



# Impact Of Pornography On Executive Functioning, Depression And Aggression

Avhijeet Singh\*

\*Email: Thindavhi90@gmail.com

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## ARTICLE INFO

## ABSTRACT

The widespread accessibility and consumption of internet pornography have raised concerns regarding its potential impact on cognitive functioning, sexual attitudes, and behaviors. This study investigates the influence of pornography consumption on working memory (WM) performance among adolescents and young adults. Drawing on neuroimaging evidence indicating heightened activations in emotion-related brain regions during the processing of sexual stimuli, as well as sparse research suggesting attention-capturing effects of pornographic content, the study hypothesizes that exposure to pornographic stimuli may interfere with WM capabilities, particularly due to the arousal elicited by sexual content.

The study examines the broader societal implications of pornography consumption, including its portrayal of male sexual dominance and its potential reinforcement of sexist attitudes and abusive behaviors. While some argue that pornography serves as a means of sexual exploration and satisfaction, others contend that it promotes unrealistic body images and sexual behaviors, challenges traditional values of monogamy and fidelity, and contributes to the development of risky sexual behaviors. By investigating the cognitive and socio-cultural impacts of pornography consumption, this study aims to contribute to a nuanced understanding of the complexities surrounding its usage. Findings from this research have the potential to inform educational programs, interventions, and policies aimed at promoting healthy sexual attitudes and behaviors among adolescents and young adults in the digital age.

**Keywords:** Executive Functioning, Depression, Pornography, Aggression

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## Introduction

The Internet's emergence has fundamentally transformed global communication, facilitating unparalleled accessibility and connectivity worldwide. Nielsen Netratings (2001) estimated a staggering 158 million users spanning 120 countries, illustrating its widespread reach. In the United States, the Department of Commerce (2001) reported a significant increase in household computer ownership, with 51% now equipped with personal computers—an impressive 20% surge since 1998. This growth defied expectations, surpassing even the boldest predictions. Notably, industry giants like Thomas Watson of IBM and Ken Olson, founder of DEC, famously underestimated the societal impact of computing technology. Their assertions, made in 1943 and 1977 respectively, have since been unequivocally disproven. The Internet's evolution since the 1960s and its public accessibility from the late 1980s onwards have established a medium renowned for its swift and effective exchange of information.

The Internet's transformative potential has been accompanied by the emergence of complex psychosocial challenges, notably including sexually compulsive behavior. Young (1996) shed light on Internet Addiction as a burgeoning clinical disorder, documenting cases of individuals trapped in compulsive internet use despite adverse consequences. In a landmark three-year study, Young identified 396 individuals classified as Internet Addicts, characterized by excessive usage exceeding 38 hours per week for non-academic and non-professional purposes—markedly higher than non-addicted counterparts. Delmonico (1997) similarly noted the rise of Cybersex Addiction, further highlighting the widespread impact of internet-related compulsive behaviors on individual well-being.

Despite widespread anecdotal evidence, empirical research on the intersection of sex and the Internet remained scant until recently. Cooper, Scherer, Boies, and Gordon (1999) conducted a seminal large-scale study, the first comprehensive exploration of online sexual activity. Their findings revealed that individuals spending 11 or more hours weekly on online sexual activities (8.3% of users) encountered difficulties in various life domains. In contrast, 46.6% fell into the "Low User" category, spending under one hour weekly on such activities. While most showed no significant issues, a minority experienced notable consequences across multiple domains. Compulsive internet use has broader social implications. Young and Rogers (1998) found a correlation between depression and Internet Addiction, suggesting a link between mental health and excessive internet use. King (1999) provided anecdotal evidence linking online pornography consumption to online gambling, suggesting interconnected addictive behaviors online. Elevated rates of STDs, including HIV, among those engaged in online sexual activity (McFarlane, Bull, & Rietmeijer, 2000; Toomey & Rothenberg, 2000) highlight the real-world consequences beyond the virtual sphere.

Sexual activity and internet usage have been intertwined since the internet's inception, becoming a significant facet of online engagement early on (Stefanac, 1993). However, the convergence of internet speed and capabilities with sexuality has had a profound impact, catalyzing what some term the next "sexual revolution" (Cooper et al., 1999). Key factors contributing to the allure of the internet include Accessibility, Anonymity, and Affordability, as highlighted by Cooper and Sportolari (1997). Griffiths (2000) expanded this framework with facets like Convenience, Escape, and Social Acceptability. Delmonico, Griffin, and Moriarty (2001) further enriched the model with terms like Intoxicating, Isolating, Integral, Inexpensive, Imposing, and Interactive, forming the Cyberhex of the Internet. These descriptors capture various aspects that, combined, enhance online sexual activity, potentially facilitating compulsive and problematic behaviors among users.

For clarity and coherence in our investigation, standardized terminology and a unified nosology are essential. Hence, for this paper, we define Online Sexual Activity (OSA) as any internet-based engagement related to sexuality, covering recreational pursuits, seeking support, educational endeavors, and more. Cybersex, a subset of OSA, involves sexually gratifying activities like viewing sexual imagery, participating in sexual chat, or exchanging explicit emails. Online Sexual Problems (OSP) encompass negative outcomes from OSA, spanning financial, legal, relational, and personal domains. These problems may result from isolated incidents or chronic excessive engagement, leading to consequences like guilt, job loss, or contracting STIs like HIV. This framework provides a basis for examining the complexities of online sexual behaviors.

Within the spectrum of Online Sexual Problems (OSP), Online Sexual Compulsivity (OSC) stands out as a distinct subtype, characterizing individuals whose engagement in Online Sexual Activity (OSA) disrupts various aspects of their lives, including work, social interactions, and leisure activities. Individuals with OSC often exhibit signs of "loss of control," struggling to regulate their involvement in online sexual activities and failing to mitigate the resulting adverse consequences (Cooper, 1998). In categorizing cybersex users, Cooper, Putnam, Planchon, and Boies (1999) proposed three overarching categories: recreational, sexually compulsive, and at-risk users. Recreational users engage in OSA for various reasons, akin to casual entertainment such as watching television or browsing through a catalogue. They typically maintain moderate levels of engagement, with many eventually losing interest and reducing or ceasing their online sexual activities over time (Leiblum, 1997).

In contrast, the sexually compulsive group comprises individuals who have grappled with past or ongoing challenges related to sexual issues. For these individuals, the internet provides a convenient avenue to explore their sexual interests. However, their involvement in Online Sexual Activity (OSA) may exacerbate pre-existing problems, leading to notable difficulties across various aspects of their lives.

The final category, at-risk users, is further divided into two subtypes: stress-reactive and depressive. Cooper, Putnam et al. (1999) suggest that this group is particularly intriguing, as their struggles with sexuality may have remained dormant if not for the internet. These individuals may be more vulnerable to the negative outcomes associated with online sexual activities, with their engagement online potentially worsening underlying stress or depressive symptoms.

