Digital Dynamics: Investigating the Correlation between Social Media Addiction and Students' Relational Aggression

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Submitted: 2024-03-03
Revised: 2024-03-27
Accepted: 2024-05-02
Keywords: covert interpersonal conflict; relational aggression; social media addiction; social manipulation

ABSTRACT: Background of the study: In the ever-evolving digital era, this study emerges to uncover potential concealed connections between social media addiction and relational aggression behaviour among university students. Aims and scope of paper: This study aims to investigate the relationship between social media addiction and relational aggression among students at Universitas Negeri Padang. Methods: The research design used in this study is correlational research. The research sample consists of 526 respondents from various faculties, aged between 19 and 30 years. Data collection was conducted through two questionnaires measuring social media addiction and relational aggression behaviour. Result: The correlation analysis of the hypothesis test, utilizing the Pearson product-moment correlation test, has provided compelling evidence. The Pearson correlation coefficient, which stands at .682, signifies a substantial and positive relationship between the variables under scrutiny: social media addiction and relational aggressive behaviour among students at Universitas Negeri Padang. Conclusion: There is a significant relationship between social media addiction and the prevalence of relational aggressive behaviour among Universitas Negeri Padang students.

INTRODUCTION

In Indonesia, aggressive conduct has manifested as an escalating violence concern since 1998, resulting in a reported 11,160 fatalities (Dewi et al., 2015). Buss & Perry (1992) categorized aggression into four distinct forms: a) physical aggression, b) verbal aggression, c) anger-driven aggression, and d) hostile aggression. These four forms of aggression can be manifested either directly or indirectly. Indirect aggression is a form of aggressive behaviour that often remains concealed or proves challenging to identify (Björkqvist, 1994). Examples of indirect aggression encompass actions like purposefully ignoring someone during conversation, creating obstacles for a colleague in their tasks, and deliberately responding slowly to messages (Kaukiainen et al., 2001).
Relational aggression closely parallels indirect aggression, as both are interrelated constructs that emerge within developmental literature, particularly concerning manipulative behaviours (Coyne et al., 2019; Murray-Close et al., 2014; Ostrov et al., 2019). Indirect aggression is defined in terms of concealed actions meant to harm others (Björkqvist, 1994). On the other hand, relational aggression represents the culmination, involving the manipulation or disruption of relationships and friendships. It can take overt or covert forms, though typically leaning towards being covert (Archer, 2004).

Several risk factors associated with relational aggression include deception (Wu et al., 2015; Zimmer-Gembeck & Pronk, 2012), and acts of relational aggression have been linked to symptoms of depression and anxiety (Card et al., 2008). Relational aggression not only affects academic performance and school engagement but is empirically connected to students' mental health (Dailey et al., 2015). This behaviour increases the likelihood of psychological maladjustment, including elevated risks of anxiety, loneliness, depression, and negative self-image (Dailey et al., 2015).

Furthermore, when aggressive behaviour in childhood/adolescence remains unaddressed, it can have repercussions in adulthood, where such behaviour tends to persist and manifest in different contexts (Sharma, 2018). Adult aggressive behaviour is often observed in the workplace (Sharma, 2018) and within families (Hackett & Willoughby, 2007). Similarly, the prevalence of employees exposed to workplace aggression ranges from 5 to 55% across various European countries (Eschleman et al., 2014). A study by Sellers et al. (2012) indicated that 25% of nurses in New York were frequently victims of workplace bullying. In line with Tian et al. (2018), 65% of employees utilize their communication time for engaging in gossip.

In a broader perspective, there is an understanding that social media addiction and relational aggression may have a mutually influencing interaction (Um et al., 2019). Social media provides a platform for individuals to communicate with a global reach without time limits, but also opens the door for behaviours that might not appear in direct interactions. The purpose of this study is to analyse the relationship between social media addiction and relational aggression.

