

Investigating the Relationship Between Pornography Use and Symptoms of

Depression

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## Abstract

The current study examined the relationship between the frequency of pornography use and symptoms of depression, while also exploring the gender differences within these variables. Prior research has shown that pornography use has been correlated with mental health problems such as depression in men, and a loss of interest in sex. The current study aimed to expand upon these findings and strengthen them by including both males and females into the investigation. A total of 59 participants aged between 18-30 completed the Porn Use Scale (Szymanski, Dawn M, Stewart-Richardson, Destin N, 2014) and the Beck Depression Inventory II. Findings from a Pearson Correlation analysis showed that there is a significant relationship between Frequency of Pornography use and Depression for both males and females. An independent t-test revealed that males watch pornography more frequently than females. A Pearson correlation found that both males and females who watch high amounts of pornography are less interested in sex. Implications for this study and best practices for measuring and researching pornography use and depression are discussed below.

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#### Introduction

Today pornography refers to sexually explicit media which includes books, films, pictures, paintings and literature that depicts sexual activity with the intention to stimulate sexual excitement (Oxford English Dictionary, 2008). With the rapid rise and availability of the internet, society has gained free, easy access to an enormous amount of different sexually explicit websites that host pornography for every wild fantasy (Greenfield, 2004).

As of 2018 the pornography industry has a net worth of 97 billion dollars and covers thirty percent of all data transferred across the internet. The porn industry is so vast, that the top pornography sites receive more visits per month than the largest streaming service (Netflix), the largest online shopping service (Amazon), and the most popular social media platform (Twitter), (Moseley, 2018).

#### Stigma

According to Merium Webster, stigma can be defined as a mark of shame. The modern use of stigma refers to negative opinions or unfair beliefs that society holds about something. Pornography is stigmatised in society to the point of being taboo (Sabri and Obermiller, 2012). Despite being such a massive, worldwide industry and part of many people's private lives, even the mere mention of the word in public raises judgemental eyebrows. Over time pornography has been investigated numerous times by theorists who view it as problematic (Dean, 1996)

Ruben (1993) suggests that the stigma surrounding pornography and its consumption is societies' way of preventing moral degeneration. The stigma surrounding pornography dates to the Victorian moral crusades in England, with the aim being to eliminate prostitution, masturbation and sex outside of marriage (Rubin, 1993). With the rapid rise of technology, pornography has become more available and involved in modern cultures. Despite this, Voss (2015) argues that the consumption and production of pornography is still heavily stigmatized and seen as taboo. A study by MacLeod, (2021) on the role of stigma in pornography, found that its participants linked their personal stigma of the topic to the shame surrounding its consumption and production. Participants of the study explained how the lack of credible information surrounding the ethics of porn production contributed to their stigma of the industry. This may be related to the assumption that violence against women is encouraged by pornography. Researchers argue that whether pornography is explicitly violent or not, it represents a form of violence and discrimination against women (Dworkin & MacKinnon, 1998).

According to Willoughby and colleagues (2019), due to the stigma around pornography, individuals who consume the sexually explicit material may experience anxiety, guilt, and depression as a result of consumption. Patterson and Price (2012), state that negativity towards pornography in religious communities also causes individuals to experience those same negative, internal conflicts. To some, pornography is seen as a healthy way to express sexuality. To others, it creates a negative attitude towards sex and relationships (O'Brien and Shapiro, 2004).

# Why people watch pornography

On its own, masturbation has numerous positive biological benefits for humans. From masturbation, chemicals and hormones are released within the body such as dopamine, serotonin, oxytocin, and endorphins. These neurotransmitters give the feeling of happiness, optimism, stress relief, and pain relief. From these benefits, it seems as if masturbation has no downside. However, when pornography is used to aid in masturbation, there can be negative effects. According to McKee (2007), the most common negative effect of consuming pornography is a loss of interest in sex, problems in relationships, unrealistic expectations from ex with a partner, and an addiction to pornography. Other possible negative effects include: An increased likelihood of having paid for sex (Wright 2013), and infidelity (Maddox et al. 2011), a preference for riskier sex (Schrimshaw, Antebi-Gruszka, & Downing, 2016), and more risk-taking behaviours (Carroll et a., 2008), as well as poorer mental health (Willoughby and collegues, 2014) and less self-body satisfaction (Daneback, Traeen, & Mansson, 2009). A study from Hong Kong found an association between watching pornography and being out of school, lacking social support, reporting family conflicts, having more sexual partners and, among men, and using prostitutes (Janghorbani, Lam, & The Youth Sexuality Study Task Force, 2003).

Despite these negative effects, current literature shows that pornography has more positive effects on people's wellbeing than negative effects. Sixty percent of the participants in McKey (2007), claimed that pornography had a positive effect on their attitudes towards sexuality. Within the study, 35% of participants said that it had no effect and only 7% said that it had a negative effect. According to the participants of his study, pornography made them more open-minded about sex, helped them tolerate other people's sexualities and even helped them be more aware and accepting of their partners sexual fantasies. In a study by Evans-DeCicco and Cowan (2001), they found that having a positive attitude towards pornographic material was related to how individuals positively perceived the actors and actresses in the pornographic content.