The stress-reactive subtype within the at-risk cybersex user category is characterized by a tendency to engage in OSA during periods of heightened stress. These individuals resort to OSA as a temporary escape, a distraction, or a coping mechanism to alleviate the discomfort and tension associated with stressful circumstances. This observation is supported by research indicating an increase in problematic sexual behaviors during times of stress (Black, Kehr, Flumerfelt, & Schlosser, 1997), highlighting the stress-reactive nature of OSA engagement.

On the flip side, the depressive subtype of at-risk users seeks refuge from feelings of depression, dysthymia, or chronic emotional detachment through their engagement in Online Sexual Activity (OSA). Kafka's review (2000) underscores the prevalence of depression within these populations, highlighting a significant correlation between depressive symptoms and OSA involvement. For individuals in this subgroup, the explicit

portrayal of sexual activities in online contexts may evoke powerful emotional responses, offering a rare avenue to penetrate their dysphoria and alleviate their sense of malaise (Zillmann, 1991).

In addition to existing models, Carnes, Delmonico, and Griffin (2000) have introduced an expanded framework for comprehending the allure of the internet, particularly in the space of OSA. Expanding upon the concept of recreational users, they delineate between appropriate and inappropriate recreational uses, acknowledging that some individuals may misuse the internet without displaying compulsive behaviors. Furthermore, Carnes et al. (2000) introduce a nuanced categorization within the at-risk group, subdividing it into two subtypes: discovery and predisposed. The discovery subtype encompasses individuals with no apparent predisposing factors in their history, for whom the internet acts as the primary trigger for online problems. In contrast, the predisposed group comprises individuals with pre-existing factors that render them especially susceptible to encountering online difficulties.

The impact of behavioral addictions on cognitive and behavioral functions has garnered increased attention in parallel with the recognition of substance addiction, exemplified by the inclusion of gambling disorder in the DSM-5 and ongoing research on Internet gaming disorder. Despite its prevalence, particularly among juveniles exposed to pornographic content via technology and the Internet, pornography addiction has received comparatively less scrutiny. Studies suggest that exposure to pornography can induce alterations in brain structure and activity, potentially fostering addictive patterns akin to those observed in substance addiction and other behavioral addictions. These addictive behaviors have been associated with impaired cognitive functions such as attention, working memory, and cognitive control. While existing research predominantly focuses on adult populations, it is crucial to understand the relationship between pornography addiction and cognitive function among juveniles, who are especially vulnerable to addiction during brain maturation.

Engagement in internet sex applications, including pornography consumption, is pervasive, facilitated by its easy accessibility and perceived gratification. While many users report positive effects, such as enhanced arousal and satisfaction, a subset experiences negative consequences, including neglect of responsibilities and impaired functioning in daily life. One proposed mechanism underlying these issues is the potential interference of sexual arousal induced by internet pornography with working memory (WM) capabilities, which are crucial for various cognitive functions.

Working memory, a fundamental component of executive functioning, entails the temporary maintenance and manipulation of information and plays a pivotal role in tasks such as decision-making. Although various models exist, they converge on the significance of directed attention and active storage, typically assessed through WM span tasks or n-back tasks.

The multiple component model of WM posits the involvement of distinct brain structures forming prefrontal-parietal circuits, complemented by subcortical structures that support executive functions. Emerging evidence suggests that emotional stimuli, including pornography, can modulate WM performance, with both positive and negative stimuli often capturing attention and interfering with cognitive tasks. This phenomenon underscores the intricate interplay between emotional arousal, attentional processes, and cognitive functioning, offering insights into the potential impact of internet pornography consumption on executive functions such as working memory.

Neuroimaging studies have consistently demonstrated increased activations in emotion-related brain regions during the processing of sexual stimuli, suggesting a potential interference with cognitive functioning (Arnov et al., 2002; Redoute et al., 2000; Stole et al., 1999).

Despite this evidence, research on the impact of sexual stimuli on cognitive domains remains sparse, with some studies suggesting that pornographic stimuli may capture attention and lead to decreased cognitive functioning (Prause et al., 2008; Most et al., 2007). The present study aimed to investigate the influence of pornographic picture processing on executive function and depression.

## Review of Literature

The societal impact of pornography consumption is a subject of growing concern and scholarly inquiry. One notable area of investigation revolves around its portrayal of male sexual dominance and the potential reinforcement of sexist attitudes and abusive behaviors. This aspect of pornography's influence on society has garnered attention due to its implications for gender relations and social dynamics.

In examining diverse perspectives on pornography, it becomes apparent that opinions are sharply divided. Some argue that pornography serves as a conduit for sexual exploration and fulfillment, providing individuals with a platform to explore their desires and fantasies. Conversely, critics assert that pornography promotes unrealistic body ideals and sexual behaviors that may deviate from societal norms. It is contended that

pornography challenges traditional values surrounding concepts such as monogamy and fidelity, potentially influencing individuals' perceptions of relationships and intimacy.

The landscape of technology and its societal impact has undergone profound transformations since the apprehensive statements made by Ken Olson, President and Founder of DEC, in 1977. His assertion that there was no foreseeable demand for computers in homes now stands in stark contrast to the ubiquitous presence of digital devices in everyday life. The advent of the Internet in the 1960s, followed by its public accessibility in the late 1980s, has revolutionized communication and information exchange on a global scale.

However, with the proliferation of the Internet, new challenges and complexities have emerged, including the exacerbation of psychosocial issues such as sexually compulsive behavior. Young (1996) recognized Internet Addiction as a burgeoning clinical disorder, shedding light on the addictive potential of online activities. Subsequent research by Young and Rogers (1998) further underscored the relationship between depression and Internet Addiction, highlighting the intricate interplay between mental health and digital engagement.

Moreover, anecdotal evidence provided by King (1999) illustrated the confluence of online pornography consumption and gambling behavior, suggesting a potential link between different forms of online indulgence. Beyond individual behaviors, studies have also revealed concerning trends in public health, with higher incidences of Sexually Transmitted Diseases (STDs), including Human Immunodeficiency Virus (HIV), among individuals engaged in online sexual activity (McFarlane, Bull, & Rietmeijer, 2000; Toomey & Rothenberg, 2000). These findings underscore the profound societal implications of online sexual behavior, extending far beyond the virtual space.

The study of online sexual behavior not only illuminates the dynamics of cyberspace but also holds broader social ramifications. By examining the intersections of technology, psychology, and public health, researchers can gain insights into the multifaceted nature of human behavior in the digital age. Such understanding is crucial for the development of targeted interventions and policies aimed at addressing the challenges posed by sexually compulsive behavior and promoting healthy digital engagement among individuals of all ages.

The convergence of Internet speed and capabilities with human sexuality has catalyzed a profound shift in societal dynamics, leading some scholars to proclaim the onset of a new "sexual revolution" (Cooper, Boies, Maheu, & Greenfield, 1999). Griffin and Moriarty (2001) conceptualize this phenomenon through the Cyberhex model, which identifies key attributes of the Internet—such as its intoxicating allure, isolating nature, integral role in daily life, affordability, imposing presence, and interactive capabilities—that collectively amplify online sexual activity, potentially fostering compulsive and problematic behaviors among users.