Social Media Addiction

In recent years, there has been a substantial surge in the utilization of social media platforms (Alizamar et al., 2019). Activities that were traditionally conducted through direct interactions or face-to-face encounters have gradually transitioned to the realm of social media (Afdal et al., 2019). The global count of users on online social networking sites (SNS) reached approximately 2.46 billion in 2017, and projections anticipate a further increase to around 3.09 billion worldwide social media users by the culmination of 2021 (Dixon, 2023). This growth is exemplified by monthly statistics for prominent platforms; Facebook (FB) boasts 2.45 billion active users, while Instagram (IG) maintains 1 billion active users (Dixon, 2023). The allure of social media can be attributed to its unique offerings that are often not replicated elsewhere (Engineering, 2019). Despite its myriad advantages, social media operates as a double-edged sword, delivering considerable benefits to its users while concurrently carrying the potential for adverse effects if consumed excessively (Müller et al., 2016; Sandjaja & Syahputra, 2019), particularly with respect to mental and social well-being (Syahputra et al., 2020).

Relational Aggression

Relational aggression is a behaviour aimed at damaging friendships, diminishing others' social status, or inducing feelings of isolation (Keenan et al., 2008). In this context, relational aggression is a form of aggressive behaviour intended to destroy and manipulate social relationships or harm someone's reputation (Dailey et al., 2015). According to Low et al. (2019), relational aggression is a type of non-physical aggression with the goal of causing harm to relationships, including endangering
social status or reputation. Common forms of relational aggression include giving the silent treatment to peers, excluding them from social groups or play, spreading false rumours about peers to trigger rejection, and imposing friendship conditions (Crick et al., 2016). Relational aggression encompasses actions such as spreading rumours, criticizing behind someone's back, social isolation (ignoring peers), threats to terminate friendship based on specific demands, and efforts to diminish a peer's social status (Archer & Coyne, 2005).

**Purpose of the Study**

Thus, understanding the link between social media addiction and relational aggression has a significant impact in shaping a new paradigm on how humans interact in an increasingly connected digital world. For this reason, the purpose of this study is to analyse the relationship between social media addiction and relational aggression.

**METHODS**

**Design**

A correlational research design was used to conduct this research, a correlational research design is a type of research design used to determine whether there is a relationship or correlation between two or more variables (Chang et al., 2019).

**Participants**

The research sample consisted of 747 respondents consisting of 177 men (M = 82.95, SD = 4.94) and 570 women (M = 83.52, SD = 5.0) at Padang State University, respondents consisted of several cultures, 209 ethnic Javanese, 462 ethnic Batak, 28 ethnic Malayu, and 48 ethnic Minang.

**Ethics Approval**

All procedures performed in this study involving human participants were in accordance with the ethical standards of the Universitas Negeri Padang. Participants agreed to participate in the study and publication of results, subject to ethical approval.

**Measures**

Data collection involves the use of two questionnaires. The first questionnaire, derived from Griffiths & Kuss (2017) theory, consists of 34 items measuring social media addiction across six dimensions: 1) salience, 2) mood modification, 3) tolerance, 4) withdrawal symptoms, 5) conflict, and 6) relapse. The second questionnaire, based on Murray-Close et al. (2010) theory with relational aggression aspects, namely: (1) proactive, (2) reactive, and (3) romantic, includes 38 items assessing relational aggression behaviour.

The survey method involves distributing written questions to the research subjects. Each variable within the study is associated with a varying number of questions. The research instruments, in the form of Likert scales, are utilized. These Likert scales consist of four response options: "Strongly Agree (SA)," "Agree (A)," "Disagree (D)," and "Strongly Disagree (SD)." Regarding a specific item within the relational aggression questionnaire, the statement "When I am not invited to do something with a group of people, I will exclude those people from future activities" is exemplified. Similarly, in the context of social media addiction, an item reads "My state of mind becomes unsettled if I haven't checked my notifications." The analysis of the social media addiction instrument an item reliability of 0.831, indicating that the instrument is of high quality for measuring social media addiction, and the items effectively capture the construct. Similarly, the analysis of the relational aggression behaviour instrument resulted in an item reliability of 0.819, signifying good quality of items for measuring relational aggression.
Data Analysis