### The gender differences in porn consumption

Men enjoy and watch pornography more often than women Hammaren & Johansson (2007). According to Szymanski and Stewart-Richardson (2014), attachment styles can be correlated with men's pornography use. One's attachment style can explain any anxiety or avoidance in romantic relationships (Zapf, Greiner, & Carroll, 2008). Men who have an avoidant attachment style may be more likely to consume pornography and consume it in larger amounts per session. These anxious men may use pornography to fulfil their sexual desires without having to focus their energy and emotions on reality or their relationships. As (Szymanski and Stewart-Richardson (2014) states, these men may dislike having sex in the real world, as they require psychological and physical closeness, which may place too much demand on the anxious individual.

A study in the Journal of Adolescent research stated that half of young adult women think watching pornography is a good way to express their sexuality, and that 20% of women watch porn every week. Romito and Beltramini (2011) conducted a study on the gender differences in watching pornography. The participants were students aged between 18 and 25. Within their participants, almost all males (88%) admitted to watching pornography in the past and is still currently watching, compared to 61% of the females. Pornographic websites were watched by 37.5% of the males and 12.1% of the females. That study is over ten years old, so one would assume that those numbers would be significantly higher, as a result of internet pornography being far more available and easier to access on any smart phone with a Wi-Fi connection. Regarding the type of pornography, they were consuming, 42% of males and 32% of females admitted to watching pornography that showed violence against women. Of those, 33% and 26% claimed the women in the pornography they consumed enjoyed the violence. These numbers are concerning and may well feed into the stigma surrounding violence in pornography. According to Wolak et al., (2007), young men who watch violent pornography tend to show antisocial behaviour. When tested in a laboratory setting, young men who prefer violent pornography show high aggressive/antisocial tendencies (Bogaert, 2001).

# Depression

Depression is a common illness that effects one in five people at some point in their lifetime (Malhi and Mann 2018). According to the WHO (2008), depression is ranked third in the causes of disease and is projected to rank first by 2030. Depression can intensify the effects of other mental illnesses such as anxiety, suicidal tendences, panic disorders etc and can be a source of suffering and disability by itself (Gaynes et al 2002).

For students, transitioning from second level education to third level education can cause stress. Many students leave their family home, their secondary level school friends and are faced with new, daunting challenges, which can cause stress (Cleary, Walter, & Jackson, 2011). This stress can put new third level students at more risk of developing mental health problems such as depression, (Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010).

Horgan, A., Kelly, P., Goodwin, J., & Behan, L. (2018) ran a study on the depressive symptoms among Irish undergraduate college students. They found that 59% of participants had experienced symptoms of depression. According to Field, Diego, Paelez, Deeds, & Delgado, 2012), third level students experience significantly more distress than individuals of the same age, who aren't still in education.

# **Depression and Pornography**

Willoughby, Busby & Young-Petersen ran a research study in 2019 looking to explore the association between a person's individual definition of pornography, and their use of pornography with symptoms of depression. The results of their study stated that an individual's perception of whether sexual material was pornographic or not was significantly correlated with how much they used pornography and these differences in perception of pornography had a significant relationship with symptoms of depression.

They stated that higher levels of symptoms of depression were related to individuals who considered the sexual material they viewed as non-pornographic. However, they did not find a correlation between pornography use and symptoms of depression. Similar to the result of their study, Grubbs et al, (2015) found that an individual's perception of pornographic addiction was a stronger predictor of one's wellbeing than how much pornography they use. The results of their study suggest that consuming sexual material they do not consider as pornographic, not the frequency of pornography use, was consistently associated with symptoms of depression.

Recent research in Ireland from Gleason, N., Banik, S., Braverman, J., & Coleman, E. (2021) inspected the effects of the covid-19 pandemic on sexual behaviour and relationship satisfaction. Their findings show a significant decrease in partnered sexual activities and sexual pleasure. Women showed a small decrease in sexual desire whereas a small increase in masturbation and pornography usage was found with the male participants. They also stated that depressive symptoms emerged as one of the predictors of their results.

Questions from the Beck Inventory II in this study will also look to see if there is a decrease in sexual desire, interest in sex and people. This study will look to replicate similar results with focus on the frequency of pornography use and symptoms of depression. Doing more research on factors that influence symptoms of depression could help reduce rates of depression in the future. The study aims to discover whether levels of pornography consumption share a relationship with depression.

### **Scientific Rationale and Research Questions**

The current literature focuses on people's views on pornography and its link to depression. Previous studies have struggled to find a significant correlation between the

amount of pornography consumed and mental health issues such as depression. This study will look to investigate how much pornographic material young adults consume and if they show depressive symptoms to see if there is a significant relationship between the two. Furthermore, the Porn Use Scale (Szymanski, Dawn M, Stewart-Richardson, Destin N, 2014) has typically been used to measure the pornography usage of just males, however in this research study, females will be included.

This study will look to measure the amount of pornographic content consumed by the participants, as well as measure their levels of depression. The other research questions are the following: Do the males consume more pornography than women? Is there a relationship between the amount of pornography consumed and a loss of interest in sex? Is there a correlation between the amount of pornography consumed in one sitting and levels of depression?