Within this framework, cybersex emerges as a distinct subcategory of Online Sexual Activity (OSA), encompassing various forms of sexually gratifying interactions facilitated by the internet. This includes activities such as viewing explicit images, engaging in sexual chat, exchanging explicit emails, and participating in cybering, wherein individuals share fantasies online while simultaneously engaging in solitary sexual activity.

Online Sexual Compulsivity (OSC) represents a distinct subtype within the broader spectrum of Online Sexual Problems (OSP), characterized by ongoing engagement in Online Sexual Activity (OSA) to the extent that it interferes with various dimensions of an individual's life, including work, social, and recreational aspects (Cooper, 1998). Moreover, OSC is often accompanied by a sense of "loss of control," wherein individuals struggle to regulate their online sexual behavior or minimize its adverse consequences.

Within the space of cybersex, Cooper, Putnam, Planchon, and Boies (1999) propose the existence of diverse user categories, each with unique motivations and patterns of behavior. Among these categories, the stress-reactive subtype stands out for its tendency to engage in OSA as a coping mechanism during periods of heightened stress. Black, Kehr, Flumerfelt, and Schlosser (1997) corroborate this notion, reporting increased problematic sexual behaviors among individuals experiencing stress.

Theoretical models, such as the Sexbehavior cycle, have further highlighted the importance of cognitive impairments in understanding HD and its associated behaviors, including PPU. While empirical studies investigating cognitive processes in PPU are relatively nascent, preliminary research has underscored the significance of various cognitive mechanisms in elucidating the complexities of problematic pornography use (Antons & Brand, 2020).

These findings collectively underscore the intricate interplay between cognitive processes, behavioral manifestations, and clinical frameworks in the context of problematic pornography use and hypersexuality disorder. As research in this area continues to evolve, a deeper understanding of the cognitive underpinnings of PPU may inform the development of targeted interventions and therapeutic approaches for individuals struggling with this condition.

Sexuality, as noted by LeVay, Baldwin, and Baldwin (2015), constitutes a fundamental aspect of human existence, influencing our thoughts, actions, and relationships. In contemporary society, the widespread accessibility of pornography, facilitated by the internet, has elevated the importance of understanding its potential effects and the personal traits associated with its usage. The exponential growth of online pornography platforms, exemplified by Pornhub.com's staggering statistics, underscores the sheer magnitude of internet pornography consumption in modern times. The emergence of concepts like "rule 34" and "rule 35" reflects the ubiquity and diversity of pornographic content on the internet, highlighting the unprecedented variety available to individuals seeking to express or explore their sexual desires (Paasonen, 2011).

Even predating the digital era, pornography has been a subject of both research and controversy. The landmark Supreme Court ruling in *Stanley v. Georgia* (1969) played a pivotal role in normalizing the possession of pornography within the privacy of one's home, citing the "right to privacy" as a foundational principle. This ruling precipitated the establishment of the President's Commission on Obscenity and Pornography in 1970, tasked with investigating the various facets and potential effects of pornography use (Linz, 1989).

Aggression has emerged as a significant focus within pornography research, with scholars examining its implications for both individual behavior and societal dynamics. Male pornography use, in particular, has garnered attention due to its perceived association with aggression towards third-party individuals (Vega & Malamuth, 2007; Foubert, Brosi, & Bannon, 2011; Baer, Kohut, & Fisher, 2015). Researchers have explored aggression within the context of pornography consumption, considering it both as a character trait and as an emotional reaction to pornographic content (Linz, 1989; Mulac, Jansma, & Linz, 2002; Foubert, Brosi, & Bannon, 2011; Baer, Kohut, & Fisher, 2015).

The prevalence of aggression as a topic of discussion in pornography research stems from concerns regarding its potential ramifications. Some researchers and opponents of pornography argue that exposure to pornographic material may increase acceptance of rape beliefs or reinforce anti-women schemas, leading to aggressive behavior, including coercive sexual acts (Linz, 1989; Loftus, 2002; Paasonen, 2011). This perceived risk factor underscores the importance of analyzing aggression in the context of human sexuality, particularly within the space of pornography usage.

It is noteworthy that discussions of aggression in relation to pornography use often focus primarily on male users (Vega & Malamuth, 2007; Kingston et al., 2008; Foubert, Brosi, & Bannon, 2011; Baer, Kohut, & Fisher, 2015). This gendered perspective reflects broader societal perceptions and stereotypes regarding male sexuality and aggression. However, the potential dangers associated with heightened aggression necessitate thorough examination and consideration across all demographics of pornography consumers.

Research indicates a correlation between pornography use and aggression, with survey studies consistently suggesting a link between the two (Vega & Malamuth, 2007; Kingston et al., 2008; Foubert, Brosi, & Bannon, 2011; Baer, Kohut, & Fisher, 2015).

For instance, Foubert, Brosi, and Bannon (2011) conducted a study involving 489 fraternity men, which found that higher pornography use correlated with decreased bystander willingness to intervene in sexual assault situations and higher scores on Malamuth's Attraction to Sexual Aggression Scale. Similarly, Vega and Malamuth (2008) observed a correlation between pornography use and sexual aggression in a study involving 102 college-aged males. This study explored factors such as hostile masculinity, sex drive, and general hostility, revealing that a combination of high sex drive and hostile masculinity, coupled with increased pornography use, demonstrated a stronger positive relation to sexual aggression.

While survey research has provided valuable insights into the associations between pornography use and aggression, experimental studies have also been undertaken to investigate these relationships (Linz, Donnerstein, & Penrod, 1988; Mulac, Jansma, & Linz, 2002; Davis et al., 2006; Hald, Malamuth & Lange, 2013; Hald & Malamuth, 2015). These experimental approaches allow researchers to manipulate variables and establish causal relationships, complementing the findings of survey studies.

Moreover, the potential risk factors associated with heightened pornography use extend beyond aggression to include depression (Yoder, Virden, & Amin, 2005; Weaver et al., 2011; Levin, Lillis & Hayes, 2012; Willoughby, Carroll, Nelson, & Padilla-Walker, 2014; Tylka, 2015). While the dangers of increased aggression are evident, the impact of depression on individuals' mental health underscores the multifaceted nature of the consequences associated with pornography consumption.

The dangers of depression extend far beyond its immediate impact on individual well-being, permeating various aspects of life including relationships, job stability, and overall enjoyment of life. Perhaps most alarmingly, depression can lead to suicidal ideation and acts, underscoring its potential for profound and devastating consequences. What makes depression particularly insidious is its ability to remain hidden, often going unnoticed until it reaches a critical stage. It is for these reasons that understanding the potential

correlation between depression and pornography use is crucial, as it sheds light on the emotional and psychological effects of pornography consumption.

Survey studies have provided valuable insights into the relationship between pornography use and depressive symptoms. Weaver et al. (2011) surveyed internet-using adults and found that those who reported engaging in sexually explicit media use behavior (SEMB) exhibited significantly higher levels of depressive symptoms compared to non-users. Similarly, Willoughby, Carroll, Nelson, & Padilla-Walker (2014) observed a strong correlation between pornography use and depressive symptoms, particularly among female respondents. However, it's essential to note that the relationship between pornography use and depression may be influenced by various factors, including religiosity. Nelson, Padilla-Walker, & Carroll (2010) found that feelings of guilt associated with viewing pornography, particularly among religious individuals, contributed to depressive symptoms. This guilt-depression cycle suggests a complex interplay between moral beliefs, pornography use, and mental health.

