthe et al., 2021), where young adults watch pornography in an effort to seek acceptance within social groups, such as friends. Watching pornography is believed to facilitate social approval among peers, especially among college-aged individuals. The decreased social pressure from friends or parents concerning watching pornography may be attributed to the increased prevalence of sexual content on social media, which influences people to be more accepting of pornography (Daneback et al., 2018; Rasmussen et al., 2016).

Another reason for the decrease in subjective norms over the years may be that people have started to perceive benefits from pornography. Pornography usage is often associated with sexual pleasure (McNabney et al., 2020; Miller et al., 2019). However in Malaysia, sexual pleasure is a taboo topic as religious reasons have been used to discourage young adults to have sexual pleasure before getting marriage (Kamaruddin et al., 2018). Young adults who are curious about sexual behaviour can only receive limited information from the current sexual education syllabus in schools (Khalaf et al., 2014; Nikkelen et al., 2020). We speculate that this restriction has made pornography a convenient alternative to achieve sexual pleasure and learn about sex. This is because watching pornography could be done anonymously and privately without worrying about unnecessary judgment (Shim & Paul, 2014). Hence, pornography viewing has become more acceptable among peers. As more people watch pornography, a desire for popularity and peer pressure would increase pornography usage among adolescents (Dawson et al., 2019).

This result may not be unique to Malaysia. Among young adults in the United States, there is a link between pornography use and peer descriptive social norms, as well as easily accessible peer injunctive norms (Rasmussen et al., 2016). In essence, the widespread availability of pornography contributes to an increased acceptance of its consumption. This acceptance arises from the belief among adults that it is okay to engage in pornography because 'everyone else is doing it.' This perception spreads through discussions about pornography and by observing friends who watch it, a phenomenon often referred to as the normalization of pornography. An increase in pornography watching behaviour would lead to eventual desensitization towards such content as it slowly becomes normalized within society (Daneback et al., 2018).

### ***Attitudes towards pornography***

Attitudes are described as whether there are positive or negative evaluations of a behaviour (White et al., 2015). The current study suggests that individuals are upholding more positive attitudes toward pornography in 2019 as compared to

2015. This study aligns with another research conducted in Malaysia, which found that 60-70% of participants reported having positive attitudes toward pornography (Goh et al., 2023). Many young adults view watching pornography as a normal and enjoyable activity that can provide pleasure, information, and guidance (Peterson et al., 2023).

We attribute these findings to the social environment in which our respondents may have interacted. The prevalence of sexual content in media, particularly on social media, has become normalized among young adults. Given that sexual cues and innuendos are pervasive in contemporary popular entertainment, greater acceptance of this media can contribute to a more positive attitude (Turner, 2011; Ward et al., 2016). For example, songs like ‘Despacito’ contain sexual implications in the lyrics, and movies like ‘Deadpool’ depict explicit sexual scenes (Cheang, 2016; J. Lim, 2017). Even in many localized entertainment, popular content creators in Malaysia, such as Namewee, have included sexual content in his work and received over 97% likes on social media (Namewee, 2022). This indicates a positive reception towards such content. The widespread presence of these trends suggests that culture has adjusted to the presence of sexual content, leading to increased acceptance.

An intriguing observation is that a person’s level of religiosity can be a significant factor influencing their positive attitudes toward pornography. Research has shown that individuals who are less religious are more likely to have positive attitudes towards pornography, especially when they believe that their friends would approve such behaviour (Grigoropoulos, 2023). In the context of this study, the research participants were selected from a society where the majority of its people are deeply devoted to religion. As an illustration, there have been concerns expressed, along with a positive reception of government initiatives aimed at reducing the extensive time currently allocated to teaching religious rituals in schools (The Straits Times, 2018; Zurairi, 2020). Therefore, these findings indicate that despite the religious and moral education provided in schools, young adults continue to hold more positive attitudes towards pornography. This suggests the need for further investigation, as there are other factors influencing these attitudes.

### ***Perceived behavioural control (PBC)***

Lastly, perceived behavioural control (PBC) represents a person’s ability to willingly stop or control their porn watching behavior. We anticipate that individuals may face greater challenges in exercising self-control in 2019, primarily due to the increased ease of accessing internet pornography facilitated by technological advancements compared to 2015. However, no significant differences were detected between 2015 and 2019. This result shows that our respondents do not perceive it as easier or more difficult to control their own behavior when it comes to watching pornography in 2019 as compared to 2015.

One way to interpret this result is that the respondents do not consider watching or not watching pornography to be a self-control effort. This argument can be supported by the fact that the environment often plays a greater role in influencing behaviour (Lahey, 2021). In today’s digital landscape, internet users often encounter unwanted pop-up advertisements (Prastyanti et al., 2021), commonly associated with

adult content. These pop-ups can serve as triggers to watch pornography (Martini & Gangadharbatla, 2023). We recommend that future research should explore how unwanted pop-up ads influence an individual's decision to engage in or abstain from watching pornography.

Furthermore, it is important to consider how these variables were measured. For instance, respondents were asked about their capacity to shift focus to alternate activities like jogging or reading, their reliance on personal convictions such as health concerns or religious beliefs to resist pornography, and their strategies for scheduling to prevent solitary access to pornography. However, these measurement methods may be outdated in today's context. For instance, when it comes to reading books, people may opt for e-books online, which are susceptible to unwanted pop-up ads that could redirect them to pornographic websites. Not only that, the scale does not acknowledge that an individual's self-regulation of pornography consumption is influenced by their reliance on such material (Sirianni & Vishwanath, 2016). When the usage remains moderate and is primarily for entertainment purposes, individuals tend to exhibit better control over their desire to watch. Conversely, those who engage with pornography out of social necessity may suffer adverse life consequences as their self-regulation diminishes.

## Limitations and recommendations

We would like to note all the limitations of this research. Firstly, some measurement scales should be updated to suit the current context, as suggestions like using books for distraction may need revision due to the availability of e-books on devices that could also access pornography content. Secondly, as this study is conducted in English, which, although widely used, is not the national language of the studied population, presenting the scales in Malay may improve participants' understanding and expand our reach to a more diverse audience. Thirdly, convenience sampling was used to gather the data in both 2015 and 2019, thus it may be susceptible to selection biases as the sample is not representative of the entire population in Malaysia (Leary, 2016). Fourthly, we would like to bring to the reader's attention that Malaysia is a multicultural and multireligious society. This study did not account for this diversity such as collecting data about ethnicity, therefore careful consideration should be conducted when interpreting the results of this study. To explore the influential factors affecting all the measured variables more comprehensively, future researchers could conduct longitudinal studies with a specific cohort to gain insights into the potential factors influencing the current variables. Additionally, conducting qualitative studies in the future may contribute to a deeper understanding of this phenomenon.

## Conclusion

Our findings indicate a noteworthy shift in attitudes and subjective norms towards pornography, with a simultaneous decrease in intentions to stop watching it, suggesting an acceptance of pornography increasingly. In light of this evolving societal perception, it becomes crucial to acknowledge the potential risks associated with

pornography consumption and provide education on its effects, while also recognizing its potential benefits when used responsibly.

## Disclosure statement

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