## Methodology

# **Participants**

The sample for this current study included (59) (males: n = 38; Females: n = 21) individuals above the age of 18. This sample size was calculated using G power, which calculated the required number of participants for a multiple regression as minimum 55. Participants were recruited from the Republic of Ireland. The minimum age of the participants was 18, as this was a requirement for participating in the study, because it is illegal to consume pornography if you are under the age of eighteen. Participants ranged in age from 18 to (30), with an average age of 22.83 (SD = 2.96). This study implemented convenience sampling methods to recruit participants. Participants were recruited using online social media platforms and participation relied on their own motivations to take part in this study.

### Materials

The study questionnaire included two demographic questions and two distinct scales. The survey was created using Google Forms. The demographic questions included questions of the participants age and gender. These were included to gather a general profile of the participants and the provide options to compare data collected from the scales by age and gender.

The Porn Use Scale: was developed by Szymanski, Dawn M, Stewart-Richardson, Destin N, 2014. They developed the scale as there were no validated men's pornography use scales that had more than one item questions. They wanted to create a scale that covered the content but was accessible for large-scale research studies. To establish validity for their scale, multiple analyses were conducted. The chi-square test of sphericity was significant (p < .001), the Kaiser-Meyer-Olkin measure of sampling adequacy had a value of .88 and in a sample of young heterosexual men, the Cronbach's alpha scores were .88 for frequency of use, (PsycTESTS Database Record © 2019 APA).

For the purpose of this research study, only the Frequency of Pornography Use subscale will be used. This scale consists of seven items which asses the amount of time spent consuming pornographic material. These items are measured on Likert Scales. For example, question one states "How frequently do you view sexually explicit materials/pornography via adult magazines (e.g., Playboy, Hustler)?", 0 = none 1 = once a month or less 2 = 2 or 3 days a month 3 = 1 or 2 days a week 4 = 3 to 5 days a week 5 = every day or almost every day.

**The Beck Depression Inventory II (BD-II):** developed by Beck (1996) is a multiplechoice self-report questionnaire designed to measure behavioural manifestations of depression. The 21-item scale and has been developed to measure the depth of depression as well as for the rapid screening of depressed patients. A self-rating instrument, the clinically derived items are rated on a scale of (0-3). The questions are of a multiple-choice response format. For example, Dissatisfaction, 0 = I am not particularly dissatisfied, 1 = I don't enjoy things the way I used to, 2 = I don't get satisfaction out of anything anymore, 3 = I am dissatisfied with everything.

# Design

This study applied a quantitative approach on a cross-sectional research design. The predictor variable (PV) was pornography use. The Criterion variable (CV) was depression. For the hypothesis a between-groups design was implemented as different sexes (male and female) were compared on their levels of pornography use and depression.

# Procedure

The participants of this study were recruited on social media sites such as Twitter, Facebook, Reddit and Instagram, as well as college group chats and word of mouth. The link to the questionnaire was posted on those social media websites. The minority of participants were recruited by mutual friends who were given a link to the questionnaires via email once they asked to take part in the study. Upon opening the link, participants were greeted with an information sheet and a consent form (appendix blank). These forms include a statement explaining how the participants can withdraw from the study at any time before they submit their questionnaire answers at the end. This statement explained how all data becomes anonymized after submission, thus making the removal of data impossible after submission. Once consent was given by clicking ''yes'' they were required to answer a question about their age and their sex. Once this was completed, they were able to move on to the questionnaire. The participants of this study were required to complete the pornography use questionnaire followed by the depression scale. This would have taken approximately 5 minutes. After the questionnaires had been completed, participants were met with a debriefing sheet, which contained the contact details of myself and my supervisor. They also would have been given a statement declaring that if they felt any distress from taking part in this study, that they should contact they helpline services listed below on the debriefing sheet (Appendix Blank).

# Ethical considerations

There will be no risk of a loss of social status, privacy, or reputation, as participant identity will be kept confidential and not published in the study. There will be no physical risk in this study. Participants may feel mild distress as a result of taking part, as the theme of depression and the related questions can be distressing to some individuals. Participants may experience some slight embarrassment while answering questions related to pornography. The participants have the right to withdraw from the study up until the point they have to submit their answers to the questionnaires. They will be informed before they agree to participate that once they submit their answers, they will be unable to withdraw consent, because their data will be immediately anonymized. No information about the research study will be withheld from the participants. There is no deception needed in order to conduct this study. A debriefing sheet will be given to all participants. This sheet will contain the phone numbers, email addresses and website information for the relevant helpline services.

#### Results

# **Descriptive Statistics**

The following data is taken from a sample of 59 participants (n = 59). This consisted of 64.4% males (n = 38) and 35.6% females (n = 21).

There are two continuous variables including pornography use frequency and depression. The mean, standard deviation, minimum and maximum scores are displayed in Table 1 below.

#### Table 1

# Descriptive statistics and reliability for all continuous variables

	Mean	SD	Skewness	Kurtosis	Minimum	Maximum
Porn Use	19.87	7.76	.203	120	7	42
Depression	35.49	12.31	1.36	2.68	21	84
Age	22.83	2.96	.587	.496	18	31

# **Inferential Statistics**

Preliminary analyses were conducted to ensure no there was no violation of the assumptions of normality. Having confirmed that there were no violations, a Pearson correlation was conducted to assess the relationship between pornography use frequency and depression. There was a significant, strong, positive correlation between the two variables pornography frequency use and depression (r = .542, n = 59, p < .01). The variance shared between the two variables was approximately 29%. These results indicate that higher levels of pornography use frequency are associated with higher levels of depression.