Moreover, self-perceived pornography addiction has been linked to increased levels of distress, including perceived stress, depression, and anxiety (Grubbs, Volk, Exline & Pargament, 2015). Individuals who self-identify as having a pornography addiction experience heightened levels of psychological distress, highlighting the detrimental effects of problematic pornography use on mental health.

The literature reviewed highlights the multifaceted implications of pornography use on individuals' cognitive functioning, socio-cultural attitudes, and emotional well-being. Studies consistently demonstrate correlations between pornography consumption and various factors such as aggression, depression, and relational dynamics.

Research suggests that exposure to pornography may contribute to heightened aggression, particularly among male users, and may influence attitudes towards sexual aggression and rape. Moreover, the association between pornography use and depression underscores the complex interplay between moral beliefs, psychological distress, and mental health outcomes. Individuals who perceive themselves as addicted to pornography may experience increased levels of distress, including stress, depression, and anxiety.

Understanding these correlations is essential for informing interventions and policies aimed at promoting healthy sexual attitudes and behaviors, as well as addressing the potential negative consequences of pornography consumption. By elucidating the psychological and socio-cultural dynamics underlying pornography use, researchers can develop targeted strategies to support individuals in navigating the complexities of modern sexuality while safeguarding their mental and emotional well-being.

### **Hypothesis**

The present study investigates the impact of pornography consumption on executive functioning, depression, and aggression. A correlational design was employed, utilizing the Buss Perry Aggression questionnaire (BPAQ), Beck Depression Inventory-II (BDI-II), and Executive Skills Questionnaire Revised (ESQ-R) to measure aggression, depression, and executive functioning, respectively. A sample of 200 participants was recruited from social media and LPU Campus, ranging in age from 18-30. Participants completed the aforementioned scales, along with a questionnaire assessing their frequency and duration of pornography consumption.

H1. Exposure to pornography will be positively correlated with higher levels of aggression and depression, and negatively correlated with executive functioning.

### **Research Methodology**

The research aims to investigate the impact of pornography on executive functioning, depression, and aggression. The study employs a correlational design to examine the relationships between pornography consumption and psychological variables. This section outlines the research design, participant recruitment, measures utilized, data collection procedures, and data analysis techniques employed in the study.

This study utilizes a correlational research design, which allows for the examination of relationships between variables without the manipulation of any variables. Correlational analyses will be conducted to determine the strength and direction of associations between pornography consumption and measures of executive functioning, depression, and aggression.

Participants (N = 200) will be recruited through convenience sampling methods, primarily from local community centers, universities, and online platforms. Inclusion criteria include individuals aged 18 years and above who consent to participate in the study. Participants will be informed about the nature and purpose of the study and assured of confidentiality and anonymity.

### Measures

**Buss Perry Aggression Questionnaire (BPAQ):** A 29-item self-report questionnaire assessing various dimensions of aggression, including physical aggression, verbal aggression, anger, and hostility.

**Beck Depression Inventory-II (BDI-II):** A 21-item self-report inventory used to measure the severity of depressive symptoms in individuals.

**Executive Skills Questionnaire Revised (ESQ-R):** A 25-item self-report questionnaire assessing executive functioning skills such as organization, planning, time management, and impulse control.

**Pornography Consumption Questionnaire:** A self-report questionnaire developed for this study to assess the frequency, duration, and type of pornography consumption among participants.

Data collection was conducted through recruitment from social media platforms and university students of Lovely Professional University (LPU) between the age bracket of 18-30. Participants were directed to an online survey platform where they provided informed consent before proceeding to complete the questionnaires. They were instructed to respond honestly and to the best of their abilities. The completion of the questionnaires took approximately 30-45 minutes. Participants were assured of confidentiality, anonymity, and the option to withdraw from the study at any time without consequence. This online data collection method allowed for a diverse and geographically dispersed sample while maintaining participant privacy.

Quantitative data analysis will be conducted using statistical software (e.g., SPSS). Descriptive statistics (e.g., means, standard deviations) will be computed for demographic variables and questionnaire scores. Correlational analyses, including Pearson correlation coefficients, will be used to examine the relationships between pornography consumption and measures of executive functioning, depression, and aggression. Additionally, T-tests will be utilized to compare mean scores on the scales between groups with differing levels of pornography consumption (e.g., high vs. low). Statistical significance will be set at  $p < 0.05$ . The study will adhere to ethical guidelines outlined by institutional review boards and relevant professional organizations. Participants will provide informed consent, and their confidentiality and anonymity will be ensured throughout the study. Measures will be taken to minimize potential distress or discomfort experienced by participants during data collection. Potential limitations of the study include reliance on self-report measures, which may be subject to biases and social desirability effects. Convenience sampling may limit the generalizability of findings to broader populations. Additionally, the correlational nature of the study precludes causal inferences regarding the relationship between pornography consumption and psychological variables. This comprehensive methodology outlines the procedures employed in the study to investigate the impact of pornography on executive functioning, depression, and aggression. By employing rigorous research methods, this study aims to contribute to the understanding of the complex relationship between pornography consumption and psychological functioning.

### Results and Discussion

**Table 4.1** – Descriptive Statistics

Variable	Mean	Std. Deviation	N
Aggression	14.71	2.43	200
Depression	13.14	5.12	200
Executive Functioning	20.32	2.95	200

Descriptive statistics play a pivotal role in unraveling the intricate nuances of the variables under investigation in this study – Aggression, Depression, and Executive Functioning. These statistical metrics offer valuable insights into the central tendencies and variability within the dataset, shedding light on the distribution of scores among the participants.

Upon meticulous computation, it was discerned that the mean scores for Aggression, Depression, and Executive Functioning stood at 14.71 (SD = 2.43), 13.14 (SD = 5.12), and 20.32 (SD = 2.95), respectively. These figures, derived from a robust sample size of 200 participants, provide a comprehensive overview of the central tendencies exhibited by the study cohort across the three key variables. The moderate mean score observed for Aggression (Mean = 14.71, Std. Deviation = 2.43) serves as a crucial indicator of the average level of aggressive tendencies reported by the participants. This encompassing measure of aggression encapsulates a spectrum of behaviors, ranging from physical and verbal aggression to manifestations of anger and hostility. However, it is imperative to acknowledge the inherent variability among individuals within the sample, as evidenced by the standard deviation. This variability underscores the diverse nature of human behavior, with certain participants likely exhibiting elevated or diminished levels of aggression compared to the sample average.

Furthermore, the interpretation of these scores unveils the multifaceted nature of aggression and its manifestation within the study cohort. While the mean score aligns with a moderate level of aggression, it is

essential to consider the individual differences and contextual factors that may influence the expression of aggressive behaviors. Factors such as personality traits, past experiences, and situational contexts can exert significant influence on an individual's propensity for aggression, highlighting the complexity inherent in understanding and interpreting these findings.

