FACEBOOK ADDICTION AND AGGRESSION AMONG CRIMINOLOGY STUDENTS: THE MODERATING ROLE OF ONLINE DISINHIBITION
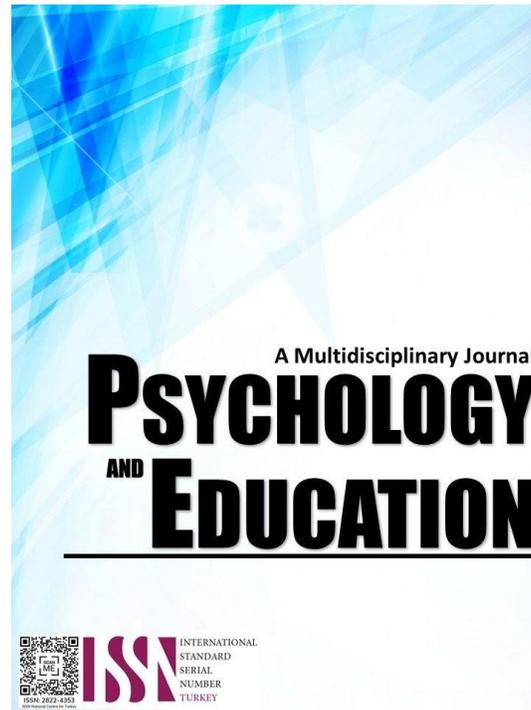
Facebook Addiction and Aggression Among Criminology Students: The Moderating Role of Online Disinhibition

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Abstract

This study intends to investigate the moderating effect of online disinhibition on the relationship between Facebook addiction and aggression among criminology students in Davao del Sur. A quantitative, descriptive-correlational design with hierarchical regression analysis was utilized, involving 345 criminology students from four academic institutions. Facebook addiction was measured through indicators such as salience, mood modification, tolerance, withdrawal, conflict, and relapse, while aggression encompassed forms such as physical aggression, verbal aggression, anger, and hostility. Findings revealed that there is a significant and positive correlation between Facebook addiction and aggression. This implies that the more addicted criminology students are to Facebook, the more likely they are to show aggressive behaviors. Meanwhile, online disinhibition has no direct effect on the relationship between Facebook addiction and aggression. The results affirm the importance of addressing issues of addiction and aggression among students to promote mental well-being and academic success. These findings contribute to criminology students, faculty, and parents by creating a more supportive and productive learning environment and by preparing students to navigate both their academic careers and future professional roles in a balanced and responsible manner.

Keywords: *aggression, Facebook addiction, criminology, online disinhibition, moderation analysis, Davao del Sur, Philippines*

Introduction

Highly, the internet has considerably enhanced people's ability to interact with one another without the limitations of location. Social networking sites have gained significant importance due to the number of associations any person can maintain at the same time, enabling free, accessible interaction online. Facebook is one of the fastest-growing social networking sites (Alenezi, 2023). It was developed to provide students with a social tool for maintaining connections to their academic community. But as Facebook's popularity among students has grown, many studies have begun examining factors associated with excessive Facebook use. One major problem is that students' heavy engagement with the platform can lead to various adverse outcomes. Students who spend more time using Facebook may experience declines in academic performance due to distractions, reduced study time, and difficulty maintaining focus. In addition, excessive use has also been linked to psychological effects, such as increased stress, anxiety, and feelings of social comparison, as users are constantly exposed to curated and idealized images of others' lives. In some cases, students may even develop symptoms similar to behavioral addiction, including impulsive checking, irritability when not online, and difficulty controlling their usage—one method employed to examine how Facebook use was impacted by personality attributes (Dule, 2023).

Studying aggression is essential because it focuses on the behaviors and actions of criminology students. Also, to assess the extent of Facebook addiction in terms of the following: physical aggression, verbal aggression, anger, and hostility (Brennan, 2021). Physical aggression, defined as the behavior directed toward another person that results in bodily harm or has the potential to cause physical harm, represents a trans-diagnostic marker of social dysfunction (Brennan & Baskin-Sommers, 2021). Meanwhile, verbal aggression is described as communication to hurt another person, regardless of whether harm is actually done. In addition to overt acts like spreading unfavorable rumors, it also includes verbal threats of damage, mockery, openly hostile statements, unfair criticism that doesn't go away, shouting or yelling insults, and overtly hostile remarks. Anger is a feeling that is defined by hostility toward someone or something that you believe has intentionally wronged you (Alia-Klein, 2020). Moreover, A negative attitude toward people that includes animosity, denigration, and ill will is referred to as hostility.

People in this generation are engaging more on Facebook. A matter of great concern about them is their unethical, violent acts and crimes due to loss of self-control. A higher level of self-control is better for being able to handle Facebook addiction, aggression, or violent behavior. In fact, due to a lack of personal appeal and open disinhibition in people's interactions, it has evolved into a breeding ground for miscommunication, disagreement, and fights.

Today, social media has become the most essential tool for communication. It's people's way of reaching out to family members, friends, co-workers, classmates, and others they have just met through social networking sites. Millions of people use Facebook, making it the most attractive social networking site. Facebook was created by Mark Zuckerberg, a Harvard University student, in 2004. This is considered a network for accessing college students' information within the institution (Alea et al., 2020). Later, its use spread widely among other university students and entered the public domain. As a result, its excessive use impairs real-world interaction and communication abilities, ultimately leading to decreased social skills. Psychiatrists invented the new term "Facebook Addiction" because it dramatically affects one's sleeping habits, health, and interest in studies and interaction abilities of real life (Nikbin & Foroughi, 2021).

Addiction is defined as a compulsive behavior that leads to adverse effects. Most people who have experienced this feel compelled to do certain things so often that they become dangerous habits that interfere with other vital activities, such as school or work (Bozzola et al., 2022). The concept of social networking addiction refers to someone who spends excessive time using social media platforms such as Facebook, Twitter, Instagram, and others, which interferes with other aspects of daily life (Kaur & Verma, 2022). Researchers term Facebook Addiction as a condition where people may subjectively experience a loss of control while continuing to use it excessively, regardless of its detrimental effects on one's life (Wadsley & Ihssen, 2023). In addition, it is a desire that controls the mind and which can be considered as a vice and is unethical (Taylor, 2023). Those who are addicted may start isolating themselves or spending less time out with friends because of the time they spend on Facebook. Spending a lot of time in front of their computers or cellphones may make them less responsive to their surroundings (Atis, 2022). A social media addict can be considered as one with an urge to use it excessively (Stănculescu & Griffiths, 2022). Some of these involve activities such as frequently checking status updates and spending many hours posting on or stalking the profiles or accounts of other users. This behavior or habit affects their everyday responsibilities, such as family, school, work, and other social obligations (Kazaz & Karadas, 2022).