An independent samples t-test was conducted to compare pornography use frequency among males and females. This test results indicated a significant difference in scores, with males (M = 22.61, SD = 7.1) scoring higher in pornography use frequency scores than for females (M = 15.13, SD = 6.8), t (58) = -4.03, p = < .01, two tailed. The magnitude of the differences in the means (mean difference = -7.47, 95%CI: -11.18 to -3.76) was strong (Cohen's d = 1.07)

A Pearson correlation was conducted to assess to relationship between the amount of pornography viewed in one sitting and depression. There was a significant, strong, positive correlation between the two variables (r = .582, n = 59, p < .01). The variance shared between he two variables was approximately 34%. These results indicate that higher amounts of pornography consumed in one sitting are associated with depression.

A Pearson Correlation was conducted to assess the relationship between frequency of pornography use and the loss of interest in sex. There was a significant, moderate, positive correlation between the two variables (r = .481, n = 59, p < .01). The variance shared between the two variables was approximately 23%. These results indicate that higher amounts of pornography use are associated with a loss of interest in sex.

To summarise the results, there is a significant correlation between the frequency of pornography use and depression. Pornography use was higher in males than females. The amount of pornography consumed in one sitting correlated with depression. The frequency of pornography use correlated with the lack of interest in sex.

#### Discussion

The current study aimed to investigate the relationship between the frequency of pornography use and symptoms of depression. It also aimed to look at gender differences within each variable. Previous research found that pornography use has been associated with various domains of mental health concerns; these include anxiety, guilt and depression (Willoughby and colleagues (2019). Other prior research has linked pornography use to loss of interest in sex (KcKee 2007), and less self-body satisfaction (Daneback, Tracen & Mansson, 2009). With regards to gender, previous research found that males have watched more and are currently watching more pornography, compared to females (Romito and Beltramini 2011). Through this research, Blank hypothesis were formulated to address the aims for this study.

It was hypothesized, from previous literature, that (H1) there would be a relationship between the amount of pornography consumed and symptoms of depression. This was explored using a Pearson correlation analysis; from this it was found that there was a significant positive relationship between pornography use and depression. These findings suggest that higher levels of frequency of pornography use are associated with higher levels of depression. This conflicts with prior research studies which have found that frequency of pornography use is not associated with symptoms of depression (Grubbs et al, 2015, Willoughby, Busby & Young-Peterson, 2019).

Regarding Hypothesis One, the findings of this study state that there is a relationship between the amount of pornography one consumes, and depression. However, the current literature suggests this may not be an accurate result. Studies such as Perry (2018) took interest in the relationship between pornography use and depression. Their findings claim that it is not the amount of pornography one uses, but the opinion one has of the material itself. That men who believe consuming pornography is always morally wrong, but consume it PORNOGRAPHY USE ON DEPRESSION

anyway are more likely to show symptoms of depression when compared to men who don't view pornography as immoral. Although according to Perry (2018) this does not apply to women. Future research on this topic should seek out why men and women differ regarding the morality of consuming pornography and depression. (Szymanski, Dawn M, Stewart-Richardson, Destin N, 2014), the authors of the Pornography Use Scale employed in this study, used the scale and its problematic porn use scale counterpart to research the effects of pornography on men. They too shared results that support the idea that it's not how much pornography you consume, but in fact it is whether you view it as problematic or not.

To explain why the results of this study contrast the current literature, Perry (2018) may have an explanation. The connection between consuming pornography and depression may be bidirectional. It depends on one's opinion of its use. Men who think consuming pornography is problematic, show symptoms of depression at low frequencies of pornography use. Men who think there is no immoral aspect of pornography but consume it to higher frequencies also show symptoms of depression. For the first group, the depressive symptoms may be a result of cognitive stress over enjoying something they view as morally wrong. For the latter, it seems the depressive symptoms are a result of reverse causation. It's not that watching high frequencies of pornography causes depression, but moreover that men who are depressed are more likely to watch high amounts of pornography. Future research could explore the differences between males and females regarding problematic pornography use and its correlation with symptoms of depression.

For H2, an independent samples t-test was conducted to compare pornography use frequency among males and females. The results of this test indicate a significant difference in scores, with males scoring higher in pornography use frequency scores than females. This PORNOGRAPHY USE ON DEPRESSION

is consistent with prior research implying that males consume more pornography than females (Romito and Beltramini 2011). Their study found large differences in most aspects of pornography consumption between gender. Males started watching pornography earlier, enjoyed the sexual nature of it more and were five times more likely to have watched it. THOMAS JOHANSSON AND NILS HAMMARÉN state that young men have a more positive attitude towards pornography than young women. That they do not dismiss pornography despite it being degrading to women. Perhaps these young men feel strong and masculine watching their fellow men show dominance over a woman in pornography. They feel no shame because they assume that is how it should be in the bedroom. This statement is backed up my Diamond (1984). They claim that men are taught then sex makes them strong and powerful, whereas women are taught that sex makes them weak and bad. Ciclitira (1998) suggests that this outcome has a bigger effect on working class women. These women tend to be stigmatized more about their sexuality than other women.