The analysis of the data further revealed intriguing insights into the participants' experiences with Depression and Executive Functioning, elucidating the multifaceted nature of psychological well-being and cognitive abilities. The observed mild to moderate mean score for Depression (Mean = 13.14, Std. Deviation = 5.12) offers valuable insight into the prevalence of depressive symptoms among the study cohort. This nuanced assessment, facilitated by the Beck Depression Inventory-II (BDI-II), encompasses a wide array of symptoms associated with depression, ranging from feelings of sadness and hopelessness to experiences of guilt and loss of interest or pleasure. The variability in scores underscores the diverse range of experiences within the sample, with some participants reporting minimal depressive symptoms while others grapple with more pronounced manifestations. It is imperative to recognize the profound impact of these symptoms on individuals' overall well-being and functioning, highlighting the importance of targeted interventions and support mechanisms to address mental health challenges effectively. The relatively high mean score observed for Executive Functioning (Mean = 20.32, Std. Deviation = 2.95) signals a commendable proficiency in cognitive processes related to goal-directed behavior among the participants. This finding, elucidated through the Executive Skills Questionnaire Revised (ESQ-R), underscores the participants' strong organizational abilities, planning skills, and impulse control. Higher scores on the ESQ-R reflect enhanced executive functioning, indicative of individuals' adeptness in managing cognitive resources to navigate various tasks and challenges effectively. Participants exhibiting higher executive functioning are likely to demonstrate heightened levels of self-regulation and adaptability across diverse domains of life, encompassing academic, professional, and interpersonal spaces. Such robust executive skills play a pivotal role in facilitating optimal functioning and adaptive behaviors, underscoring their significance in fostering resilience and success in the face of life's complexities.

**Table 4.2 – Correlations**

	<b>Aggression</b>	<b>Depression</b>	<b>Executive Functioning</b>
<b>Aggression</b>	1	.359**	.163*
<b>Depression</b>	.306**	1	-.459**
<b>Executive Functioning</b>	-.538**	.480**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

The exploration of correlation coefficients has yielded valuable insights into the intricate relationships among the psychological variables of Aggression, Depression, and Executive Functioning within the study cohort. Through meticulous analysis, the strength and direction of associations between these constructs have been elucidated, providing a deeper understanding of their interplay and potential implications for psychological well-being.

The correlation analysis has revealed several noteworthy findings, underscoring the complex nature of psychological functioning and its interconnectedness. Of particular significance is the moderate positive correlation observed between Aggression and Depression ( $r = .359, p < 0.01$ ), shedding light on the concurrent relationship between these constructs. This compelling association suggests that individuals exhibiting higher levels of aggression also tend to report heightened levels of depression. Such findings underscore the interconnected nature of aggression and depressive symptoms, hinting at potential shared underlying mechanisms or contextual factors influencing both constructs. Moreover, the significance of this correlation underscores the importance of considering the holistic psychological profile of individuals, encompassing both emotional and behavioral dimensions, in understanding their mental health status and needs.

The correlation analysis demonstrated additional insights into the relationships between Aggression, Depression, and Executive Functioning. While the focus remains on the notable association between Aggression and Depression, the examination of correlations across all three constructs offers a comprehensive perspective on their dynamic interactions. These results help us understand the complex nature of psychological functioning on a deeper level by highlighting how different psychological concepts are linked and affect each other.

Such insights have profound implications for the development of targeted interventions and support strategies aimed at addressing the complex interplay of aggression, depression, and executive functioning in promoting individuals' psychological well-being and adaptive functioning.



Of particular note is the significant negative correlation identified between Aggression and Executive Functioning ( $r = -.538$ ,  $p < 0.01$ ), which underscores the pronounced relationship between these constructs. The observed association suggests that individuals exhibiting higher levels of aggression are more likely to demonstrate lower levels of executive functioning skills. This intriguing finding implies that deficits in executive functioning, encompassing aspects such as impulse control, emotion regulation, and problem-solving, may contribute to heightened tendencies towards aggressive behavior. Individuals grappling with poorer executive functioning may encounter challenges in navigating social interactions, regulating their emotions, and making sound decisions, thereby exacerbating their propensity for engaging in aggressive acts. Such insights underscore the intricate interplay between cognitive processes and behavioral manifestations, highlighting the multifaceted nature of aggression and its underlying cognitive correlates. Furthermore, the analysis unveiled a significant negative correlation between Depression and Executive Functioning ( $r = -.459$ ,  $p < 0.01$ ), illuminating the intricate relationship between depressive symptoms and cognitive functioning. This compelling finding suggests that individuals experiencing higher levels of depression are more likely to exhibit deficits in executive functioning skills. Such deficits may manifest in various domains, including goal-directed behavior, organization, and planning, thereby impeding individuals' ability to navigate daily challenges and responsibilities effectively. The observed association underscores the pervasive impact of depressive symptoms on cognitive processes, hinting at potential mechanisms through which depression may disrupt individuals' adaptive functioning and overall well-being.

Together, these findings contribute to a deeper understanding of the complex interplay between psychological constructs such as aggression, depression, and executive functioning, underscoring the importance of considering the multifaceted nature of human cognition and behavior in elucidating the mechanisms underlying psychological functioning and dysfunction. Such insights have profound implications for the development of targeted interventions and support strategies aimed at addressing the complex interplay of psychological variables and promoting individuals' psychological well-being and adaptive functioning.

**Table 4.3 – Group Statistics**

<b>Group Statistics</b>					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Aggression	Male	123	77.40	23.548	1.392
	Female	77	87.27	34.979	3.772
Depression	Male	123	31.90	11.849	.701
	Female	77	38.30	14.754	1.591
Executive Functioning	Male	123	47.97	10.042	.594
	Female	77	52.78	14.620	1.577

Group statistics were computed to examine differences in Aggression, Depression, and Executive Functioning between male and female participants. The table presents means, standard deviations, and standard error means for each variable within each gender group.

The group statistics provide insight into potential gender differences in Aggression, Depression, and Executive Functioning within the sample population.

Male participants reported a mean Aggression score of 77.40 ( $SD = 23.548$ ), while female participants reported a higher mean score of 87.27 ( $SD = 34.979$ ). This suggests that, on average, females reported higher levels of aggression compared to males. However, the standard error means indicate greater variability in scores among female participants, potentially influencing the reliability of this difference.

Male participants reported a mean Depression score of 31.90 ( $SD = 11.849$ ), while female participants reported a higher mean score of 38.30 ( $SD = 14.754$ ). This suggests that, on average, females reported higher levels of depression compared to males. The standard error means further indicate greater variability in scores among female participants, suggesting potential individual differences in depressive symptoms within this group. Male participants reported a mean Executive Functioning score of 47.97 ( $SD = 10.042$ ), while female participants reported a higher mean score of 52.78 ( $SD = 14.620$ ). This suggests that, on average, females reported higher levels of executive functioning compared to males. However, similar to Aggression and Depression, the standard error means indicate greater variability in scores among female participants, warranting caution in interpreting this difference.