The collected data underwent comprehensive analysis utilizing the Statistical Package for the Social Sciences (SPSS) software version 20.0, developed by (IBM Corporation, 2011). The analytical approach employed the Pearson product-moment correlation technique, a robust statistical method designed to explore and quantify the relationships between different variables. This method allows for a nuanced examination of the interconnections and associations within the dataset, providing a rigorous foundation for understanding the dynamics between social media addiction and relational aggression behaviour among the sampled university students at Universitas Negeri Padang.

Data cleaning
Prior to analysis, suspicious responses that indicated carelessness (e.g., responding ‘Strongly Agree’ to all items despite reverse wording) were eliminated, including respondents who did not answer completely were also

Categorization
Investigate descriptive tests of social media addiction and relational aggression.
- Categorization analysis starts from very low to very high
- Interval with class length 20

Correlation
Investigate whether there is a correlation
- Pearson’s r correlation coefficient
- **. Correlation is significant at the 0.01 level (2-tailed).

Based on gender
Investigate social media addiction and relational aggression by gender
- Describe social media addiction separately by gender
- Delineation of relational aggression separately by gender

Based on Ethnicity
Investigate social media addiction and relational aggression by ethnicity
- Describe social media addiction separately by ethnicity
- Delineation of relational aggression separately by ethnicity

Figure 1. Data Analyses Flow

RESULTS AND DISCUSSION

Results

The results of the analysis of the relationship between social media addiction and relational aggression will be tested using the Pearson product moment correlation test. Next, testing the

Table 1. Description of Social Media Addiction

<table>
<thead>
<tr>
<th>Intervals</th>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 115</td>
<td>Very High</td>
<td>40</td>
<td>5.3</td>
</tr>
<tr>
<td>95-114</td>
<td>High</td>
<td>171</td>
<td>22.9</td>
</tr>
<tr>
<td>75-94</td>
<td>Moderate</td>
<td>386</td>
<td>51.7</td>
</tr>
<tr>
<td>55-74</td>
<td>Low</td>
<td>150</td>
<td>20.1</td>
</tr>
<tr>
<td>≤ 54</td>
<td>Very Low</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>747</td>
<td>100</td>
</tr>
</tbody>
</table>
relationship between social media addiction and relational aggressive behaviour in students uses statistical prerequisite tests and hypothesis testing, namely the Pearson product moment correlation which is presented in table 1 and so on. Based on the results of distributing questionnaires regarding the variables of social media addiction and relational aggressive behaviour to 747 students, a general overview of the results was obtained in the following table 1.

Table 2. Description of Relational Aggression

<table>
<thead>
<tr>
<th>Intervals</th>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 132</td>
<td>Very High</td>
<td>85</td>
<td>11.4</td>
</tr>
<tr>
<td>109-131</td>
<td>High</td>
<td>138</td>
<td>18.5</td>
</tr>
<tr>
<td>86-108</td>
<td>Moderate</td>
<td>357</td>
<td>47.8</td>
</tr>
<tr>
<td>62-85</td>
<td>Low</td>
<td>167</td>
<td>22.3</td>
</tr>
<tr>
<td>≤ 61</td>
<td>Very Low</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>747</td>
<td>100</td>
</tr>
</tbody>
</table>

According to the findings presented in Table 1, the data indicates that none of the students surveyed reported experiencing a very high level of social media addiction. A small percentage, specifically 22.9% of the students, reported a high level of social media addiction. The majority of students, comprising 51.7% of the sample, reported a moderate level of social media addiction. Additionally, a minimal percentage of students, specifically 20.1% a low level, and a very high level of 5.3% of college students' social media addiction. It is worth noting that no students reported experiencing an extremely low level of social media addiction. This study reveals that the prevalence of social media addiction among students from different faculties at Universitas Negeri Padang is within the moderate range, see table 2.