Females on the other hand were far more likely to react with fear and disgust to pornography than males (Romito and Beltramini 2011). This may be a result of the inherently violent nature of some pornography, with depicts women both enjoying and disliking the sexual violence. Future research may consider investigating the relationship between the moral opinion of pornography and the frequency of pornography use and compare the male results with the female results. That could provide a better understanding of why there is a significant difference between the genders regarding pornography use.

For H3, it was assumed that the amount of pornography consumed in one session would be related to higher symptoms of depression. A Pearson Correlation was conducted to assess to relationship between the amount of pornography viewed in one sitting and depression. There was a significant, strong, positive correlation between the two variables. These results indicate that higher amounts of pornography consumed in one sitting are

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associated with higher amounts of depression. These results contrast with prior literature, that states the amount of pornography consumed in one session is not correlated with higher symptoms of depression (Harper and Hodgins 2016). Once again, these results can be explained through the findings of (Perry, 2018), which suggest that people suffering with depression are more likely to watch more pornography. Perhaps people who consume more pornography in general are more likely to spend extra time doing so in one sitting. Future research would include studying pornography use in one session comparing results with people who have no symptoms of depression and people who show high levels of depression.

Lastly, H4 stated that there would be a relationship between frequency of pornography use and the loss of interest in sex. A Pearson Correlation was conducted to assess the relationship between frequency of pornography use and the loss of interest in sex. There was a significant, moderate, positive correlation between the two variables. The results indicate that higher amounts of pornography use are associated with a loss of interest in sex. This is consistent with previous research by McKee (2007) who produced similar results. His findings reported that some participants claimed positive effects such as sustaining sexual interest in long term relationships, from watching pornography. Other participants claimed negative effects such as a loss of interest in sex, which match the results of this study. With these two outcomes being opposites of each other, perhaps future research could look to investigate whether relationship status or relationship length has any impact on which side of the sexual interest spectrum participants lie on. It could be that single individuals watch pornography to fill the void of a sexual relationship, thus removing any drive to pursue a romantic partner.

Referring to prior research, men who view pornography may have avoidant or anxious attachment styles (Szymanski and Stewart-Richardson, 2014). Individuals with anxiety often have insecurities about their sexual attractiveness, and thus worry about being

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rejected by their desired sexual partners (Tracy et al., 2003). These anxious and avoidant men may consume more pornography because there is no risk of rejection. They can have their sexual desires fulfilled without any anxiety that comes with real life copulation. Perhaps future studies should look to include questionnaires and scales based on deducing attachment styles of both men and women to further the research surrounding this topic.

As there is a casual relationship between pornography use and depression, other future implications could be that current mental health services and promotions spread awareness of the potential dangers of pornography use. If individuals are informed of this information perhaps less people will suffer from depression which would reduce some of the strain on healthcare facilities and services dedicated to providing help to these individuals.

## **Strengths and Limitations**

A strength of this study is the male to female participant ratio. Out of 59 participants, 64% were male and 35% were female. While this is not the perfect ratio, it has far more female representation in terms of percentage, than the original Porn Use Scale study by Szymanski, Dawn M, Stewart-Richardson, Destin N, (2014) that only focused on male pornography use. Despite being relatively modern, Szymanski and colleagues focus was set on only men. However, since males and females both consume pornography, it was important for this study to get enough data from both groups to get a to better understanding of the relationship between pornography use and depression.

The Porn Use scale itself can be considered both a strength and a limitation for this study. The scale had good validity and reliability. The chi-square test of sphericity was significant (p < .001), and the Kaiser-Meyer-Olkin measure of sampling adequacy had a value of .88. However, the questions themselves seem to be outdated. From this study's own data, questions about how often one reads pornography magazines such as Playboy, or

watches pornography movies not watched on the internet, are just not relevant to this young adult population. A suggestion for future research would remove the questions about pornography magazines and films, and solely focus on internet porn, if focusing on younger adults.

Unfortunately, there were multiple limitations regarding the sample. Firstly, the sample size was not large enough to gain an accurate representation of the targeted population. There were multiple methods of data collection, including online advertisements, word of mouth and convenience sampling. However, the majority of participants were recruited from the researchers own social media accounts, WhatsApp groups and personal friends who shared the study with people they knew. This meant that the participants would be primarily based in County Dublin, Ireland, which would not give an accurate representation of the population, as different counties, especially counties away from the major cities may have different cultural opinions on pornography, which could affect how much is consumed. Future research should look to replicate the study with a larger sample size while focusing on gathering participants from around the country, to reduce any sampling bias.

Another limitation of this study was the reliance on self-reported questionnaires and scales. Despite this study being completely anonymous, some participants may have felt embarrassed about answering personal questions surrounding a topic as taboo as pornography. Participant responses to the Beck Depression Inventory II may not be entirely truthful, as self-reported questionnaires always run the risk of being affected by the participants current mood and feelings. An individual may be having an unusually bad day and therefore their answers may be more negative than usual. With there being some stigma surrounding mental health problems in society, participants may be in denial about their own feelings, which could affect the variables being measured. One possible solution to this could

be to measure participants symptoms of depression over multiple periods of time, in order to avoid catching them on an unusually upsetting day.