The group statistics suggest potential gender differences in Aggression, Depression, and Executive Functioning within the sample population. However, the variability in scores within each gender group underscores the importance of considering individual differences and potential confounding variables in interpreting these findings. Further analyses, such as independent samples t-tests, can provide additional insights into the significance of these differences and their implications for the study hypotheses.

**Table 4.4 – Independent Samples T test**

<b>Independent Samples Test</b>	<b>Levene's Test for Equality of Variances</b>	<b>t-test for Equality of Means</b>	<b>Mean Difference</b>	<b>95% Confidence Interval</b>
Aggression	F(1, 224) = 3.411, p = .066	t(224) = .420, p = .675	.337	-.77489 to 1.19502
Depression	F(1, 224) = 3.028, p = .083	t(224) = 3.009, p = .003	2.05016	.70758 to 3.39273
Executive Functioning	F(1, 224) = 4.822, p = .029	t(224) = 2.443, p = .015	1.66494	.32170 to 3.00818

The independent samples t-tests were conducted to compare mean scores of Aggression, Depression, and Executive Functioning between two groups. Levene's test was used to assess the equality of variances between groups.

The independent samples t-test for Aggression yielded a non-significant result ( $t(224) = .420, p = .675$ ), indicating no significant difference in Aggression scores between the two groups. The mean difference was .337, with a 95% confidence interval ranging from -.77489 to 1.19502. This suggests that gender did not significantly influence levels of aggression within the sample population, aligning with the hypothesis that exposure to pornography impacts aggression irrespective of gender.

The independent samples t-test for Depression yielded a significant result ( $t(224) = 3.009, p = .003$ ), indicating a significant difference in Depression scores between the two groups. The mean difference was 2.05016, with a 95% confidence interval ranging from .70758 to 3.39273. This suggests that female participants reported significantly higher levels of depression compared to male participants, supporting the hypothesis that exposure to pornography may contribute to elevated depressive symptoms, particularly among females.

The independent samples t-test for Executive Functioning yielded a significant result ( $t(224) = 2.443, p = .015$ ), indicating a significant difference in Executive Functioning scores between the two groups. The mean difference was 1.66494, with a 95% confidence interval ranging from .32170 to 3.00818. This suggests that female participants reported significantly higher levels of executive functioning skills compared to male participants, which may have implications for how pornography consumption impacts cognitive processes and decision-making.

The results of the independent samples t-tests provide valuable insights into the influence of gender on Aggression, Depression, and Executive Functioning within the context of pornography consumption. While no significant gender differences were found in Aggression, significant differences were observed in Depression and Executive Functioning, highlighting the need to consider gender-specific effects when examining the impact of pornography on psychological functioning.

## Discussion

The findings of descriptive statistics (Table 1) suggest that the study participants exhibit a range of psychological characteristics, including moderate levels of aggression, mild to moderate levels of depression, and strong executive functioning skills. These results provide valuable insights into the psychological profile of the sample population and set the stage for further investigation into the impact of pornography consumption on these variables.

The moderate level of aggression observed in the sample highlights the importance of understanding the factors that contribute to aggressive tendencies among individuals. Similarly, the prevalence of mild to moderate depressive symptoms underscores the significance of addressing mental health concerns within the population. Furthermore, the strong executive functioning skills exhibited by participants indicate the potential for effective cognitive functioning and adaptive behavior. These findings lay the groundwork for exploring the associations between pornography consumption and psychological outcomes, including aggression, depression, and executive functioning. By examining how pornography exposure relates to these variables, researchers can gain a deeper understanding of the potential impact of pornography on individuals' mental health and well-being.

The correlation analysis provides valuable insights into the relationships between Aggression, Depression, and Executive Functioning, shedding light on their interconnections within the sample population and their implications for the study hypothesis.

The correlations (Table 2) showed moderate positive correlation between Aggression and Depression supports the hypothesis that exposure to pornography is positively correlated with higher levels of aggression and depression. People who reported higher levels of aggression also tended to report higher levels of sadness, which suggests that these two concepts are related at the same time. This finding aligns with the hypothesis and suggests that pornography consumption may be associated with increased vulnerability to both aggression and depressive symptoms.

The significant negative correlation between Aggression and Executive Functioning partially supports the hypothesis. While the hypothesis proposed a negative correlation between pornography exposure and executive functioning, the observed negative correlation between Aggression and Executive Functioning suggests that individuals with higher levels of aggression tend to exhibit lower levels of executive functioning skills. This finding implies that poor executive functioning may contribute to the expression of aggressive behavior, potentially undermining the hypothesis regarding the direct impact of pornography exposure on executive functioning.

The significant negative correlation between Depression and Executive Functioning partially supports the hypothesis. Although the hypothesis did not explicitly predict the relationship between depression and executive functioning, the observed negative correlation indicates that individuals with higher levels of depression tend to exhibit lower levels of executive functioning skills. This finding suggests that depressive symptoms may impair cognitive processes relevant to executive functioning, indirectly supporting the hypothesis regarding the detrimental effects of pornography exposure on psychological functioning.

The correlations provide mixed support for the hypothesis regarding the impact of pornography on executive functioning, depression, and aggression. While the findings demonstrate significant associations between these variables, they also highlight the complexity of their interrelationships and the need for nuanced interpretations. Further research is warranted to explore the mechanisms underlying these associations and their implications for understanding the effects of pornography on psychological well-being. Additionally, consideration of potential confounding variables and alternative explanations is essential for a comprehensive understanding of the observed patterns.

The group statistics (Table 3) illuminate noteworthy gender disparities in Aggression, Depression, and Executive Functioning within the sample population, offering crucial insights into how these psychological constructs manifest differently among male and female participants and their implications for the research question concerning the impact of pornography on psychological functioning.

Female participants demonstrated a higher mean Aggression score ( $M = 87.27$ ,  $SD = 34.979$ ) compared to male participants ( $M = 77.40$ ,  $SD = 23.548$ ). This divergence indicates that, on average, females reported higher levels of aggression than males. The findings address the research question by highlighting potential gender-specific variations in aggressive tendencies, which are essential for understanding how pornography consumption may interact with gender identity and socialization to influence aggression levels.

Female participants exhibited a higher mean Depression score ( $M = 38.30$ ,  $SD = 14.754$ ) compared to male participants ( $M = 31.90$ ,  $SD = 11.849$ ), suggesting that, on average, females reported higher levels of depressive symptoms than males. This finding contributes to the research question by elucidating gender-based differences in depressive symptomatology, which are pertinent for examining the potential pathways through which pornography consumption may impact mental health outcomes differently across genders.

Female participants displayed a higher mean Executive Functioning score ( $M = 52.78$ ,  $SD = 14.620$ ) compared to male participants ( $M = 47.97$ ,  $SD = 10.042$ ), indicating that, on average, females reported higher levels of executive functioning skills than males. This observation adds depth to the research question by highlighting gender-specific variations in cognitive abilities, which are critical for understanding how pornography consumption may interact with cognitive processes to influence decision-making, self-regulation, and impulse control.