Students use Facebook for many reasons. It was identified that there are five motives for using social media, including Facebook, such as meeting new people, entertainment, maintaining relationships, social events, and media creation (Abrar-ul Hassan & Safdar, 2022). They used this platform to connect with old friends and family members, to find new friends, to obtain or share learning materials, to receive updates on events, to post information, and to use as a pastime (Winstone et al., 2021). In addition, Facebook enables real-time interactive exchange with others and allows them to get close to popular people they admire, mostly in entertainment, which may contribute to their choice to use social media. These have been described as potentially addictive and may lead to Facebook addiction.

As the internet and social media like Facebook grew in importance, researchers became curious and wanted to explore this area. This is expanded to explore these new environments and how they interact with one another (Kaluzeviciute, 2022). However, the excessive use of Facebook can be associated with the following: social tension, jealousy, depression, and isolation, as some researchers have revealed (Dibb & Foster, 2021). Moreover, they highlighted its implications across areas such as learning (Cheng & Nguyen, 2023), identity construction (Vannucci et al., 2020), emotional and psychological well-being (Schønning et al., 2020), and privacy (Ismagilovia et al., 2020).

On social media, aggression is directed at a particular person or group to damage their identity and lower their prestige and status. It is often expressed in two ways: directly expressed or hidden in the post. Based on research, aggression in social media can be classified into three categories: Overly Aggressive (AOG), Covertly Aggressive (CAG), and Non-aggressive (NAG). In overtly aggressive situations, aggression is directly expressed. It might be expressed either through verbal features, verbal items, or a particular syntactic structure. However, in covertly aggressive text, aggression is not expressed directly; it is hidden. It is pretty challenging to differentiate overtly aggressive text and covertly aggressive text (Shariff & Hoque, 2022). Researchers have observed the production of abusive language and an increase in aggressive, potentially harmful content on social media (Modha et al., 2020). However, most of the forms of abusive language are not criminal. It can lead to a deterioration of public discourse and opinions, which may in turn generate a more radicalized society. Different forms of abusive content detection have been identified, such as hate speech (Alkomah, 2022), cyberbullying (Giumetti & Kowalski, 2022), and aggression. Excessive use of Facebook and other social media platforms is associated with adverse effects (Cataldo et al., 2022).

The online disinhibition effect refers to the lack of restraint people feel when communicating online compared to in person. Based on studies, some online behaviors, such as self-disclosure (Towner et al., 2022), online aggression (Graf et al., 2022), online flaming (Walther, 2025), and cyberbullying (Lozano-Blasco et al., 2020), are the result of the online disinhibition effect. Furthermore, online disinhibition is divided into two types: benign and toxic. Benign disinhibition is characterized by sharing very personal things, revealing secret emotions, fears, and wishes, and performing unusual acts of kindness and generosity. Whereas, toxic disinhibition refers to the dark side of using the Internet, such as using rude language, hard criticism, threats, and anger. Compared to the offline world, there is a higher likelihood that fewer adults are present in adolescents' online world. This can increase aggressive behavior and discrimination. This concept explains that online disinhibition is a domain-specific psychological state rather than a personality trait (de-Juan-Ripoll et al., 2021).

Social media usage remains highest among the youngest users (Swart, 2021). Facebook, Snapchat, and Instagram rank highest in popularity (Swathi & Sujatha, 2022). However, researchers also found strong associations between social media use and increased anxiety, depression, low self-esteem, changes in behavior, and even suicide-related activities in adolescence (Vidal et al., 2020). The unregulated, continuous nature of the online world has been labeled a breeding ground for toxic and harmful social interactions (Kilvington, 2021). Actually, many of the online social networks adolescents inhabit come with their own unwritten "rules and expectations" (West et al., 2023). Surprisingly, an increase in young people behaving in an unrestrained manner on the Internet has been observed (Singh & Paliwal, 2020). This unrestrained online behavior has been associated with a vast increase in the occurrence of cyber-aggression behavior, specifically among youth.

The Differential Association Theory, developed by Edwin Sutherland, is relevant for this study. This is a criminology theory that focuses on the role of social interactions in the development of criminal behavior. Sutherland argued that deviant behavior is learned, including addiction, through interactions with others who engage in such behavior. This theory suggests that efforts to prevent criminal

behavior should focus on altering individuals' learning environments and promoting definitions that discourage criminal conduct (Estelami & Florendo, 2021). In addition, this study is anchored in Social Presence Theory (Hollebeek et al., 2021), which examines factors that explain why people feel addicted and engage in deviant behavior online. There are many policies to deter illegal behavior in cyberspace, but many people still think they are safe behind their computers (Dvoryanchikov et al., 2020).

The independent variable is Facebook Addiction, which is anchored in Self-Determination Theory, developed by Psychologists Richard Ryan and Edward Deci, which posits that individuals have innate psychological needs for autonomy, competence, and relatedness. When these needs are not met, individuals may engage in behaviors, including addictive behaviors, to compensate. Users addicted to Facebook may have unmet psychological needs for social connection (relatedness), a sense of competency in managing their online presence, or autonomy in making choices about their digital engagement. Addiction may result from external pressures or internal motivation. External factors like social validation through likes and comments may drive addictive behaviors, while internal motivations could include a need for self-expression or identity construction.

Furthermore, behavioral addiction is also a societal issue. With the development of social media platforms, the number of social media users has rapidly increased (Ortiz-Ospina & Roser, 2023). Young adults and teenagers still make up the majority of social media users. Although those who participate in online social networking have access to conveniences and novel user experiences thanks to the wide variety of social media applications and the extremely high popularity of social media among younger generations, social media addiction is a public health issue that needs to be addressed head-on (Zhuang, 2023).

