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Quantitative Research Article

Digital Gaming Media and Aggression: Exploring the Moderating Effects of Self-Esteem and Moral Identity

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Abstract

Background/Problem: Gaming media exposure has been linked to aggressive behavior, but the roles of self-esteem and moral identity in this relationship are not fully understood. Prior studies largely focus on Western populations, overlooking culturally specific contexts.
Objective/Purpose: This study investigates how moral identity impacts the relationship between gaming media exposure, self-esteem, and aggressive behavior.
Design and Methodology: A quantitative online survey was conducted with 384 participants aged 18-24 years from Klang Valley, Malaysia, an urban region with high internet usage and active gaming communities. Data analysis utilized partial least squares structural equation modeling (PLS-SEM) to examine moderation and path relationships.
Results: Gaming media exposure positively influences aggression (β = .44, p = .00). In contrast, self-esteem (β = –.24, p = .00) and moral identity (β = –.13, p = .00) significantly reduce aggression. However, moral identity did not significantly moderate the relationships between gaming media exposure and aggression (β = –.08, p = 1.39) or self-esteem and aggression (β = –.07, p = 1.19).
Conclusion and Implications: Moral identity plays a critical role in reducing aggression independently but does not buffer the effects of gaming exposure or self-esteem on aggression. Strategies to strengthen moral identity should be prioritized alongside exploring other influences, such as emotional regulation, for managing aggression in culturally specific contexts. These findings contribute to understanding aggression and inform interventions targeting youth in urban gaming communities.

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Gaming activity, whether online or offline, will affect our psychological behavior. Numerous researchers have confirmed how gaming activity influences, especially aggression, as it relates to human behavior (Ferguson, 2015). Scholars have studied this question about violent game effects for many years and have shown that video games have a significant relationship with aggression (Coyne et al., 2023). Recent scholars do not accept video games as the sole reason behind aggressive actions. According to Bushman and Anderson (2023), media violence affects people when they engage with it frequently, and people lose their sensitivity to violence because of lengthy exposure and become more prone to aggressive behavior. Therefore, moral identity is important to this analysis because it clearly shows how individuals perceive themselves as ethical beings. Someone with firm moral values and high self-esteem tends to respond to violent media content differently than other people.

Some recent studies show that people with a strong moral identity and self-esteem are less likely to be influenced by violent games, which means they are less likely to show aggressive behavior afterwards (Tamborini, 2012). However, critical gaps remain in understanding the interplay between moral identity, self-esteem, and aggression. While robust moral identity appears protective, its role is not absolute: even individuals with high moral standards may succumb to aggression under conditions of prolonged exposure or stress (Bushman & Anderson, 2023). Conversely, those with weaker moral identities and lower self-esteem may lack the psychological resources to buffer against violent media influences, yet this dynamic remains underexplored. Prior research has focused predominantly on moral identity or self-esteem in isolation, neglecting their combined effects and the cumulative impact of repeated exposure

Considering the existing literature, a critical question remains: Are individuals with lower moral identity and self-esteem more susceptible to the effects of exposure to violent media? While a strong moral identity is often regarded as a protective factor against aggression, research suggests that it does not provide complete immunity. According to Mrug et al. (2015) posit that even individuals with high moral standards may experience desensitization to violence due to prolonged exposure, leading to potential behavioral changes over time. While early research established a strong association between violent video games and aggression, recent findings suggest that not all individuals react to violent gaming content in the same way, indicating that other psychological factors may influence this relationship. Self-esteem and moral identity have emerged as key variables in understanding aggression, yet their roles, particularly in non-Western gaming communities such as Malaysia, remain largely unexplored.

A significant gap exists in research on gaming media exposure and its varying effects across individuals, as most studies focus on Western populations, overlooking cultural differences in gaming behaviors. Although frequent exposure to violent gaming content has been linked to aggression, contextual factors such as gaming motivations, cultural norms, and social interactions within gaming communities may alter this relationship. Yet, little empirical research has examined this in Malaysia. Similarly, the role of self-esteem in aggression remains inconsistent, as some studies suggest that low self-esteem leads to aggression due to heightened rejection sensitivity. In contrast, others indicate that unstable high self-esteem may also trigger aggressive responses when individuals feel their self-worth is threatened.

Despite the competitive and socially interactive nature of gaming, little research has explored how self-esteem functions in gaming environments, where in-game failures, social comparisons, and hostile interactions frequently occur. Moral identity, defined as the extent to which individuals internalize moral values, is often considered a protective factor against aggression. Yet, existing research primarily examines it in general moral decision-making contexts rather than in digital gaming environments. While some findings suggest that individuals with strong moral identities are less susceptible to the effects of violent gaming content, others argue that moral identity alone may not be sufficient to counteract the influence of prolonged exposure.