## Conclusions

Overall, there is consistent evidence from this research study that there is a relationship between pornography use and depression. This study also found a relationship between the frequency of pornography use and a decrease in interest in sex. The results from this study add to the existing literature surrounding pornography use and strengthen previous findings around its relationship to depression. Data representing female frequency of pornography use will add to and strengthen the previous limited amount of research surrounding women and pornography use.

Future studies may look to replicate by improving on the limitations of this study. Developing a modernized pornography use questionnaire which takes the incredible availability of internet pornography into account. Perhaps using a more modern depression scale than the Beck Depression Inventory II would be beneficial, while also doing longitudinal research to record symptoms of depression over multiple periods of time. These changes may provide more accurate results from a young adult population and provide a better understanding of how pornography use effects people mentally. This would be helpful in developing interventions related to reducing problematic frequencies of pornography use and depression.

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# Appendices

# Appendix A

# Evidence of data and SPSS output

<b>a</b> 6	🖨 🛄 🗠 🦘 🎬 📥 📰 🏴 🚹				
	Name	Туре	Width	Decimals	Label
1	Timestamp	Date	20	0	
2	Consent	String	255	0	
3	Age	Numeric	8	2	
4	Gender	Numeric	8	2	
5	How_often_do_you_view_sexual_explicit_materialspornography_via_	Numeric	8	2	How often do you view sexual explicit materials/pornography via
6	How_often_do_you_view_sexual_explicit_materialspornography_via1	Numeric	8	2	How often do you view sexual explicit materials/pornography via
7	How_often_do_you_view_sexual_explicit_materialspornography_via2	Numeric	8	2	How often do you view sexual explicit materials/pornography via2
8	Taken_together_how_often_do_you_view_sexually_explicitporn	Numeric	8	2	Taken together, how often do you view sexually explicit/porno
9	More_Specifically_how_often_do_you_view_sexually_explicit_porno	Numeric	8	2	More Specifically, how often do you view sexually explicit porno
10	Taken_together_how_many_hours_per_week_do_you_view_sexually	Numeric	8	2	Taken together, how many hours per week do you view sexually
11	When_usingviewing_sexually_explicitpornographic_materials	Numeric	8	2	When using/viewing sexually explicit/pornographic materials
12	Sad	Numeric	8	2	
13	Future	Numeric	8	2	
14	Failure	Numeric	8	2	
15	Satisfaction	Numeric	8	2	
16	Guilt	Numeric	8	2	
17	Punishment	Numeric	8	2	
18	Disapointment	Numeric	8	2	
19	Self_Critical_	Numeric	8	2	Self Critical
20	Suicide_Thoughts	Numeric	8	2	Suicide Thoughts
21	Crying	Numeric	8	2	
22	Iritated	Numeric	8	2	
23	Interest_in_people	Numeric	8	2	Interest in people
24	Decision_making	Numeric	8	2	Decision making
25	Appearance_	Numeric	8	2	Appearance
26	Work_effort	Numeric	8	2	Work effort
27	Sleeping	Numeric	8	2	
28	Tiredness	Numeric	8	2	
20	A	Alizzation	0	2	

Data View Variable View

Descriptive Statist	Correlations				
	De	scriptive	Statistics		
		Mean	Std. Deviati	on N	
	Total_Porn_Use	19.8667	7.760	10 60	
	Total_Depression	35.4915	12.308	36 59	
		c	orrelation		Tabl Dama
		c		<b>s</b> Total_Porn_U se	Total_Depres
	Total_Porn_Use	C Pearson C		Total_Porn_U	
	Total_Porn_Use		orrelation	Total_Porn_U se	sion
	Total_Porn_Use	Pearson C	orrelation	Total_Porn_U se 1	sion .542
	Total_Porn_Use Total_Depression	Pearson C Sig. (2-tail	orrelation ed)	Total_Porn_U se 1	sion .542 <sup>*</sup> .000
		Pearson C Sig. (2-tail N	correlation ed) correlation	Total_Porn_U se 1	sion .542 <sup>°</sup> .000

# Appendix B

# The Pornography Use Scale

# Szymanski, Dawn M, Stewart-Richardson, Destin N, (2014)

1. How frequently do you view sexual explicit materials/pornography via adult

magazines (e.g.,

# Playboy, Hustler)?

0 = none

- 1 =once a month or less
- 2 = 2 or 3 days a month
- 3 = 1 or 2 days a week
- 4 = 3 to 5 days a week

5 = everyday or almost everyday

# 2. How frequently do you view sexual explicit materials/pornography via adult videos,

movies,

and/or films?

0 = none

- 1 =once a month or less
- 2 = 2 or 3 days a month
- 3 = 1 or 2 days a week
- 4 = 3 to 5 days a week

5 = everyday or almost everyday

# 3. How frequently do you view sexual explicit materials/pornography via the Internet?

0 = none

1 =once a month or less

2 = 2 or 3 days a month

3 = 1 or 2 days a week

4 = 3 to 5 days a week

5 = everyday or almost everyday

# 4. Taken together, how frequently do you view sexually explicit/pornographic material

(such as magazines, movies, and/or Internet sites)?

0 = never

1 = rarely

2 =sometimes

3 = frequently

4 = most of the time

5. More specifically, how frequently do you view sexually explicit/pornographic material (such as magazines, movies, and/or Internet sites)?