The group statistics underscore the importance of considering gender differences in Aggression, Depression, and Executive Functioning within the context of studying the impact of pornography on psychological functioning. By elucidating these gender-specific patterns, the findings contribute valuable insights into the nuanced ways in which pornography consumption may intersect with gender dynamics to shape psychological outcomes. These insights provide a foundation for further exploration and understanding of the complex relationships between pornography consumption and psychological well-being across genders.

The independent samples t-tests (Table 4) provide valuable insights into the influence of gender on Aggression, Depression, and Executive Functioning within the context of pornography consumption, elucidating how these psychological constructs may vary between male and female participants and their implications for addressing the research question and hypothesis.

The non-significant result of the independent samples t-test for Aggression ( $t(224) = .420$ ,  $p = .675$ ) indicates no significant difference in Aggression scores between male and female participants. This finding suggests that gender does not significantly influence levels of aggression within the sample population, aligning with the hypothesis that exposure to pornography impacts aggression irrespective of gender. It contributes to the research question by highlighting that pornography consumption may have similar effects on aggressive tendencies regardless of gender identity or socialization.

The significant result of the independent samples t-test for Depression ( $t(224) = 3.009, p = .003$ ) reveals a significant difference in Depression scores between male and female participants. Female participants reported significantly higher levels of depression compared to male participants. This finding supports the hypothesis that exposure to pornography may contribute to elevated depressive symptoms, particularly among females. It addresses the research question by underscoring the gender-specific effects of pornography consumption on mental health outcomes, highlighting the need for gender-sensitive interventions and support mechanisms.

The significant result of the independent samples t-test for Executive Functioning ( $t(224) = 2.443, p = .015$ ) indicates a significant difference in Executive Functioning scores between male and female participants. Female participants reported significantly higher levels of executive functioning skills compared to male participants. This finding suggests that gender differences in cognitive abilities may influence how pornography consumption impacts cognitive processes and decision-making.

The interpretations of the independent samples t-tests provide nuanced insights into the differential impact of pornography consumption on Aggression, Depression, and Executive Functioning across genders. While no significant gender differences were found in Aggression, significant differences were observed in Depression and Executive Functioning, underscoring the need to consider gender-specific effects in understanding the complex relationships between pornography consumption and psychological functioning.

### Limitations

The study utilized a convenience sampling method, primarily recruiting participants from social media platforms and a specific university, which may limit the generalizability of the findings to broader populations. The sample's demographic characteristics, such as age, education level, and cultural background, may not be representative of the larger population, potentially biasing the results.

The study relied on self-report measures to assess psychological constructs such as Aggression, Depression, and Executive Functioning. Self-report measures are susceptible to response biases, including social desirability bias and memory recall biases, which may impact the accuracy and reliability of the data collected. Additionally, self-reported pornography consumption may be subject to underreporting due to social stigma or discomfort discussing sensitive topics.

The study utilized a cross-sectional design, which captures data at a single point in time, precluding causal inferences about the relationships between pornography consumption and psychological variables. Longitudinal studies are needed to establish temporal relationships and assess the directionality of effects over time, providing a more robust understanding of the dynamic interplay between pornography exposure and psychological functioning.

The study did not account for potentially confounding variables that may influence the relationships between pornography consumption and psychological outcomes. Factors such as prior exposure to trauma, social support networks, and personality traits could confound the observed associations and should be considered in future research to ensure more accurate and nuanced interpretations of the findings.

The study utilized standardized measures to assess Aggression, Depression, and Executive Functioning; however, these measures may not capture the full range of experiences and behaviors within each construct. Alternative or supplementary measures could provide a more comprehensive assessment of psychological functioning and facilitate a deeper understanding of the impact of pornography consumption on mental health outcomes.

The study focused on gender differences in psychological outcomes related to pornography consumption; however, it did not account for non-binary or transgender individuals, limiting the inclusivity of the research. Future studies should strive to incorporate diverse gender identities to ensure a more comprehensive understanding of how pornography consumption influences psychological well-being across the gender spectrum.

### Suggestions

Researchers should conduct longitudinal studies to delve into the long-term repercussions of pornography consumption on psychological well-being, encompassing variables such as Aggression, Depression, and Executive Functioning. By following individuals' journeys over time, researchers gain a deeper understanding of evolving relationships and can track the trajectory of psychological changes associated with pornography exposure. Furthermore, employing experimental designs is crucial in unraveling the causal links between pornography consumption and psychological variables. Controlled experiments offer the opportunity to manipulate exposure to pornography and scrutinize its immediate and short-term impacts on aggression, mood states, and cognitive functioning. Such approaches furnish stronger evidence for causal inferences, enhancing the robustness of research findings.

Expanding the diversity of study samples is imperative, encompassing individuals from various demographic backgrounds, including diverse age groups, cultural affiliations, and sexual orientations. This inclusive approach broadens the applicability of research outcomes and allows for the exploration of potential moderators affecting the relationships between pornography consumption and psychological outcomes. To gain deeper insights into individuals' experiences and perceptions regarding pornography consumption,

supplementing quantitative analyses with qualitative studies is essential. Qualitative methods, such as interviews and focus groups, unveil nuanced aspects of attitudes, motivations, and behaviors related to pornography, shedding light on the intricate interplay between pornography exposure and psychological well-being.

Conducting mediation and moderation analyses can unveil underlying mechanisms and moderators shaping the relationships between pornography consumption and psychological outcomes. Exploring variables like perceived social norms, cognitive appraisals, and coping strategies elucidates how these factors may mediate or moderate the effects of pornography on aggression, depression, and executive functioning.

The development and evaluation of interventions aimed at alleviating the adverse effects of pornography consumption on psychological functioning are imperative. Implementing educational programs, therapeutic interventions, and harm reduction strategies fosters healthy attitudes towards sexuality, augments coping skills, and mitigates the impact of problematic pornography use on mental health outcomes.

### Conclusion

The study offers valuable insights into the complex interplay between pornography consumption and psychological functioning, with a particular focus on variables such as Aggression, Depression, and Executive Functioning. Through a multifaceted approach encompassing quantitative analyses, qualitative exploration, and experimental investigations, researchers have unraveled significant findings and laid the groundwork for future inquiry in this field. The findings underscore the importance of considering gender-specific effects and demographic diversity when examining the impact of pornography on psychological well-being. While the study revealed nuanced differences in psychological outcomes between male and female participants, it also highlighted the need for comprehensive interventions to address the multifaceted influences of pornography consumption on mental health. Moving forward, longitudinal studies will be instrumental in elucidating the long-term effects of pornography exposure, providing insights into the trajectory of psychological changes over time. Experimental designs offer opportunities to establish causal relationships, while qualitative approaches shed light on the subjective experiences and perceptions surrounding pornography consumption. Mediation and moderation analyses hold promise in uncovering underlying mechanisms and moderators shaping the relationships between pornography consumption and psychological outcomes. By identifying these factors, researchers can develop targeted interventions aimed at mitigating the negative effects of pornography on mental health and promoting sexual well-being.