Additionally, prior studies have primarily treated moral identity as a direct predictor of aggression rather than as a moderating factor, leaving a gap in understanding whether it can buffer the effects of gaming media exposure and self-esteem on aggression. The moderating role of moral identity remains particularly underexplored, as limited research has examined whether moral identity interacts with self-esteem to influence aggression or whether its protective effects diminish under conditions of repeated exposure and psychological stress. Addressing these research gaps is critical, especially in the context of Malaysia's growing online gaming community, where young adults are increasingly immersed in competitive and sometimes toxic gaming environments. This study examines how moral identity moderates the relationship between gaming media exposure, self-esteem, and aggression.

Literature Review

This section outlines the relevant literature and discusses previous studies. It specifically discusses online gaming communities in Malaysia, gaming media exposure and aggression, self-esteem, moral

identity, and the general aggression model. It also presents the research hypotheses and introduces the proposed conceptual framework.

Online Gaming Communities in Malaysia

Digital gaming communities in Malaysia have grown substantially due to increasing internet penetration (91.7% in 2023), affordable gaming technology, and government support for the thriving e-sports industry (Malaysian Communications and Multimedia Commission [MCMC], 2020). These communities are hubs for social connection, competition, and identity exploration, particularly for youth engaging in popular team-based games like Mobile Legends and PUBG Mobile (Nasir et al., 2024). However, prolonged exposure to competitive or violent games is associated with heightened aggression, as explained by the general aggression model (GAM), which links gaming to the activation of hostile thoughts and emotions, especially in younger players. While gaming provides a platform to enhance self-esteem through skill development and social validation, studies indicate that players with low self-esteem are more likely to develop problematic gaming behaviors, including addiction and aggression, when facing in-game failures or toxic interactions (van Looy et al., 2020).

When players are exposed to violent online games and face toxic gaming settings during frequent plays, it increases their aggressive behavior (Nasir et al., 2024). Additionally, moral identity plays a critical role in moderating player behavior within these communities, with higher moral identity associated with lower toxicity rates, such as trolling, cyberbullying, and cheating (Kircaburun et al., 2020). Despite this, players commonly ignore the ethical impact of their actions while competing.

General Aggression Model (GAM)

The general aggression model (GAM) was developed by Anderson and Bushman (2002) to explain why aggression occurs when personal attribute meets environmental contexts. The model links personal traits (Self-esteem and moral identity) with environmental influences (Violent media) to show how these inputs affect what people think (Aggressive ideas), feel (Anger), and their physical condition. The ways people react to events depend on their thought processes and decision-making as they move through different internal states, which can lead to aggressive or nonaggressive responses. The GAM posits that exposure to violent media creates instant aggression, but consistent exposure makes people tolerant of violence and strengthens their aggressive thought patterns, which turn aggression into automatic responses. Research studies across 136 studies consistently validate the GAM (Greitemeyer & Mügge, 2014); for instance, meta-analyses have consistently shown that exposure to violent video games is associated with increased aggression, reduced prosocial behavior, and diminished empathy (Prescott et al., 2018). Meanwhile, Mohd Zaharim et al. (2024) found that long-term exposure can diminish empathy and increase baseline levels of aggression. Researchers now recognize that using the GAM requires considering how cultural backgrounds and mindsets affect its results.

Gaming Media Exposure and Aggression

Researchers examine if protection against aggressive behavior exists through media use in light of today's fast-growing video game industry. Researchers find that increased gaming media time leads to more aggression shown in Anderson et al. (2010). Still, Ferguson notes these findings do not fully apply everywhere. Coyne et al. (2023) confirmed through data analysis that small but real changes take place when people play video games especially in aggressive behavior. This suggests that while exposure to violent gaming media may contribute to aggressive tendencies, its influence varies based on individual susceptibility and environmental factors. Additional studies confirm that repeated exposure to violent content increases aggressive cognitive processing and emotional arousal, reinforcing aggression as a habitual response. Anderson et al. (2010) also emphasized that experimental studies consistently demonstrate heightened aggressive reactions in participants after playing violent video games, particularly in controlled laboratory settings. However, the extent to which these findings generalize to real-world gaming environments remains a subject of debate, necessitating further research on cross-cultural differences, psychological resilience, and contextual gaming factors in shaping aggression. Other studies

describe how repeatedly viewing violent media creates aggressive thoughts and elevates emotional stimulation, leading to stronger aggression patterns over time. Anderson et al. (2010) predicted that viewing violent video games would increase aggressive reactions. Thus, the proposed hypothesis is:

H1: Gaming media exposure is positively associated with aggressive behavior.