According to the findings presented in Table 2, it is evident that a proportion of 11.4% of students reported experiencing a significant level of relational aggressive behaviour. Additionally, 18.5% of students indicated a high level of relational aggression, while the majority of students, accounting for 47.8%, reported experiencing a moderate level of relational aggression. A smaller proportion of students, specifically 22.3%, reported a low level of relational aggressive behaviour. This finding indicates that, on average, the level of relationship aggressiveness exhibited by students at Universitas Negeri Padang falls within the moderate range, see table 3.

The data presented in Table 3 demonstrates that the Pearson Correlation test conducted on Social Media Addiction and Relational Aggression produces a Sig. (2-tailed) value of .00. This significant p-value indicates a clear and noteworthy relationship between social media addiction and relational aggression. This connection is further substantiated by the favourable correlation value of .160** observed between the two variables. This correlation value strongly implies a positive association, implying that as the degree of social media addiction escalates, so does the propensity for heightened interpersonal hostility. Consequently, it can be asserted that there exists a compelling link between social media addiction or excessive usage and the escalation of relational aggressiveness within interpersonal relationships.
DISCUSSION

The outcomes of this study illustrate that the concept of social media addiction correlates with relational aggression behaviour among students. The aim of this research is to ascertain the relationship between social media addiction and relational aggression behaviour among students at Universitas Negeri Padang. The results of the hypothesis test, utilizing the Pearson correlation technique, reveal a Sig. (2-tailed) value of .682 for both variables. This implies that the hypothesis in this study holds significance and indicates a relationship between social media addiction and relational aggression behaviour.

This aligns with Istiqomah (2019) perspective, where the research findings demonstrate a significant positive correlation of .975 with a significance value of .00. This suggests that as social media addiction increases, the level of relational aggression behaviour among adolescents also rises. This analysis’s results also align with the hypothesis of this study, affirming a significant positive relationship between social media addiction and relational aggression behaviour among adolescents. With the confirmation of this hypothesis, it can be understood that reducing social media addiction may lead to a reduction in relational aggression behaviour among adolescents.

When examining the dynamics of relational aggressiveness and social media addiction, noticeable disparities between male and female students become evident. Male students exhibited pronounced inclinations towards relational aggression, whilst female students displayed marginally elevated levels of social media addiction. The data reveal a fascinating shift that highlights the intricate connection between gender, interpersonal behaviour, and social media usage among students.

A thorough examination of the results reveals disparities between male and female pupils regarding relationship aggression and social media addiction. Male students have elevated levels of relationship aggression, maybe linked to societal norms and familial environmental experiences. The potential presence of standards that associate violent behavior with masculinity may explain these findings. Furthermore, the influence of the family environment, including parental styles and patterns of interaction, may also impact the development of relational violence in male pupils. Extensive cross-cultural studies and meta-analyses have shown limited support for the presence of gender disparities in relationship aggressiveness. In their cross-sectional study encompassing nine nations, including the US, Lansford et al. (2012) found that there was no variation in relational aggressiveness based on gender. An study of 78 studies found that there were no gender disparities in indirect violence when self-reports were employed as a measure. However, studies that utilized observation, teacher ratings,
and peer assessments indicated a somewhat higher prevalence of indirect aggression among girls compared to males (Archer, 2004). It is important to mention that these external judgments might be affected by the mainstream media, which often portrays a higher amount of female relational violence (Coyne et al., 2010; Rasmussen et al., 2017).