The aggression variable in this study is linked to Uses and Gratification Theory by Elihu Katz, which holds that individuals consciously select media platforms to meet their needs and derive satisfaction from their media consumption. In the realm of Facebook addiction, users might be motivated by the need for social interaction, entertainment, information, or an escape from reality. Facebook users actively seek specific gratifications, such as social connection, entertainment, and information. Addiction may develop when individuals habitually resort to Facebook to satisfy these needs, potentially impacting other facets of their lives (Lin & Chu, 2021).

Moreover, Albert Bandura's social learning theory, established in 1986, is also significant in the context of this study. At the core of social learning theory is the idea that individuals acquire knowledge through their social interactions with others (Scavarelli et al., 2021). Simultaneously, individuals grasp insights into others' behavior through similar behavioral patterns. When people witness behaviors relevant to their own conduct, they tend to absorb and adopt new behaviors by mimicking the observed actions. Bandura contends that mimicry involves accurately replicating behaviors observed (Bandura, 2021). This theory provides insights into the emergence of aggressive patterns, the motivations behind aggressive behavior, and the factors that sustain violent conduct once initiated.

According to sociologists, behavior is acquired through socialization and interaction. This is also considered a product of social structure and social processes. Aggression is a learned behavior. Through social interaction, people learn and acquire others' behavior. The associations a person is in contact with may vary depending on their behavior. Through interaction with others, we can learn the values, attitudes, techniques, and even motivation for aggressive behavior (Nickerson, 2022).

Existing empirical studies have not extensively explored the moderating influence of online disinhibition on the connection between Facebook Addiction and Aggression. Consequently, there is a need for a research investigation to identify variables that may play a direct or moderating role. Despite the existing body of research, the link between Facebook addiction and aggression remains insufficiently examined, and a comprehensive study addressing all three variables in a unified manner is lacking.

Research Questions

The main purpose of this study was to find out whether there is a moderating role of online disinhibition on the relationship between Facebook addiction and aggression among criminology students, and which indicator of online disinhibition best describes Facebook addiction and aggression. Specifically, this study addressed the following objectives:

1. To assess the extent of Facebook Addiction among Criminology Students in terms of:
    1.1 salience;
    1.2 tolerance;
    1.3 mood modification;
    1.4 relapse;
    1.5 withdrawal; and
    1.6 conflict?
2. To assess the level of aggression among criminology students in terms of:
    2.1 physical aggression;
    2.2 verbal aggression;
    2.3 anger; and
    2.4 hostility?
3. To assess the role of online disinhibition among criminology students in terms of:
    3.1 benign disinhibition; and

3.2 toxic disinhibition?
4. To determine the significant relationship between Facebook addiction and aggression.
5. To find out if there is a moderating role of online disinhibition in the relationship between Facebook addiction and aggression.

Methodology

Research Design

The study utilized a quantitative, descriptive-correlational method with moderating analysis through hierarchical logistic regression to examine the relationship between Facebook addiction and aggression among criminology students and the moderating role of online disinhibition. The descriptive aspect involved gathering data to determine the level of Facebook addiction and aggression of criminology students. The correlational analysis explored naturally occurring relationships between variables without establishing causation. In contrast, the moderating analysis assessed how online disinhibition influenced the strength or direct relationship using hierarchical regression and moderation graphs (Karaoglan Yilmaz et al., 2022).

The questionnaire's validity was ensured through expert validation, and its reliability was confirmed using Cronbach's alpha ($\alpha \geq 0.70$) and pilot testing. Approval to conduct the study was obtained from the four academic institutions in Davao del Sur: UM Digos College, UM Bansalan College, Cor Jesu College, and Polytechnic College of Davao del Sur. Data collection was conducted face-to-face. Mean, Pearson's r, and the Sobel z-test were employed to analyze the data. Mean was used to determine the central tendency of each variable. Pearson's r determined the relationship between Facebook addiction and aggression, while Sobel's z-test assessed the moderating role of online disinhibition, revealing how Facebook addiction impacts aggression.

Respondents

This study focused on criminology students from Davao del Sur academic institutions, namely UM Digos College (UMDC), UM Bansalan College (UMBC), Cor Jesu College (CJC), and Polytechnic of Davao del Sur College (PCDS), who are currently enrolled in the 2023-2024 academic year. There were 112 students from UMDC, 96 from UMBC, 48 from CJC, and 89 from PCDS who participated in this study. A total of 345 criminology students from the four academic institutions of Davao del Sur comprised the sample.

The inclusion criteria for this study required that respondents be officially enrolled criminology students from UM Digos College, UM Bansalan College, Cor Jesu College, and Polytechnic of Davao del Sur College during the Academic Year 2023–2024. Students were included only if they were part of the designated strata determined through the stratified random sampling technique and voluntarily agreed to participate after being fully informed of the study's objectives, procedures, and potential risks and benefits. Participation was contingent upon providing informed consent and acknowledging their rights to confidentiality and voluntary withdrawal at any stage of the study. Conversely, students were excluded if they were not enrolled in the criminology program of the selected institutions, were not registered during the specified academic year, or were not part of the sampling frame used in the study. Individuals who declined participation, failed to provide informed consent, or chose to withdraw during data collection were also excluded. Additionally, respondents whose submissions were incomplete or invalid, rendering their data unusable for analysis, were omitted from the final dataset.

The study employed a stratified random sampling technique to ensure a comprehensive representation of the criminology students' population. This aims to account for potential variations in Facebook addiction and aggression levels across different academic levels, allowing for a nuanced analysis of the moderating role of online disinhibition in the specified population. Moreover, respondents were furnished with explicit and comprehensive details regarding the research objectives, procedures, and potential risks and benefits. Each participant provided informed consent, with the assurance of the freedom to withdraw from the study at any stage without facing repercussions. The decision to participate or withdraw was conveyed as entirely voluntary, with participants informed that it would not impact their academic standing or relationship with the educational institution. The confidentiality of participants is rigorously upheld throughout the study.

Instrument

This study utilized a survey questionnaire adapted from established tools to measure Facebook addiction, aggression, and online disinhibition. Facebook addiction was assessed using Bergen Facebook Addiction Scale (Andreassen, et al. 2012) comprised of 18 items, wherein three items were divided into the six core features of addiction: salience (items 1-3), tolerance (items 4-6), mood modification (items 7-9), relapse (items 10-12), withdrawal (items 13-15) and conflict (items 16-18). Aggression was measured using the Buss-Perry Aggression Questionnaire from Buss and Perry (1992), which consists of 29 items, loaded into its four constructs: physical aggression (items 1-9), verbal aggression (items 10-14), anger (items 15-21), and hostility (items 22-29). On the other hand, the Online Disinhibition Scale (ODS) Questionnaire is an 11-item instrument developed to assess online disinhibition, whether benign or toxic (Wen & Miura, 2023).