Self-esteem

Self-esteem plays a crucial role in shaping how individuals respond to media exposure and its potential influence on aggression. Traditionally, high self-esteem has been linked to lower aggression, but recent research suggests that the relationship is more complex. In the United States, Kernis et al. (2008) found that people with high but fragile self-esteem were more likely to react aggressively when they felt their self-worth was under threat. Similarly, a study in Germany by von Collani and Werner (2005) showed that individuals with unstable self-esteem became more aggressive when receiving negative social feedback. In China, Zhang et al. (2021) supported these findings, showing that people with fragile self-esteem were more likely to display aggression when their confidence was challenged.

Meanwhile, research on Malaysian youth suggests that both low and high self-esteem influence aggression, but in different ways. A study by Amad et al. (2022) found that young Malaysians with low self-esteem were more likely to act aggressively after being exposed to violent media, suggesting that insecurity can make individuals more reactive to external influences. On the other hand, Yap et al. (2022) highlighted that self-esteem serves as a protective factor for Malaysian adolescents, helping them regulate their emotions and reducing aggressive tendencies. Despite these insights, little research has explored how self-esteem, aggression, and moral identity interact within Malaysian online gaming communities. Given the rising popularity of gaming in Southeast Asia, understanding these dynamics in a digital context is essential for creating effective interventions and fostering healthier online environments. Thus, the propose hypothesizes:

H2: Self-esteem is negatively associated with aggressive behavior.

Moral Identity

Moral identity exists when you match ethical rules and feel like a moral being. Conceptually, moral identity acts as the primary controller of how violent media affects aggressive actions (Aquino & Reed, 2002). It plays a crucial role in regulating how violent media influences aggression, acting as a protective factor against its negative effects. When individuals have a strong moral identity, they are less likely to be influenced by violent entertainment, as their ethical values help them critically evaluate media content rather than passively absorbing it (Bulmash, 2024). This ability to assess media through moral reasoning allows them to process risky content with better judgment, reducing the likelihood of adopting aggressive behaviors (Tamborini, 2012). In addition, the moral identity system drives us to follow ethical behavior in high-pressure moments. Researchers repeatedly confirm these findings, which prove that moral identity protects people from aggressive behavior.

According to Zhao et al. (2021) discovered both effects decreased aggression they found that an individual's self-esteem helped them handle media exposure better while feeling secure in ethical choices. The moderating role of moral identity is particularly relevant in digital gaming environments, where players frequently engage with violent media. Research by Zhao et al. (2021) found that both moral identity and self-esteem interact to lower aggression, as individuals with a strong moral identity are better equipped to regulate their emotional responses to violent gaming content. Similarly, Krettenauer (2020) demonstrated that moral identity moderates' aggression levels in competitive gaming environments, suggesting that it plays a protective role in shaping ethical decision-making in virtual spaces. Therefore, this research aims to fill this gap by examining how moral identity shapes links between different media types and self-esteem to aggressive reactions. In research on online gaming social circles in Malaysia, it was found that moderate self-esteem and moral identity prevent the mental harm that gaming media exposure creates (Mohd Zaharim et al., 2024). Thus, the proposed hypotheses are:

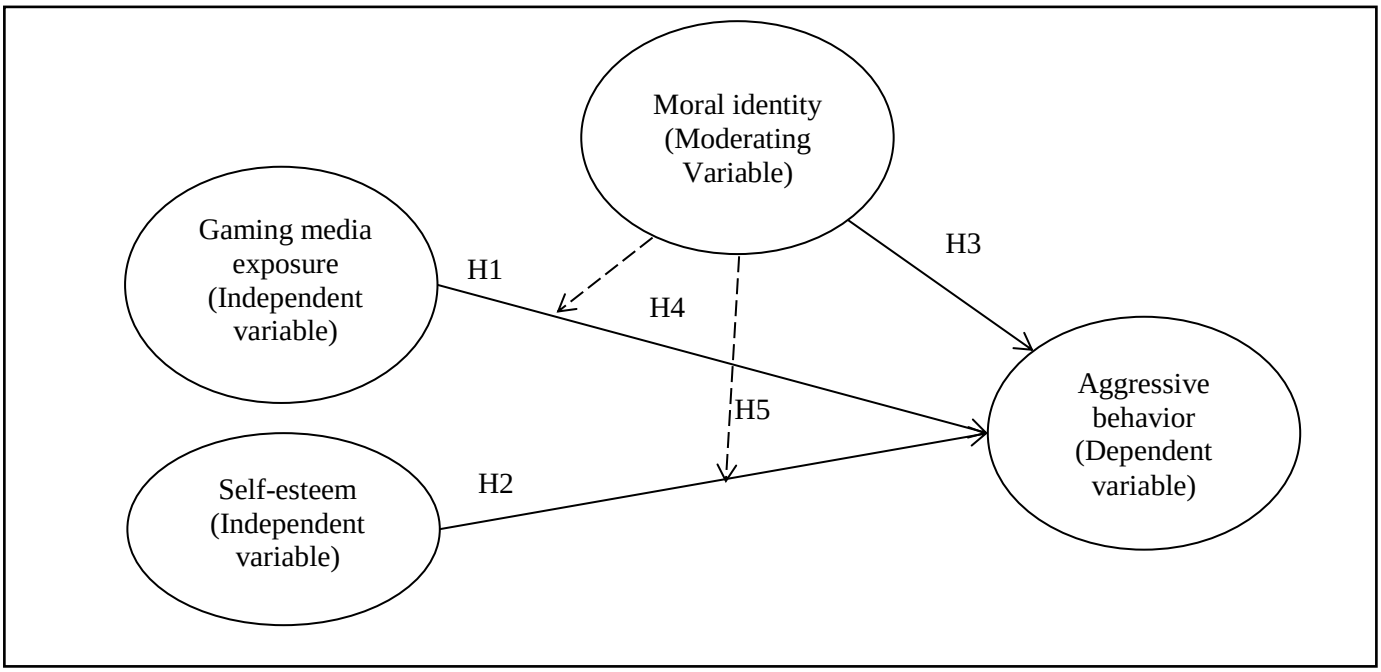
H3: Moral identity is negatively associated with aggressive behavior.

H4: The relationship between gaming media exposure and aggressive behavior is moderated by self-esteem.

H5: The relationship between self-esteem and aggressive behavior is moderated by moral identity.

Figure 1

Conceptual Framework of the Study



Note. H = Hypothesis.

Method

Research Design

This study employed a quantitative method with a cross-sectional survey design to explore the relationship between moral identity, self-esteem, gaming media exposure and aggressive behavior among online gamers. The design was selected to capture data at a single point in time, allowing for examining associations between the variables without manipulation.

Research Setting

The research was conducted in Klang Valley, Malaysia, a region with a diverse population of approximately 13.2 million (Malaysian Communications and Multimedia Commission, 2022). As suggested by Clement (2024), participants were recruited through social media platforms such as Discord and Facebook, widely used by Southeast Asian gamers. The study leveraged these platforms to target a representative sample of active gamers. This approach ensures inclusivity and diversity, reflecting the Malaysian community's broader demographic and gaming behaviors.

Participants/ Sample

Purposive sampling was used to choose the 384 participants in this study based on their self-reported media exposure and online gaming participation. Of these, 700 people were contacted from the first pool using social media sites like Facebook and Discord, which are frequently used by gamers, with a concentration of people between the ages of 18 to 24 years old. The age range was chosen because young adults in this category are among the most active participants in online gaming communities (Crumly et al., 2022). Research indicates that this age group exhibits higher engagement with gaming content, particularly in competitive and multiplayer environments, making them a relevant demographic for studying the effects

of media exposure on aggression and moral identity (Anderson & Dill, 2000). Additionally, young adults undergo significant cognitive and moral development, which may influence how they interpret violent media and regulate aggressive behaviors. Sampling ensured that all demographics were represented, including age, gender, and gaming experience. To provide statistical reliability for a population of more than 100,000 players in the Klang Valley, the sample size of 384 was established using Krejcie and Morgan's (1970) sample size formula. Age, gender, and media exposure patterns were among the demographics gathered to assess heterogeneity and improve the findings' generalizability.

Sampling and Sample ‘Procedures

Purposive sampling was used to recruit participants from the online gaming community. This technique ensured that participants had sufficient exposure to gaming media for the study. Inclusion criteria were: (a) active involvement in online gaming; (b) exposure to gaming-related content in media; and (c) age between 18 and 24 years. Exclusion criteria included individuals not engaged in online gaming or those outside the targeted age range.