0 = none

1 =once a month or less

2 = 2 or 3 days a month

- 3 = 1 or 2 days a week
- 4 = 3 to 5 days a week
- 5 = everyday or almost everyday

#### 6. Taken together, how many hours per week do you view sexually

## explicit/pornographic material (such as magazines, movies, and/or Internet site)?

0 = none

1 = about 1 hour per week

- 2 = between 2 and 4 hours per week
- 3 = between 4 and 6 hours per week
- 4 = between 6 and 8 hours per week
- 5 = more than 8 hours per week
- 7. When using/viewing sexually explicit/pornographic materials (including online,

magazines, DVD/videos/movies) in one sitting, I spend approximately \_\_\_\_\_ amount of time doing such;

- 0 = I do not ever use/view such materials
- 1 = less than 15 minutes
- 2 = between 15 minutes and 30 minutes
- 3 = between 31 minutes and 60 minutes
- 4 = between 61 minutes and 90 minutes
- 5 = more than 90 minutes

# Appendix C

# **Beck's Depression Inventory II**

# Beck, A. T., Steer, R. A., & Brown, G. K. (1996)

#### Beck's Depression Inventory II (BDI-II)

**INSTRUCTIONS:** This questionnaire is about **YOURSELF**. On this questionnaire are groups of statements. Please read each group of statements carefully, then fill in the circle next to the statement in each group that best describes the way you have been feeling over the **PAST TWO WEEKS**, **INCLUDING TODAY**. *BE SURE TO READ ALL THE STATEMENTS IN EACH GROUP BEFORE MAKING YOUR CHOICE*. Then move on to the next group of sentences.

••		
	0	I do not feel sad.
	1	I feel sad
	2	I am sad all the time and I can't snap out of it.
	3	I am so sad and unhappy that I can't stand it.
2.		
	0	I am not particularly discouraged about the future.
	1	I feel discouraged about the future.
	2	I feel I have nothing to look forward to.
	3	I feel the future is hopeless and that things cannot improve.
3.		
	0	I do not feel like a failure.
	1	I feel I have failed more than the average person.
	2	As I look back on my life, all I can see is a lot of failures.
	3	I feel I am a complete failure as a person.
4.		
	0	I get as much satisfaction out of things as I used to.
	1	I don't enjoy things the way I used to.
	2	I don't get real satisfaction out of anything anymore.
	3	I am dissatisfied or bored with everything.
5.		
	0	I don't feel particularly guilty
	1	I feel guilty a good part of the time.
	2	I feel quite guilty most of the time.
	3	I feel guilty all of the time.
6.		
	0	I don't feel I am being punished.
	1	I feel I may be punished.
	2	I expect to be punished.
	3	I feel I am being punished.
7.		
	0	I don't feel disappointed in myself.
	1	I am disappointed in myself.
	2	I am disgusted with myself.
	-	T1 ( 10

3 I hate myself.

#### PORNOGRAPHY USE ON DEPRESSION

- 0 I don't feel I am any worse than anybody else.
- I am critical of myself for my weaknesses or mistakes. 1
- 2
- I blame myself all the time for my faults. I blame myself for everything bad that happens. 3
- 0 I don't have any thoughts of killing myself. 1 I have thoughts of killing myself, but I would not carry them out.
- I would like to kill myself. 2
- 3 I would kill myself if I had the chance.

10.

8.

9.

- 0 I don't cry any more than usual.
- I cry more now than I used to. I cry all the time now. 1
- 2
- 3 I used to be able to cry, but now I can't cry even though I want to.

#### 11.

	0	I am no more irritated by things than I ever was.
	1	I am slightly more irritated now than usual.
	2	I am quite annoyed or irritated a good deal of the time.
	3	I feel irritated all the time.
12.		
	0	I have not lost interest in other people.
	1	I am less interested in other people than I used to be.
	2	I have lost most of my interest in other people.
	3	I have lost all of my interest in other people.
13.		
	0	I make decisions about as well as I ever could.
	1	I put off making decisions more than I used to.
	2	I have greater difficulty in making decisions more than I used to.
	3	I can't make decisions at all anymore.
14.		
	0	I don't feel that I look any worse than I used to.
	1	I am worried that I am looking old or unattractive.
	2	I feel there are permanent changes in my appearance that make me
		look unattractive
	3	I believe that I look ugly.
15.		
	0	I can work about as well as before.
	1	It takes an extra effort to get started at doing something.
	2	I have to push myself very hard to do anything.
	3	I can't do any work at all.
16.		
	0	I can sleep as well as usual.
	1	I don't sleep as well as I used to.
	2	I wake up 1-2 hours earlier than usual and find it hard to get back to
		sleep.
	3	I wake up several hours earlier than I used to and cannot get back to sleep.
17.		
	0	I don't get more tired than usual.
	1	I get tired more easily than I used to.
	2	I get tired from doing almost anything.