The variables of the study are evaluated using the 5-level Likert Scale as follows: a mean score of 4.20 to 5.00 is categorized as "Very High," indicating that the measures related to the variables are consistently manifested. In the range of 3.40 to 4.19, a mean score is

labeled "High," indicating that measures related to the variables are frequently observed. The "Moderate" category corresponds to mean scores between 2.60 and 3.39, suggesting that measures related to the variables are occasionally observed. Scores falling between 1.80 and 2.59 are classified as" Low," indicating that measures related to the variables are never manifested in the context of the study. Lastly, mean scores within the range of 1.00 to 1.79 are labeled "Very Low," suggesting that the variables are never manifested in the context of the study.

The questionnaire underwent validation to assess its reliability and appropriateness for the study. Content validation was conducted by a panel of experts, who evaluated the clarity, relevance, and adequacy of the items. For reliability testing, the instrument underwent a pre-test (pilot testing). The instrument's reliability was assessed using Cronbach's alpha, with $\alpha \geq 0.70$, indicating acceptable internal consistency across all subscales.

Procedure

During the study, the researcher adhered to all ethical standards established by the University of Mindanao Professional Schools. The University of Mindanao Ethics Review Committee (UMERC) reviewed the thesis proposal in accordance with key ethical principles, including voluntary participation, privacy and confidentiality, recruitment, risk and benefit assessment, plagiarism prevention, fabrication and falsification, conflict of interest, management, prevention of deceit, and proper permissions from organizations or locations involved. After the review, the study was granted certification under UMERC Protocol Number 2024-255, confirming compliance with the University's ethical guidelines. This ensured that the research maintained the highest standards of integrity and respect for participants throughout its execution.

Results and Discussion

This section presents the interpretation, statistical analysis, and explanation of the research findings.

Facebook Addiction among Criminology Students

Table 1 shows the descriptive statistics results of criminology students' addictive tendencies to Facebook, with an overall mean score of 3.03 and a standard deviation (SD) of 0.79, which indicates a moderate level of Facebook addiction. Among the indicators, mood modification has the highest mean score of 3.30 (SD=1.05), described as mild, which highlights a significant factor of Facebook addiction, reflecting an area of concern. Conflict, while the lowest-scoring indicator at 2.77 (SD=1.03), still represents a moderate level of Facebook addiction. This explains that criminology students shift their focus from problems to Facebook to cope with challenges they are facing and find it hard to control their use of it because it serves to fulfill their need for mood modification (Yusuf et al., 2022).

Table 1. *Level of Facebook Addiction among Criminology Students*

Indicators	SD	Mean	Descriptive Level
Salience	0.90	3.17	Moderate
Tolerance	0.95	2.98	Moderate
Mood Modification	1.05	3.30	Moderate
Relapse	0.94	3.15	Moderate
Withdrawal	1.00	2.80	Moderate
Conflict	1.03	2.77	Moderate
Overall	0.79	3.03	Moderate

Meanwhile, conflict, an unavoidable aspect of the human condition, can be a powerful way to communicate and help us better understand ourselves. In this case, the advancement and the adverse effects of Facebook addiction can also lead to conflict among criminology students. The lack of positive connections and values caused by these uncertainties can further increase conflict. But these can be avoided if arguments are resolved rationally or logically (Matang et al., 2022). Students should develop a plan for social media use that outlines accountability and responsibility for online behavior.

Aggression among Criminology Students

Table 2. *Level of Aggression among Criminology Students*

Indicators	SD	Mean	Descriptive Level
Physical Aggression	0.84	2.98	Moderate
Verbal Aggression	0.90	2.87	Moderate
Anger	0.90	2.75	Moderate
Hostility	0.94	2.83	Moderate
Overall	0.76	2.86	Moderate

Table 2 represents the Level of Aggression among Criminology Students, with an overall mean score of 2.86 and a standard deviation of 0.76, which reflects a moderate level of aggression, indicating that criminology students show a behavior that is considered a significant social concern, particularly in an educational institution setting (Xing et al., 2023). Among the indicators, physical aggression has the highest mean score of 2.98 (SD=0.84), which is still considered moderate, highlighting its critical role as one of the most overt and visible indicators of aggressive behavior that a criminology student might exhibit. According to research, failing to

control oneself in Facebook use leads to aggression in users; this is a study analyzed using Social Media Self-Control Failure (SMSCF) (Hameed & Irfan, 2021).

The indicator with the lowest mean score, 2.75 (SD=0.90), is anger, which is still described as moderate. This explains that when an individual is angry, internet usage can act as a coping mechanism for emotional or social difficulties, helping them manage their negative emotions. However, excessive reliance on the internet as a way to avoid these feelings, especially when other coping strategies are lacking, may lead to internet addiction. Individuals with maladaptive coping styles or those who expect the internet to improve their mood are at greater risk of developing this dependency (Iannuzzo, 2024).

Online Disinhibition among Criminology Students

Table 3 highlights the level of online disinhibition among criminology students, which had an overall mean score of 2.90 and a standard deviation (SD) of 0.81, indicating a moderate level of online disinhibition. Of all the indicators, benign online disinhibition has the highest mean score of 3.22 (SD=0.89), which is describe as mild, this leads to a positive outcome for criminology students, for instance, sharing personal information, thoughts, feelings, and engaging in positive behavior online than creating a harmful behaviors like cyberbullying and internet trolling (Wen & Miura, 2025). The tendency of individuals to reveal their innermost thoughts and emotions, like fears, hopes, altruism, generosity, and kindness, in ways that align with how they typically behave in face-to-face interactions.

Table 3. *Level of Online Disinhibition among Criminology Students*

Indicators	SD	Mean	Descriptive Level
Benign Disinhibition	0.89	3.22	Moderate
Toxic Disinhibition	101	2.58	Low
Overall	*0.81*	*2.90*	*Moderate*

Toxic online disinhibition, on the other hand, has the lowest mean score of 2.58 (SD=1.01), describe as low, this explains that a loss of self-awareness among criminology students can be shaped by factors such as dissociative anonymity or an individual's sense of freedom of expression, which may contribute to the disinhibition of harmful or toxic online behaviors (Mantara, et al., 2023).