Instruments

This study employed well-established measurement instruments to assess the key research variables. To ensure linguistic and conceptual equivalence in the Malaysian context, all scales underwent a forward-backwards translation process, a widely recognized method for adapting psychological instruments across cultures. This approach involved independent bilingual translators who first translated the instruments into Bahasa Malaysia, followed by a back-translation into English to verify accuracy (Beaton et al., 2000). Additionally, a pilot study was conducted to assess reliability and clarity, ensuring that participants fully understood the items in their cultural and linguistic context (Sousa & Rojjanasrirat, 2011). Expert reviews were also incorporated to confirm the conceptual integrity of the translated scales before finalizing the survey instrument.

Moral Identity

Moral identity was assessed using the Moral Identity Scale (Aquino & Reed, 2002), which evaluates the extent to which individuals internalize moral traits as a core part of their self-concept. This instrument comprises two sub-dimensions: internalization, which reflects the degree to which moral values are personally significant, and symbolization, which pertains to the outward expression of moral traits. The scale demonstrated strong internal consistency (Cronbach’s alpha = .85).

Self-Esteem

The Rosenberg self-esteem scale (Rosenberg, 1965) was used to measure participants’ global self-worth. This widely recognized instrument consists of two sub-dimensions: positive self-esteem, which captures self-confidence and self-respect, and negative self-esteem, which reflects self-doubt and insecurity. The scale exhibited high internal reliability (Cronbach’s alpha = .89).

Aggressive Behavior

Aggressive tendencies were measured using the Buss-Perry aggression questionnaire (Buss & Perry, 1992), which assesses four dimensions of aggression: physical aggression, verbal aggression, hostility, and anger. The scale demonstrated excellent internal consistency (Cronbach’s alpha = .92).

Gaming Media Exposure

To evaluate participants’ engagement with gaming-related media, the study utilized the gaming media exposure scale (Den Hamer et al., 2017). This instrument assesses the frequency and intensity of exposure to gaming content across three sub-dimensions: esports viewing, online community engagement, and gameplay exposure. The scale exhibited acceptable internal consistency (Cronbach’s alpha = .78).

Measurement Reliability

As presented in Table 1, all research constructs demonstrated high reliability, with Cronbach's alpha (CA) and composite reliability (CR) values exceeding .7. Additionally, the average variance extracted (AVE) values were above .5, confirming strong convergent validity for structural equation modeling (SEM) analysis.

Table 1
Construct Reliability

Construct	CA	CR	AVE
Aggressive Behavior	.98	.98	.69
Gaming Media Exposure	.96	.97	.77
Moral Identity	.98	.98	.75
Self-Esteem	.98	.98	.81

Note. CA = Cronbach's alpha, CR = combined reality; AVE = average variance extracted.

Procedure

Data collection took place from December 2022 to March 2023. After ethical approval, participants were recruited through online platforms like Facebook, Telegram, and gaming forums, for example, gaming-related online communities, including Discord servers and gaming discussion forums. An online questionnaire, which included an introduction, the objectives of the study, and an informed consent form, was distributed through these channels. The questionnaire was administered in both English and Bahasa Malaysia to accommodate participants from diverse linguistic backgrounds in Malaysia and took approximately 20 minutes to complete. Participants were assured of their anonymity and the confidentiality of their responses.

Results

This section begins with descriptive results and hypotheses testing. To provide a more detailed explanation, it also includes tables of statistical analysis results and a visualization of the model.

Descriptive Results

There were 384 participants in the study's sample, the majority of whom were young adults. Table 2 shows that there were 32.8% female participants and a considerable majority of male participants (67.2%). Many participants (71.4%) were between the ages of 18 and 24, suggesting a young demographic, according to the age distribution. Conversely, just 6.8% of the population was older than 32. Importantly, every participant said they had been exposed to gaming media, indicating that the group's involvement with the media was consistent. These demographic traits are important for understanding the study's context and the findings' generalizability to the larger online gaming community.

Table 2
Results of Hypotheses Testing

Hypotheses (H)	Path Coefficients	Standard deviation	*t*-statistics	*p*-values	Interpretation
GME → AB (H1)	.44	.04	10.32	.00	Supported
SE → AB, H2	–.24	.04	6.45	.00	Supported
MI → AB, H3	–.13	.03	3.76	.00	Supported
MI x GME → AB, H4	–.08	–.09	.06	1.39	Not Moderate
MI x SE → AB, H5	–.07	–.08	.06	1.19	Not Moderate

Note. Significance Level = $p > .05$, Gaming Media Exposure (GME), Self-esteem (SE), Moral Identity (MI), Aggressive behavior (AB).