Therefore, the potential for damage from relationally aggressive behaviour is heightened when women prioritize relationships more highly. Nevertheless, this theory has received scant support, as the majority of studies have discovered that care and justice orientations are utilized by both men and women, with potential variations contingent upon personality traits and the practical circumstances surrounding the decision (Haviv & Leman, 2002). In contrast, gender disparities were noted in the assessment of aggression among pupils in the fourth and fifth grades: girls exhibited a higher propensity than boys to perceive relational aggression as immoral and detrimental (Murray-Close et al., 2014). Additionally, evolutionary theory has been proposed by researchers as a possible explanation for relational aggression among women, specifically aggression directed at other women. According to this viewpoint, in their pursuance of a desired mate, females devalue other women who are perceived as rivals through the use of relational aggression (Vaillancourt et al., 2010). Conversely, female students exhibit a marginally higher degree of social media dependency in comparison to male students. Possible determinants of this phenomenon encompass the impact of media and the perpetuation of gender norms. Social media has a significant impact on the formation of female students' self-perception and the reinforcement of gender norms. These data demonstrate a potential correlation between addiction to social media and the endeavors of female students to establish and sustain social connections.

Consistent with a study conducted by the Spanish Ministry of Health, the prevalence of addiction to social networks was found to be 18% lower among those aged 18 to 24 (Fernandez-Aliseda et al., 2020). Nevertheless, the results pertaining to adolescent female college students validated the deductions made in prior research, demonstrating a correlation between mood alteration and addiction (Buran Köse & Doğan, 2019). However, these findings corroborated prior research that concentrated on adolescents and found Spanish women to be more susceptible to addiction than men (Gomez et al., 2017). Previous research has established a correlation between addiction to social networks and variables such as body image, self-esteem, and testosterone levels (Alzougool, 2018). A multitude of studies have established a correlation between addiction to mobile devices and the occurrence of emotional fluctuations and mood disorders (Bergman et al., 2018; Peng et al., 2019).

Within an educational setting, the findings of this investigation underscore the necessity of cultivating pedagogical strategies that prioritize the nuances of interpersonal connections.
particularly for male students. Furthermore, it is important to acknowledge that including media literacy and digital competencies into education can play a crucial role in assisting female students in effectively managing their addiction to social media. Shifting the focus from gender differences, let us explore another dimension that influences students' social dynamics, namely the role of ethnicity in describing variations in relational aggression and social media addiction. By broadening this perspective, the complexity of cultural factors that can shape patterns of online behavior and interactions can be revealed.

This explanation emphasizes study findings that indicate the lack of notable disparities in relational aggression and social media addiction scores among students. These findings suggest that, on the whole, students exhibited similar and consistent levels of relational aggressiveness and social media addiction within the group. According to (Um et al., 2019), a highly significant positive relationship exists between social media addiction and relational aggression. One factor that triggers relational aggression behaviour in adolescents is the exposure to violence through gadgets (Ko et al., 2009). (Yang et al., 2022) suggest that social media addiction constitutes maladaptive behaviour that encompasses both emotional and physical issues. Social media addiction has detrimental effects on daily activities, resulting in negative emotions that elevate the propensity for engaging in relational aggression behaviour.

A highly significant positive correlation exists between tolerance symptoms and relational aggression behaviour in adolescents, as evidenced by the correlation coefficient $\rho = 0.596$, $p < 0.01$. The increased allocation of time and frequency in utilizing social media are closely associated with the severity of social media addiction. Adolescents engrossed in social media usage and spending extended periods engaging with it are prone to exhibiting aggressive behaviours (Yilmaz et al., 2023). Meanwhile, findings from Tartila (2013) study reveal that active users of social media are more likely to engage in verbal aggression on these platforms due to the inherent openness of social media. This characteristic grants individuals the freedom to post opinions, often containing derogatory content, on social media. According to research conducted by Kibona & Mgaya (2015), 48% of respondents regularly spend between 5-7 hours per day on social media without considering the time invested. Chang et al. (2019) report that children in Taiwan spend 11 hours per week using smartphones or devices. According to research (Resti, 2015), 98 present of 50 respondents used social media features such as Instagram, Twitter, Facebook, Youtube, Photo Editor, and online games as a form of entertainment. Respondents are consistently engaged with this application for more than five hours per day. Ten respondents, meanwhile, spent more time playing social media than interacting with others. Individuals' lack of self-control to regulate their daily internet use time leads to excessive internet use (Özdemir et al., 2014).