Significance of the Relationship between Facebook Addiction and Aggression among Criminology Students

Table 4 shows the significant relationship between Facebook addiction and aggression among criminology students with an overall correlation of (r = .645, p = .000), indicating that Facebook addiction is significantly and positively related to aggression. The findings on the relationship between Facebook addiction and aggression reveal significant roles for withdrawal (r= .610, p= .000), conflict (r= .591, p= .000), relapse (r= .576, p= .000), salience (r= .461, p= .000), tolerance (r= .459, p= .000), and mood modification (r= .435, p=.000), aligning with existing literature while highlighting nuanced perspectives.

Table 4. *Significance of the Relationship between Facebook Addiction and Aggression among Criminology Students*

Facebook Addiction	Aggression				
	Physical	Verbal	Anger	Hostility	Overall
Salience	.483**	.376**	.416**	.306**	.461**
	.000	.000	.000	.000	.000
Tolerance	.494**	.381**	.401**	.301**	.459**
	.000	.000	.000	.000	.000
Mood Modification	.439**	.361**	.356**	.336**	.435**
	.000	.000	.000	.000	.000
Relapse	.587**	.498**	.448**	.442**	.576**
	.000	.000	.000	.000	.000
Withdrawal	.544**	.551**	.516**	.472**	.610**
	.000	.000	.000	.000	.000
Conflict	.616**	.486**	.490**	.436**	.591**
	.000	.000	.000	.000	.000
Overall	.651**	.546**	.540**	.473**	.645**
	.000	.000	.000	.000	.000

Conflict strongly correlates with physical aggression (r=.616, p=.000), which, according to the General Aggression Model (GAM), violent media can affect individuals and influence aggression through factors such as personal or situational conflict (Bushman & Anderson, 2020). Also, factors can increase the likelihood of aggressive behavior by affecting an individual's mental state. Furthermore, tolerance shows the lowest correlation with hostility (r = .301, p = .000), suggesting that being open and respectful of others who are different and refraining from giving opinions or judgment can prevent separation, tension, and hostility (Verkuyten & Kollar, 2021).

These results have implications for policy, theory, and practice in addressing this behavior among criminology students. Parents and educators should demonstrate responsible social media use, set a model for students, encourage them in offline and extracurricular activities, and educate them on online safety, cyberbullying, and digital etiquette.

Significance of the Relationship between Facebook Addiction and Online Disinhibition among Criminology Students

Table 5 represents a positive and significant relationship between Facebook Addiction and Aggression among criminology students with an overall correlation of (r= .510, p= .000), with relapse showing the strongest correlation (r= .487, p= .000), particularly affecting benign online disinhibition (r= .383, p= .000) and toxic online disinhibition (r= .444, p= .000). Whereas, conflict has the lowest correlation with online disinhibition (r=.381, p=.000), indicating that it is more likely to have online disinhibition if there is Facebook addiction, and it is less likely to have online disinhibition if there is less addiction.

Table 5. *Significance of the Relationship between Facebook Addiction and Online Disinhibition among Criminology Students*

Facebook Addiction	Online Disinhibition		
	Benign	Toxic	Overall
Salience	.295**	.394**	.407**
	.000	.000	.000
Tolerance	.264**	.378**	.380**
	.000	.000	.000
Mood Modification	.322**	.323**	.378**
	.000	.000	.000
Relapse	.383**	.444**	.487**
	.000	.000	.000
Withdrawal	.233**	.524**	.454**
	.000	.000	.000
Conflict	.214**	.423**	.381**
	.000	.000	.000
Overall	.351**	.511**	.510**
	.000	.000	.000

The results are consistent with Li et al. (2024), who found that problematic social media affects emotional dependency, excessive and/or persistent use, withdrawal symptoms, and functional impairment. These are detrimental to students' healthy development, causing discomfort both physically and mentally. Therefore, educators should incorporate social media education and digital wellness into the curriculum, designate times as Facebook-free, especially during classes, and offer counseling or support services for students struggling with Facebook addiction, promoting self-awareness and personal growth (Wu et al., 2023).

Significance of the Relationship between Online Disinhibition and Aggression among Criminology Students

Table 6 investigates the significance of the relationship between online disinhibition and aggression among criminology students, revealing an overall correlation of (r=.628, p= .000), with toxic online disinhibition indicating the strongest correlation (r= .6.22, p= .000), affecting physical aggression (r= .489, p= .000), verbal (r= .494, p= .000), anger (r= .539, p= .000), and hostility (r= .593, p= .000). However, benign online disinhibition has the lowest correlation (r=. 440, p= .000), suggesting that it is more likely to have online disinhibition if there is aggression. It is less likely to experience online disinhibition when aggression is lower.

Table 6. *Significance of the Relationship between Online Disinhibition and Aggression among Criminology Students*

Online Disinhibition	Aggression				
	Physical	Verbal	Anger	Hostility	Overall
Benign Disinhibition	.354**	.299**	.297**	.542**	.440**
	.000	.000	.000	.000	.000
Toxic Disinhibition	.489**	.494**	.539**	.593**	.622**
	.000	.000	.000	.000	.000
Overall	.499**	.471**	.498**	.666**	.628**
	.000	.000	.000	.000	.000

According to studies supported by Ramadhani & Merida (2024), individuals with greater self-control tend to exhibit lower levels of online disinhibition. Furthermore, self-exploration, improved self-understanding, and emotional exploration reduce the tendency toward high levels of online disinhibition (Setiabudi et al., 2023). Therefore, parents and educators should encourage students to show kindness, respect, and empathy online, promoting a positive online culture and fostering positive relationships with others.

Moderation Analysis of the Relationships between Facebook Addiction, Aggression, and Online Disinhibition

Table 7 shows the moderation analysis of the relationships between Facebook addiction, aggression, and online disinhibition, revealing significant insights into how these variables interact.

While the direct effect of Facebook and aggression is statistically significant in the presence of the moderating variable (p=.004), the interaction of online disinhibition is not statistically significant in the relationship between Facebook addiction and aggression (p=.412), confirming no moderation effect.