Hypotheses Testing Results

The study employed partial least squares structural-equation modeling (PLS-SEM) to assess each of the hypotheses. The researcher implemented Hair et al. (2024) recommendations for the best practices for reporting PLS-SEM results. Table 2 presents the hypothesized path coefficients, t-statistics, and *p*-values.

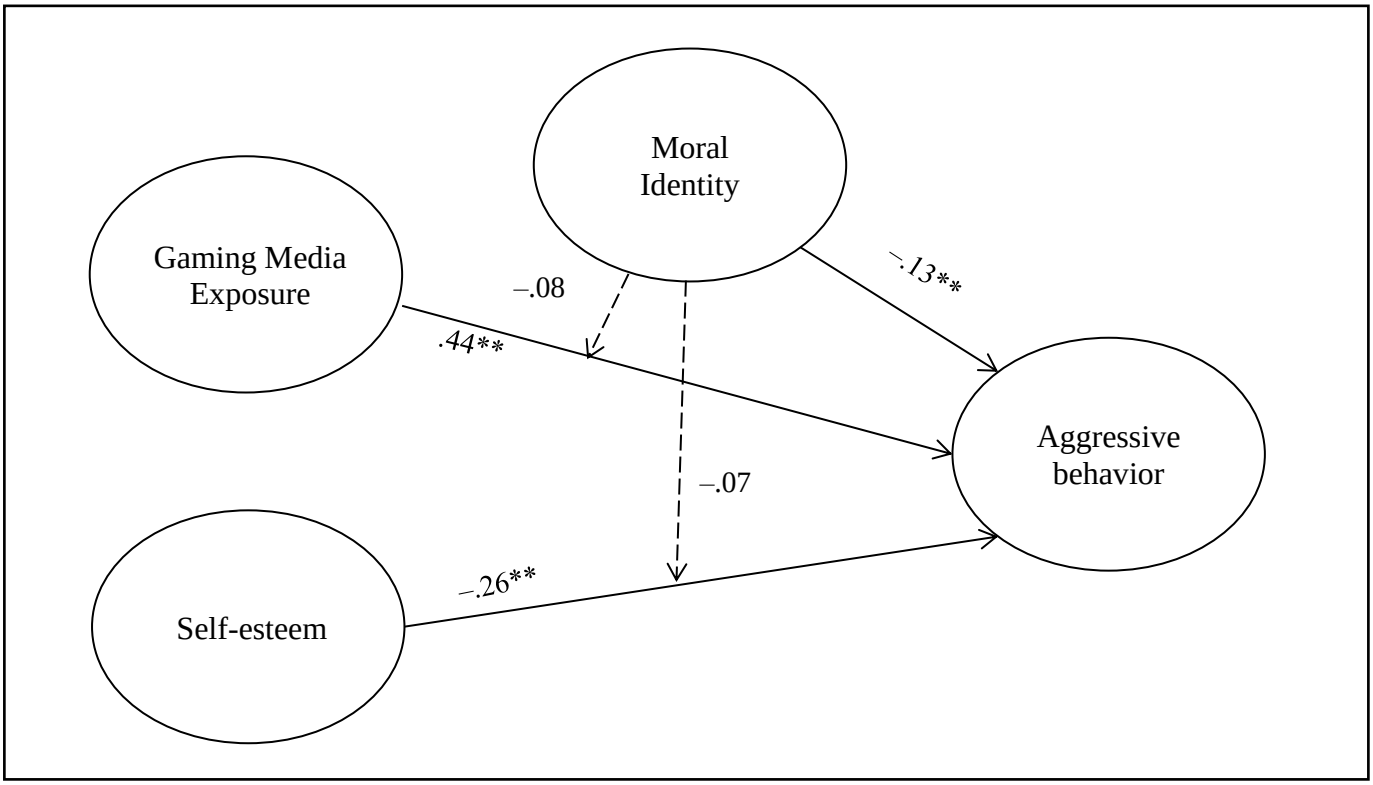
Hypothesis 1 predicted that gaming media exposure (GME) positively correlates with aggressive behavior (AB). The analysis showed a significant positive relationship between gaming media exposure and aggressive conduct (β = .44, $p < .00$). This result demonstrates that the hypothesis 1 has significant statistical validation. Our second hypothesis showed a direct effect between self-esteem and aggressiveness levels. The study reveals a negative correlation between self-esteem and aggressive behavior (β = –.24, $p < .00$). These results provide strong evidence for Hypothesis 2, which states that persons with high self-esteem are less aggressive because they have more control over their emotions and behaviors.