Similarly, research conducted by Prabowo (2021) indicates that the swift responses obtained on social media platforms can transform expressed opinions into forms of verbal aggression such as insults or mockery (Martins & Weaver, 2019). In agreement with this, Coyne et al. (2019) suggests that based on the research outcomes, social media usage influences the level of relational aggression among adolescents. It is evident that higher social media usage correlates with elevated levels of relational aggression behaviour in adolescents. These research findings have crucial implications for both academic and practical contexts. Understanding the linkage between social media addiction and relational aggression contributes to a deeper comprehension of the psychological dynamics that underlie online interactions among adolescents. In the academic realm, this research accentuates the importance of integrating digital literacy and ethical education into curricula to equip adolescents with the skills to engage responsibly in the digital realm.
Limitation

The limitations of this research need to be acknowledged in order to understand the scope of the findings. First, generalization of findings needs to be done carefully because the research sample is limited to Padang State University students, so it cannot be directly applied to a wider population. Although the number of respondents is quite large, the ethnic and cultural composition of the sample may not cover the full diversity. The absences of substantial disparities also need additional examination to comprehend the intricate dynamics that could impact these findings. A more comprehensive analysis could entail examining contextual factors, such as social and cultural surroundings, and incorporating additional variables that could influence scores related to relationship aggressiveness and social media addiction. Subsequently, it is crucial to consider whether this trend is exclusive to the cohort of students under examination or if it is observable in other student populations or diverse contexts. Hence, conducting additional study could facilitate the generalization of these findings and offer deeper understanding of the intricate connections between relational aggressiveness, social media addiction, and other variables among students.

Implications

The implication of this research is that it requires the implementation of strategies to reduce the negative consequences of social media addiction and its potential to increase relational aggressive behavior. Schools, parents, and educators can collaborate to develop awareness campaigns that highlight the pitfalls of excessive social media use and promote healthier online communication habits. One approach that can be used to overcome relational aggression is to implement the Walk Away, Ignore, Talk It Out, Seek Help program or go, ignore, talk, seek help. This program is a community-based prevention program with the goal of reducing acts of relational aggression by increasing adult intervention and socio-emotional abilities and conflict resolution skills. This program is designed to be implemented over three years and is based on social-ecological theory (Teater, 2021) and social coordination perspective (Selman, 2003). Teachers are encouraged to use WITS lesson plans at least once a month. These lessons are designed to teach children four conflict resolution strategies (walk away, ignore, talk, ask for help) while meeting educational goals. Furthermore, fostering open discussions with adolescents about the impact of their online actions on real-life relationships can empower them to make more conscious choices in their digital interactions.

CONCLUSION

The existence of a significant and meaningful relationship between social media addiction and the prevalence of relational aggressive behaviour among Universitas Negeri Padang students has major implications. It sheds light on the complex interplay between two critical aspects of modern student life: excessive social media use and the quality of their interpersonal relationships. Firstly, these findings underscore the pressing need for additional research in this field. Understanding the mechanisms and underlying causes of how social media addiction can contribute to relational aggression is crucial. Future research can delve deeper into the specific behaviours and patterns of social media usage that may exacerbate aggressive tendencies, allowing for a more nuanced understanding of this relationship. Furthermore, the implications extend to potential interventions. Recognizing the potential negative impact of social media addiction on students' interpersonal behaviour opens doors to preventative measures and support systems. Universities and educational institutions can consider implementing educational programs and workshops that promote healthy digital habits and conflict resolution skills among students. Counseling services tailored to addressing social media addiction and its effects on relationships may also be beneficial. It highlights the need
to equip students with the skills and knowledge to navigate the digital landscape while maintaining positive and respectful interpersonal relationships.

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