Table 7. *Moderation Analysis of the Relationships between Facebook Addiction, Aggression, and Online Disinhibition*

			Estimate	S.E.	C.R.	P	Label
Aggression	<---	Facebook Addiction	.618	.039	15.703	***	

Regression Weights: (Group number 1 – Default model)
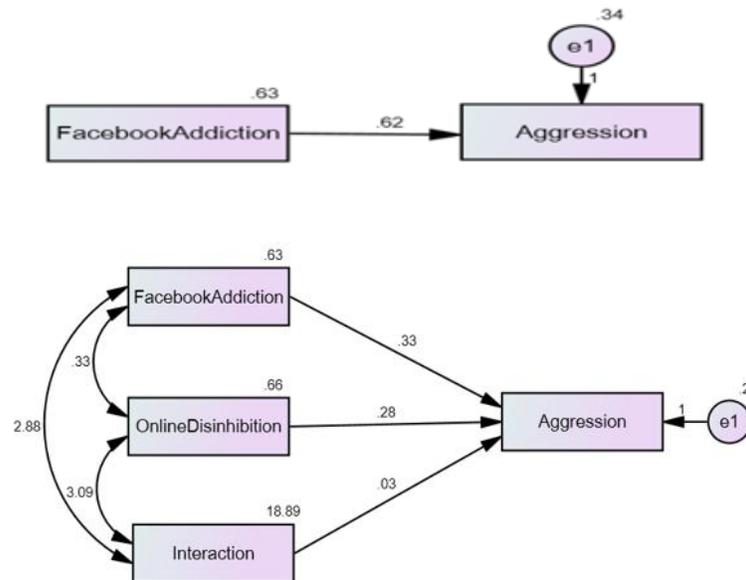
Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Aggression	<---	Facebook Addiction	.332	.115	2.888	.004	H01
Aggression	<---	Online Disinhibition	.278	.128	2.166	.030	H02
Aggression	<---	Interaction	.031	.037	.821	.412	H03

Hypothesis 3 is not significant with the presence of a moderating variable; therefore, No Moderation.

This indicates that the impact of online disinhibition does not imply the relationship between Facebook addiction and aggression. According to Wen & Miura (2025), many studies examine online disinhibition or a range of online behaviors, yet it remains unclear how it affects these behaviors. It suggests that the factors driving Facebook addiction and aggression are distinct and not influenced by the disinhibited behavior that can occur online. The results highlight the creation of interventions targeting Facebook addiction in reducing it or addressing underlying issues that are driven by addiction, without necessarily addressing online disinhibition. Similarly, interventions targeting aggression focus on anger management, empathy-building, or conflict resolution skills, without considering online disinhibition as a contributing factor.

Conclusions

The findings of this study reveal a moderate level of Facebook addiction among criminology students from different institutions in Davao del Sur. The indicators were salience, mood modification, tolerance, withdrawal, conflict, and relapse. Educational institutions should implement digital literacy programs for students that teach them about responsible social media use, online safety, and digital citizenship. Also, provide counseling services, addressing issues that contribute to their Facebook addiction. Aggression among criminology students was also found to be moderate. Parents and educators can collaborate with mental health professionals to provide students with access to expert advice and support.

Students struggling with aggression and addiction to Facebook use may benefit from a multifaceted approach. First, setting boundaries and limits on social media usage can help reduce feelings of frustration and irritability. By establishing specific times for Facebook use, students can regain control over their social media habits. Moreover, identifying triggers of aggressive behavior on Facebook can help students develop strategies to manage them. In addition to individual efforts, schools and organizations can support students. Digital literacy programs can educate students about responsible social media use, provide counseling services, and support groups to help them manage social media-related issues. By promoting healthy social media habits and providing resources, schools can help students develop a positive connection with technology.

Meanwhile, online disinhibition was perceived as moderate, with benign online disinhibition ranking highest and toxic online disinhibition ranking lowest. These results highlight the practice of empathy and understanding towards others online that can help mitigate the adverse effects of online disinhibition. By putting themselves in others' shoes and considering their perspectives, students can reduce the likelihood of engaging in hurtful or aggressive behavior. Furthermore, setting boundaries and being mindful of one's

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online interactions can help prevent feelings of overwhelm or frustration.

Analysis revealed that there is a significant and positive correlation between Facebook addiction and aggression, implying that the more addicted criminology students are to using Facebook, the more they are likely to show aggressive behaviors. However, online disinhibition has no moderating effect on the relationship between Facebook addiction and aggression. This could imply that other factors, such as individual personality traits or social environment, may play a more significant role in determining the relationship between Facebook addiction and aggression.

The results support the theoretical underpinnings of the study, including Differential Association Theory, which suggests that deviant behavior, including addiction, is acquired through interactions with others who engage in such behavior. Similarly, the findings align with Uses and Gratification Theory and Albert Bandura's Social Learning Theory, supporting the role of social interaction in an individual's acceptable or deviant behavior. These theoretical frameworks validate the interaction between Facebook addiction, aggression, and online disinhibition in this study.

This study relied solely on self-reported questionnaires, which may have introduced social desirability bias, recall bias, or inaccurate reporting, especially on sensitive topics such as aggression and addictive behaviors. Participants may have underreported or overreported their Facebook use or aggression levels, affecting the accuracy of the findings. In addition, the sample was limited to criminology students from four institutions in Davao del Sur, which restricts the generalizability of the findings. Students from other programs, provinces, or socioeconomic backgrounds may exhibit different levels of Facebook addiction, aggression, and online disinhibition. The study focused only on Facebook, even though students typically engage with multiple digital platforms such as TikTok, Instagram, and other messaging apps that may also influence aggression or addictive tendencies. Finally, although online disinhibition was examined as a moderating variable, other influential factors such as personality traits, mental health conditions, family environment, and peer influence were not included, which may help explain why online disinhibition showed no moderating effect.

To strengthen future research, studies can use a mix of methods, such as combining surveys with interviews or group discussions, to better understand students' experiences with Facebook use and aggression. Using actual behavioral data or digital tracking tools can also make the results more accurate and less dependent on what students say about themselves. It would also help to follow students over time to see how Facebook addiction and aggression develop and whether one leads to the other. Future studies could include students from other courses, more schools, or different places to make the findings apply to a broader group. Looking at other social media platforms beyond Facebook would give a clearer picture of students' online behavior. Including factors such as personality, coping skills, mental health, and social support may also help explain why certain patterns emerge. Researchers can also try implementing programs such as digital literacy training or counseling services to see if these efforts can reduce aggression and social media addiction among students.