Hypothesis 3 predicted that moral identity (MI) is negatively associated with aggressive behavior. The results reveal a significant negative relationship between moral identity and aggressive behavior (β = –.13, $p < .00$). This result provides strong statistical support for Hypothesis 3, indicating that individuals with a stronger sense of moral identity are less prone to aggression. Hypothesis 4 predicted that moral identity moderates the relationship between gaming media exposure and aggressive behavior. The results indicate that the interaction between gaming media exposure and moral identity is not significant (β = –.08, $p = 1.39$). This indicates that the effect of gaming media exposure on aggressive behavior operates independently of moral identity.

Furthermore, hypothesis 5 predicted that moral identity moderates the relationship between self-esteem and aggressive behavior. The analysis's outcome reveals an insignificant result for the proposed interaction effect (β = –.07, $p = 1.19$). This means that Hypothesis 5 is not supported, indicating that moral identity does not affect how self-esteem shields people from being aggressive. The outcomes confirm that self-esteem and moral identity prevent aggressive behaviors separately.

Figure 2

The SEM Model Analysis



Note. The main entries are standardized coefficients, β (Significance level *$p < .05$, ** $p < .05$).

Discussion and Conclusion

This study examined the relationships between gaming media exposure, self-esteem, moral identity, and aggressive behavior, with a particular focus on the moderating role of moral identity. The findings support previous research on gaming and aggression, providing insights into how self-esteem and moral identity function as protective factors. However, the results also indicate that moral identity does not moderate the effects of gaming media exposure or self-esteem on aggression, suggesting that these psychological constructs operate independently rather than interactively.

The results also have been found to support previous research with the general aggression model (GAM), which confirms a significant positive relationship between gaming media exposure and aggression, supporting the GAM model. GAM suggests that repeated exposure to violent media reinforces aggressive cognitive scripts, leading to increased accessibility of aggressive thoughts and behavioral tendencies (Greitemeyer & Mügge, 2014). In line with previous research, these results indicate that violent video games can desensitize individuals to violence and normalize aggressive responses (Coyne et al., 2023). Although the relationship between violent gaming and aggression has been debated, research suggests that individual differences, gaming motives, and contextual factors may influence these effects (Bushman & Anderson, 2023). For instance, the extent to which players engage with competitive gaming, role-playing elements, or cooperative gameplay may shape how gaming media exposure translates into aggression.

The study found that higher self-esteem is associated with lower aggression, while low self-esteem increases aggressive behavior. This finding aligns with sociometer theory (Leary et al., 1995), which posits that self-esteem serves as an internal barometer of social acceptance and emotional stability. Individuals with high self-esteem are generally more emotionally resilient and less prone to reactive aggression, as they can regulate their emotions effectively. Conversely, individuals with low self-esteem may exhibit higher aggression levels due to heightened sensitivity to rejection and perceived threats. Prior research has also shown that unstable or narcissistic self-esteem may lead to increased aggression, particularly when individuals perceive threats to their self-concept. Although this study examined global self-esteem, future research should distinguish between stable vs. unstable self-esteem to determine whether these different forms influence aggression differently, particularly in digital gaming environments where status and competition are significant.

Moral identity was found to have a significant negative relationship with aggression, consistent with previous research indicating that a strong moral identity discourages aggressive behavior (Hardy & Carlo, 2015). Moral identity serves as an internalized ethical framework, guiding individuals toward prosocial decision-making and emotional self-regulation (Wang et al., 2023). These findings support existing literature that suggests moral identity helps individuals regulate aggressive impulses by reinforcing their commitment to ethical values (Tamborini, 2012). However, while moral identity had a direct effect on aggression, its role as a moderator in media effects was not significant, as discussed below.

Contrary to expectations, moral identity did not significantly moderate the relationship between gaming media exposure and aggression. This suggests that playing violent video games influences aggression independently of moral identity, contradicting prior studies that suggested moral identity could buffer against media-induced aggression (Wang et al., 2023). Similarly, moral identity did not moderate the relationship between self-esteem and aggression, suggesting that these two psychological constructs operate independently rather than interactively. While moral identity shapes ethical behavior, self-esteem influences emotional stability and self-regulation, meaning that they may affect aggression through distinct psychological pathways (Zhao et al., 2021).