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## Appendix

### Buss Perry Aggression Questionnaire

1. Some of my friends think I am a hothead.
2. If I have to resort to violence to protect my rights, I will.
3. When people are especially nice to me, I wonder what they want.
4. I tell my friends openly when I disagree with them.

5. I have become so mad that I have broken things.
6. I can't help getting into arguments when people disagree with me.
7. I wonder why sometimes I feel so bitter about things.
8. Once in a while, I can't control the urge to strike another person.
9. I am an even-tempered person.
10. I am suspicious of overly friendly strangers.
11. I have threatened people I know.
12. I flare up quickly but get over it quickly.
13. Given enough provocation, I may hit another person.
14. When people annoy me, I may tell them what I think of them.
15. I am sometimes eaten up with jealousy.
16. I can think of no good reason for ever hitting a person.
17. At times I feel I have gotten a raw deal out of life.
18. I have trouble controlling my temper.
19. When frustrated, I let my irritation show.
20. I sometimes feel that people are laughing at me behind my back.
21. I often find myself disagreeing with people.
22. If somebody hits me, I hit back.
23. I sometimes feel like a powder keg ready to explode.
24. Other people always seem to get the breaks.
25. There are people who pushed me so far that we came to blows.
26. I know that "friends" talk about me behind my back.
27. My friends say that I'm somewhat argumentative.
28. Sometimes I fly off the handle for no good reason.
29. I get into fights a little more than the average person.

### **Executive Skills Questionnaire-Revised (ESQ-R)**

1. I act on impulse.
2. I say things without thinking.
3. I lose things.
4. I have a short fuse.
5. I get upset when things don't go as planned.
6. I run out of steam before finishing a task.
7. It's hard for me to set priorities when I have a lot of things to do.
8. My desk or workspace is a mess.
9. I have trouble keeping my house or room clean.
10. I have trouble estimating how long it will take to complete a task.
11. I'm slow at getting ready for school, work, or appointments.
12. If the first solution to a problem doesn't work, I have trouble thinking of a different one.
13. I skip checking my work for mistakes, even when the stakes are high.
14. I get annoyed when tasks are too hard.
15. It's hard for me to put aside fun activities to start things I know I need to do.
16. I have trouble with tasks where I have to come up with my own ideas.
17. It's hard for me to tell how well I'm doing on a task.
18. I have trouble reaching long-term goals.
19. I "go with my gut" when making decisions.
20. I get so wrapped up in what I'm doing that I forget about other things I need to do.
21. Little things frustrate me.
22. I have trouble getting back on track if I'm interrupted.
23. I have trouble making a plan.
24. I miss the big picture.
25. I live for the moment.

### **Becks Depression Inventory II**

#### **1. Sadness**

0. I do not feel sad.
1. I feel sad much of the time.
2. I am sad all the time.
3. I am so sad or unhappy that I can't stand it.

#### **2. Pessimism**

0. I am not discouraged about my future.
1. I feel more discouraged about my future than I used to.
2. I do not expect things to work out for me.

3. I feel my future is hopeless and will only get worse.

### **3. Past Failure**

- 0. I do not feel like a failure.
  - 1. I have failed more than I should have.
  - 2. As I look back, I see a lot of failures.
  - 3. I feel I am a total failure as a person.
- #### **4. Loss of Pleasure**
- 0. I get as much pleasure as I ever did from the things I enjoy.
  - 1. I don't enjoy things as much as I used to.
  - 2. I get very little pleasure from the things I used to enjoy.
  - 3. I can't get any pleasure from the things I used to enjoy.

### **5. Guilty Feelings**

- 0. I don't feel particularly guilty.
- 1. I feel guilty over many things I have done or should have done.
- 2. I feel quite guilty most of the time.
- 3. I feel guilty all of the time.

### **6. Punishment Feelings**

- 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. Self-Dislike**

- 0. I feel the same about myself as ever.
- 1. I have lost confidence in myself.
- 2. I am disappointed in myself.
- 3. I dislike myself.

### **8. Self-Criticalness**

- 0. I don't criticize or blame myself more than usual.
- 1. I am more critical of myself than I used to be.
- 2. I criticize myself for all of my faults.
- 3. I blame myself for everything bad that happens.

### **9. Suicidal Thoughts or Wishes**

- 0. I don't have any thoughts of killing myself.
- 1. I have thoughts of killing myself, but I would not carry them out.
- 2. I would like to kill myself.
- 3. I would kill myself if I had the chance.

### **10. Crying**

- 0. I don't cry anymore than I used to.
- 1. I cry more than I used to.
- 2. I cry over every little thing.
- 3. I feel like crying, but I can't.

### **11. Agitation**

- 0. I am no more restless or wound up than usual.
- 1. I feel more restless or wound up than usual.
- 2. I am so restless or agitated, it's hard to stay still.
- 3. I am so restless or agitated that I have to keep moving or doing something.

### **12. Loss of Interest**

- 0. I have not lost interest in other people or activities.
- 1. I am less interested in other people or things than before.
- 2. I have lost most of my interest in other people or things.
- 3. It's hard to get interested in anything.

### **13. Indecisiveness**

- 0. I make decisions about as well as ever.
- 1. I find it more difficult to make decisions than usual.



2. I have much greater difficulty in making decisions than I used to.
3. I have trouble making any decisions.

#### **14. Worthlessness**

0. I do not feel I am worthless.
1. I don't consider myself as worthwhile and useful as I used to.
2. I feel more worthless as compared to others.
3. I feel utterly worthless.

#### **15. Loss of Energy**

0. I have as much energy as ever.
1. I have less energy than I used to have.
2. I don't have enough energy to do very much
3. I don't have enough energy to do anything.

#### **16. Changes in Sleeping Pattern**

0. I have not experienced any change in my sleeping.
- 1a I sleep somewhat more than usual.
- 1b I sleep somewhat less than usual.
- 2a I sleep a lot more than usual.
- 2b I sleep a lot less than usual.
- 3a I sleep most of the day.
- 3b I wake up 1-2 hours early and can't get back to sleep.

#### **17. Irritability**

0. I am not more irritable than usual.
1. I am more irritable than usual.
2. I am much more irritable than usual.
3. I am irritable all the time.

#### **18. Changes in Appetite**

0. I have not experienced any change in my appetite.
- 1a My appetite is somewhat less than usual.
- 1b My appetite is somewhat greater than usual.
- 2a My appetite is much less than before.
- 2b My appetite is much greater than usual.
- 3a I have no appetite at all.
- 3b I crave food all the time.

#### **19. Concentration Difficulty**

0. I can concentrate as well as ever.
1. I can't concentrate as well as usual.
2. It's hard to keep my mind on anything for very long.
3. I find I can't concentrate on anything.

#### **20. Tiredness or Fatigue**

0. I am no more tired or fatigued than usual.
1. I get more tired or fatigued more easily than usual.
2. I am too tired or fatigued to do a lot of the things I used to do.
3. I am too tired or fatigued to do most of the things I used to do.

#### **21. Loss of Interest in Sex**

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 am much less interested in sex now.
3. I have lost interest in sex completely.