References

Abrar-ul-Hassan, S., & Safdar, G. (2022). Relationship between self-esteem and problematic use of Facebook among University students. Annals of Social Sciences and Perspective, 3(1), 199-217.

Alea, L. A., Fabrea, M. F., Roldan, R. D. A., & Farooqi, A. Z. (2020). Teachers' Covid-19 awareness, distance learning education experiences, and perceptions towards institutional readiness and challenges. International Journal of Learning, Teaching and Educational Research, 19(6), 127-144.

Alenezi, A. (2023). The impact of madrasati platform materials on teaching and learning behaviors. International Journal of Education and Information Technologies, 17, 81-99.

Alia-Klein, N., Gan, G., Gilam, G., Bezek, J., Bruno, A., Denson, T. F., ... & Verona, E. (2020). The feeling of anger: From brain networks to linguistic expressions. Neuroscience & Biobehavioral Reviews, 108, 480-497.

Alkomah, F., & Ma, X. (2022). A literature review of textual hate speech detection methods and datasets. Information, 13(6), 273.

Andreassen, C. S., Griffiths, M. D., Hetland, J., & Pallesen, S. (2012). Development of a work addiction scale. Scandinavian journal of psychology, 53(3), 265-272.

Atis, R. A. (2022). Attachment Theory and Computer Screen Use: Addiction of the Digital Age Family (Doctoral dissertation, Pacifica Graduate Institute).

Bandura, A. (2021). Analysis of modeling processes. In Psychological modeling (pp. 1-62). Routledge.

Bozzola, E., Spina, G., Agostiniani, R., Barni, S., Russo, R., Scarpato, E., & Staiano, A. (2022). The use of social media in children and adolescents: Scoping review on the potential risks. International journal of environmental research and public health, 19(16), 9960.

Brennan, G. M., & Baskin-Sommers, A. R. (2021). Cognitive mechanisms influencing facial emotion processing in psychopathy and externalizing. Personality Disorders: Theory, Research, and Treatment, 12(6), 581.

British Journal of Psychotherapy, 36(2), 303-320.

Bushman, B. J., & Anderson, C. A. (2020). General aggression model. The international encyclopedia of media psychology, 1, 1-9

Buss, AH and Perry, MP. (1992). The Aggression Questionnaire. 63 J Pers Soc Psychol 452 – 459

Cataldo, I., Billieux, J., Esposito, G., & Corazza, O. (2022). Assessing problematic use of social media: where do we stand and what can be improved? Current Opinion in Behavioral Sciences, 45, 101145.

Cheng, W., Nguyen, D. N., & Nguyen, P. N. T. (2023). The association between passive social network usage and depression/negative emotions, with envy as a mediator. Scientific Reports, 13(1), 10097.

de-Juan-Ripoll, C., Chicchi Giglioli, I. A., Llanes-Jurado, J., Marín-Morales, J., & Alcañiz, M. (2021). Why do we take risks? Perception of the situation and risk proneness predict domain-specific risk taking. Frontiers in psychology, 12, 562381.

Dibb, B., & Foster, M. (2021). Loneliness and Facebook use: the role of social comparison and rumination. Heliyon, 7(1).

Dule, A., Abdu, Z., Hajure, M., Mohammedhussein, M., Girma, M., Gezimu, W., & Duguma, A. (2023). Facebook addiction and affected academic performance among Ethiopian university students: A cross-sectional study. PLoS One, 18(2), e0280306.

Dvoryanchikov, N. V., Bovina, I. B., Delibalt, V. V., & Dozortseva, E. G. (2020). Deviant online behavior in adolescent and youth circles: In search of a risk assessment model. International Journal of Cognitive Research in Science, Engineering and Education, 8(2), 105-119.

Estelami, H., & Florendo, J. (2021). The Role of Financial Literacy, Need for Cognition, and Political Orientation on Consumers' Use of Social Media in Financial Decision Making. Journal of Personal Finance, 20(2).

Giumetti, G. W., & Kowalski, R. M. (2022). Cyberbullying via social media and well-being. Current Opinion in Psychology, 45, 101314

Graf, D., Yanagida, T., Runions, K., & Spiel, C. (2022). Why did you do that? Differential types of aggression in offline and in cyberbullying. Computers in Human Behavior, 128, 107107.

Hameed, I., & Irfan, B. Z. (2021). Social media self-control failure leading to antisocial, aggressive behavior. Human behavior and emerging technologies, 3(2), 296-303.

Iannuzzo, F., Lombardo, C., Silvestri, M. C., Turiaco, F., Genovese, G., Rombolà, C., & Bruno, A. (2024). The shield of the screen: The role of anger on the development of social media addiction and internet gaming disorder. AIMS Public Health, 11(4), 1002.

Ismagilova, E., Hughes, L., Rana, N. P., & Dwivedi, Y. K. (2020). Security, privacy, and risks within smart cities: Literature review and development of an innovative city interaction framework. Information Systems Frontiers, 1-22.

Kaluzeviciute, G. (2020). Social media and its impact on therapeutic relationships.

Karaoglan Yilmaz, F. G., Avci, U., & Yilmaz, R. (2022). The role of loneliness and aggression on smartphone addiction among university students. Current Psychology, 1-9.

Kaur, S., Kaur, K., & Verma, R. (2022). Impact of social media on the mental health of adolescents. Journal of Pharmaceutical Negative Results, 779-783.

Kazaz, N., Dilci, T., & Karadaş, T. (2022). Effects of digital media on education (Meta-Thematic Analysis). International Journal of Emerging Technologies in Learning, 17(16).

Kilvington, D. (2021). The virtual stages of hate: Using Goffman's work to conceptualise the motivations for online hate. Media, Culture & Society, 43(2), 256- 272.

Li, S., Chen, X., Liu, L., & Sun, C. (2024). The relationship between social withdrawal and problematic social media use in Chinese college students: a chain mediation of alexithymia and negative body image. BMC psychology, 12(1), 246.

Lin, Y. H., & Chu, M. G. (2021). Online communication, self-disclosure, and intimacy development on Facebook: the perspective of uses and gratifications theory. Online Information Review, 45(6), 1167-1187.