3 I am too tired to do anything.

18.		
10.	0	My appetite is no worse than usual.
	1	My appetite is not as good as it used to be.
	2	My appetite is much worse now.
	3	I have no appetite at all anymore.
19.	5	r have no appende at an anymore.
	0	I haven't lost much weight, if any, lately.
	1	I have lost more than five pounds.
	2	I have lost more than ten pounds.
	3	I have lost more than fifteen pounds.
20.		·
	0	I am no more worried about my health than usual.
	1	I am worried about physical problems like aches, pains, upset stomach,
		or constipation.
	2	I am very worried about physical problems and it's hard to think of much else.
	3	I am so worried about my physical problems that I cannot think of anything
		else.
21.		
	0	I have not noticed any recent change in my interest in sex.
	1	I am less interested in sex than I used to be.
	2	I have almost no interest in sex.
	3	I have lost interest in sex completely.

#### INTERPRETING THE BECK DEPRESSION INVENTORY (BDI-II)

Now that you have completed the questionnaire, add up the score for each of the twentyone questions by counting the number to the right of each question you marked. The highest possible total for the whole test would be sixty-three. This would mean you circled number three on all twenty-one questions. Since the lowest possible score for each question is zero, the lowest possible score for the test would be zero. This would mean you circles zero on each question. You can evaluate your depression according to the Table below.

Total Score		Levels of Depression
1-10	=	These ups and downs are considered normal
11-16	=	Mild mood disturbance
17-20	=	Borderline clinical depression
21-30	=	Moderate depression
31-40	=	Severe depression
over 40	=	Extreme depression

A PERSISTENT SCORE OF 17 OR ABOVE INDICATES THAT YOU MAY NEED TREATMENT.

### OTHER INTERPRETION OF THE BECK DEPRESSION INVENTORY (BDI-II)



Total Score		Levels of Depression
1-13	=	Minimal depression
14-19	=	Mild depression
20-28	=	Moderate depression
29-63	=	Severe depression

## **Appendix D**

# **Consent Form and Information Sheet**

# **Information Sheet**

You are invited to participate in a research study that will form the basis for an undergraduate thesis. Please read the following information before deciding whether or not to participate.

What are the objectives of the study?

I am conducting this study in order to investigate whether there is a relationship between the amount of pornographic material an individual consumes and their levels of depressive symptoms.

A complete debriefing will be offered after participation, where any questions will be answered.

Why have I been asked to participate?

You have been asked to participate in this study because you meet the sample criteria. I am looking for participants who:

Are over the age of eighteen.

Are attending a third level institution.

# What does participation involve?

Firstly, you will be asked to complete a questionnaire on pornography use, followed by a questionnaire on aspects of depression.

# Right to withdraw:

Participants have the right to withdraw from the research at any time for whatever reason before they submit their answers. As all data will be anonymized, once you submit your answers, it will be impossible to distinguish which data is yours. If you wish to withdraw, you may simply close your browser window without submitting any answers.

## Are there any benefits from my participation?

While there will be no direct benefit from participation studies like this can make an important contribution to our understanding of how pornography use is related to one's mental health issues such as depression. No individual participant will be identified in any publication or presentation. Individuals will not be offered any monetary or other rewards for their participation.

# Are there any risks involved in participation?

There is risk of mild psychological distress as many of the questions relate to depression. Any other inconvenience involved in taking part will be limited. If the participant feels any distress during/after/because of this study, they will be given a debriefing sheet with a list of appropriate contacts who help people in distress.

### Confidentiality:

All information and data gathered from this study will be anonymous and used solely for this research project's purposes. The Researcher will hold all responsibility for the data collected from this study for five years. The data will be on a password protected hard drive. After five years, the data will be deleted and become unrecoverable.

Contact Details:

If you have any further questions about the research, you can contact: x19515639@student.ncirl.ie

Researcher: Alan Kenny

Supervisor: Dr Conor Nolan

## **Consent Form**

In agreeing to participate in this research I understand the following:

This research is being conducted by Alan Kenny, an undergraduate student at the School of Business, National College of Ireland.

The method proposed for this research project has been approved in principle by the Departmental Ethics Committee, which means that the Committee does not have concerns about the procedure itself as detailed by the student. It is, however, the above-named student's responsibility to adhere to ethical guidelines in their dealings with participants and the collection and handling of data.

If I have any concerns about participation, I understand that I may refuse to participate or withdraw at any stage.

I have been informed as to the general nature of the study and agree voluntarily to participate.

There may be some mild distress regarding the nature of the questions asked in the questionnaires as they relate to depression. If I feel any distress during/after/because of this study, I will contact some of the services located in the debriefing form.

All data from the study will be treated confidentially. The data from all participants will be compiled, analysed, and submitted in a report to the Psychology Department in the School of Business. No participant's data will be identified by name at any stage of the data analysis or in the final report.

At the conclusion of my participation, any questions or concerns I have will be fully addressed.

I may withdraw from this study at any time before submitting my questionnaire answers.

# **Appendix E**

# **Debriefing Sheet**

Thank you for participating in the present questionnaire measuring pornography use and depression.

This study's purpose is to investigate whether there is a relationship between pornography use and depression in young adults who attend university.

The questionnaire is confidential and anonymous, therefore submitted responses cannot be withdrawn as the responses will all be anonymous data.

The information gathered from this questionnaire will exclusively be used for my thesis and no other studies.

The data collected will be stored for 5 years in accordance with NCI policies, after

this period however all data from this study will be destroyed.

In the event that you felt psychological distress as a result of taking part in this survey

I have provided helpline phone numbers to give you support if needed.

Support Services:

The Samaritans: (01) 872 7700

# Aware Support Line: +35316766166