The cultural background in Malaysia has a profound impact on the development of moral identity and the management of aggression, especially within the realm of gaming. Collectivist cultures, shaped by Confucian values, embed moral identity in social norms that promote prosocial behavior and discourage aggression (Li et al., 2020). In contrast, individualistic cultures prioritize competition, often leading to greater tolerance for aggression in gaming. Moral identity further influences how players justify violent

content, with Western contexts linking violent media exposure to lower empathy, while collectivist societies mitigate these effects through stronger moral identity (Li et al., 2020). Parental influence and cultural messaging shape whether gaming aggression translates into real-world behavior (Berger & Andaur, 2022), emphasizing the need for culturally sensitive interventions (Tsai & Tan, 2022). Meanwhile, violent exposure in the digital era is shaped by cultural norms that justify harmful online interactions (Sousa & Rojjanasrirat, 2011), while lower moral sensitivity reduces bystander intervention in bullying. It also extends to environmental responsibility, where individuals disengage from ecological obligations in crisis situations (Sydorova et al., 2024).

These findings highlight the widespread impact of moral, reinforcing the need for ethical awareness across digital and real-world contexts. Building on that, moral identity seriously shapes how we tackle global challenges like climate change. It's surprising how people sometimes justify harmful environmental actions by downplaying the consequences or shifting the blame onto bigger systems, which slows down our collective efforts (Capaldi et al., 2022). This mindset fuels climate change denial, where moral lets individuals ignore overwhelming evidence and feel justified in nothing. By boosting moral identity strategies, we can encourage people to adopt eco-friendly behaviors and take ownership of their impact on the planet (Shen & Zhang, 2024). These patterns show how vital it is to integrate ethical awareness into education and policy-making. Addressing moral head-on could spark more responsible actions across society, making a real difference in both our online interactions and the real world. In contrast, the result explained gaming media exposure to aggressive behaviors isn't affected by moral identity. A person's moral identity has no impact on how playing violent video games influences aggressive behavior. The research indicates that moral identity and self-esteem do not collaboratively explain the tendency of aggressiveness; rather, they are independent predictors of aggression.

Limitations

The current study has limitations, even though it offers insightful information on how media exposure, self-esteem, and moral identity interact to predict aggressiveness. First, any causal inferences are precluded by the design's cross-sectional nature. Second, the purposive sample approach may restrict the findings' applicability to the larger population, even though it is beneficial in guaranteeing the representation of gamers. Third, despite showing respectable dependability, the recently created gaming media exposure scale needs more testing and improvement to provide a thorough evaluation of various gaming experiences and their possible effects.

Recommendations

Future studies should focus on the specific impacts of various media types, content characteristics, and individual media usage preferences on aggressive behavior. Through moral identity and self-esteem, we can better understand how psychological processes and emotions regulate the relationship between exposure to media and aggressive behavior. Our study must investigate how, in this digital age, media effects and other individual characteristics, such as empathy management and visual drive, influence aggressive behavior. Holistic involvement is necessary for the study's objectives to demonstrate whether these are consistent and to understand better how society impacts moral identity and self-esteem, which results in aggressiveness.

Implications for Behavioral Science

Theoretically, while this study did not support moral identity as a moderator, findings show that it is still highly linked to decreased aggressive conduct, increasing its potential protective benefit. The findings support the internalization theory of moral identity laid out by Aquino and Reed (2002), which holds that individuals who firmly believe in moral principles are more likely to uphold them in situations of difficulties. In spite of their exposure to media and developing levels of self-esteem, they may be able to reduce aggressive behavior in young adults by fostering the development of moral identities. According to recent research, moral identity protects people from unethical conduct by enabling them to restrain their desires and make rational choices. These findings reshape how we understand aggression and moral identity

in the digital age. In terms of knowledge building, the study challenges the assumption that moral identity always acts as a buffer against aggression, showing instead that it influences behavior independently rather than moderating media effects.

This pushes researchers to rethink how moral values function in interactive environments where players actively engage with violent content. For future research, the results highlight the need to explore whether moral identity is stable across different contexts or if it shifts depending on social and digital influences. Are moral values temporarily set aside in gaming but reinforced in real life? Do immersive experiences weaken self-regulation over time? These are critical questions that need deeper investigation. In practical applications, this research underscores the need for stronger media literacy programs that go beyond simple warnings about violent content and instead teach players how to engage critically with digital aggression. Additionally, game developers can integrate ethical choice mechanics that encourage players to reflect on their actions, reinforcing moral reasoning rather than moral disengagement.

Declarations

Conflicts of Interest: The authors declare no conflicts of interest.
Ethical Approval Statement*:* The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Universiti Putra Malaysia (protocol code JKEUPM-2022-328 and 10 August 2022) for studies involving humans.

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