Lozano-Blasco, R., Cortés-Pascual, A., & Latorre-Martínez, M. P. (2020). Being a cybervictim and a cyberbully–The duality of cyberbullying: A meta-analysis. Computers in human behavior, 111, 106444.

Mantara, A. Y., Sa'id, M., Zahra, G. A., Rizkina, A. T., Febriyanti, L., & Prastika, S. B. (2023). Adaptation of the Online Disinhibition Effect Scale. KnE Social Sciences, 317-323.

Matang, M., Maftuh, B., Malihah, E., & Hudi, I. (2022, January). A student indicator of social media addiction that leads to conflict. In Annual Civic Education Conference (ACEC 2021) (pp. 230-236). Atlantis Press.

Modha, S., Majumder, P., Mandl, T., & Mandalia, C. (2020). Detecting and visualizing hate speech in social media: A cyber watchdog

for surveillance. Expert Systems with Applications, 161, 113725.

Nickerson, Charlotte (2022). "Positivism in sociology: definition, theory & examples." Simply Psychology.

Nikbin, D., Iranmanesh, M., & Foroughi, B. (2021). Personality traits, psychological well-being, Facebook addiction, health, and performance: testing their relationships. Behaviour & Information Technology, 40(7), 706-722.

Ortiz-Ospina, E., & Roser, M. (2023). The rise of social media. Our world in data.

Ramadhani, A. Z., & Merida, S. C. (2024). Self-Control and the Phenomenon of Toxic Online Disinhibition in Teenagers Who Have Twitter. Nusantara Journal of Behavioral and Social Science, 3(2), 45-52.

Scavarelli, A., Arya, A., & Teather, R. J. (2021). Virtual reality and augmented reality in social learning spaces: a literature review. Virtual Reality, 25, 257-277.

Schønning, V., Hjetland, G. J., Aarø, L. E., & Skogen, J. C. (2020). Social media use and mental health and well-being among adolescents–a scoping review. Frontiers in psychology, 11, 1949.

Setiabudi, R., La ManI, D. W., & Situmorang, W. (2023). Anonymous and Online Hate Speech when the Government raised subsidized fuel prices: An Analysis of an Instagram Account of an Indonesian-owned company. Journal of Theoretical and Applied Information Technology, 101(24).

Sharif, O., & Hoque, M. M. (2022). Tackling cyber-aggression: Identification and fine-grained categorization of aggressive texts on social media using a weighted ensemble of transformers. Neurocomputing, 490, 462-481.

Singh, S., & Paliwal, M. (2020). Exploring the problem of internet addiction: A review and analysis of existing literature. Journal of Well-being Management and Applied Psychology, 3(1), 11-20.

Stănculescu, E., & Griffiths, M. D. (2022). Social media addiction profiles and their antecedents using latent profile analysis: The contribution of social anxiety, gender, and age. Telematics and Informatics, 74, 101879.

Swart, J. (2021). Experiencing algorithms: How young people understand, feel about, and engage with algorithmic news selection on social media. Social media+ society, 7(2), 20563051211008828.

Swathi, P. K., & Sujatha, K. S. (2022). Comparative Case Study Analysis of Social Media Platforms: Instagram, Facebook, and Snapchat. International Journal of Research and Analytical Reviews, 9(1), 360-369.

Taylor, K. (2023). The social diagnoses of digital addictions: Technophobic ambivalences, the limits of the natural and imperatives of self-governance in the information age. Sociology of Health & Illness.

Towner, E., Grint, J., Levy, T., Blakemore, S. J., & Tomova, L. (2022). Revealing the self in a digital world: a systematic review of adolescent online and offline self-disclosure. Current Opinion in Psychology, 45, 101309.

Udris, R. (2014). Cyberbullying among high school students in Japan: Development and validation of the Online Disinhibition Scale. Computers in Human Behavior, 41, 253-261.

Vannucci, A., Simpson, E. G., Gagnon, S., & Ohannessian, C. M. (2020). Social media use and risky behaviors in adolescents: A meta-analysis. Journal of Adolescence, 79, 258-274.

Verkuyten, M., & Kollar, R. (2021). Tolerance and intolerance: Cultural meanings and discursive usage. Culture & Psychology, 27(1), 172-186.

Vidal, C., Lhaksampa, T., Miller, L., & Platt, R. (2020). Social media use and depression in adolescents: a scoping review. International Review of Psychiatry, 32(3), 235-253.

Wadsley, M., & Ihssen, N. (2023). Restricting social networking site use for one week produces varied effects on mood but does not increase explicit or implicit desires to use SNSs: Findings from an ecological momentary assessment study. PLoS one, 18(11), e0293467.

Walther, J. B., & Rice, R. E. (2025). Social processes of online hate (p. 336). Taylor & Francis.

Wen, R., & Miura, A. (2023). Online Disinhibition: Reconsideration of the Personality and Individual Differences, 140(1), 41-45.

Wen, R., & Miura, A. (2025). Online disinhibition is not a master key: an examination of online disinhibition mechanisms. Internet Research, 35(7), 52-70.

West, M., Rice, S., & Vella-Brodrick, D. (2023). Adolescent social media use: cultivating and constraining competence—International Journal of Qualitative Studies on Health and Well-being, 18(1), 2277623.

Winstone, L., Mars, B., Haworth, C. M., & Kidger, J. (2021). Social media use and social connectedness among adolescents in the

United Kingdom: A qualitative exploration of displacement and stimulation. BMC Public Health, 21, 1-15.

Wu, B., Xiao, Y., Zhou, L., Li, F., & Liu, M. (2023). Why are individuals with psychopathy and moral disengagement more likely to engage in online trolling? The online disinhibition effect. Journal of Psychopathology and Behavioral Assessment, 45(2), 322-332.

Xing, X., Liu, Y., Shi, R., & Liu, L. (2023). Longitudinal associations from maternal and paternal internalizing symptoms to preschoolers' problem behavior and social competence in China: The mediating role of executive function. Child Psychiatry & Human Development, 1-10.

Yusuf, A., Rachmawati, P. D., & Rachmawati, D. (2022). The correlation of Internet addiction with adolescents' social interaction. International Journal of Adolescent Medicine and Health, 34(5), 351-355.

Zhuang, Jie, et al.(2023). "A serial mediation model of social media addiction and college students' academic engagement: the role of sleep quality and fatigue." BMC Psychiatry 23.1: 1-10.

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