

RESEARCH ARTICLE**ONLINE DISINHIBITION AND ANONYMITY IN ADOLESCENT TIKTOK DISCOURSE: IMPLICATIONS FOR CYBERBULLYING AND DIGITAL EDUCATION****Kurnia Juliati¹, Sigit Nugroho^{2*}, Nasha Nuryati Qorifah³**^{1,2}Universitas Islam Riau, Pekanbaru, Riau, Indonesia³International Islamic University Malaysia, Kuala Lumpur, Selangor, Malaysia**Article History**

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ABSTRACT

This study explores the relationship between online disinhibition, perceived anonymity, and cyberbullying behavior among adolescent TikTok users through a psychological and educational discourse lens. As social media becomes increasingly integrated into youth identity formation, understanding how digital environments shape speech patterns and behavioral norms is crucial. The research surveyed 297 adolescents aged 13–20 using validated psychometric scales and analyzed results via multiple linear regression. Findings reveal that both online disinhibition and anonymity significantly predict cyberbullying behavior, with anonymity ($\beta = 0.670$) exerting a stronger influence than disinhibition ($\beta = 0.173$). These results suggest that adolescents are more likely to engage in aggressive digital discourse when they feel untraceable or emotionally disconnected from their targets. TikTok's unique algorithmic environment, pseudonym options, and asynchronous comment features reinforce this behavioral pattern. From an educational discourse perspective, these findings demonstrate that cyberbullying is not merely a behavioral outcome, but also a discursive shift where ethical communication norms erode under perceived invisibility. This study highlights the need for digital literacy programs that go beyond rule-based safety education to address the discursive realities of online interaction, emphasizing moral reasoning, identity accountability, and empathetic speech. Schools and educators should integrate reflective tasks that analyze online comment culture, encourage discourse analysis of aggressive digital speech, and cultivate a sense of online moral agency. Future research should investigate how specific language forms (e.g., sarcasm, mockery, tag-chaining) evolve in anonymous platforms and affect adolescent behavior. This research contributes to both cyberpsychology and education by providing a nuanced understanding of how digital speech patterns fueled by anonymity and disinhibition construct and normalize cyber aggression among youth.

Introduction

Adolescence represents a critical developmental stage marked by significant physical, emotional, and psychosocial transformations, during which individuals experience rapid hormonal changes, heightened emotional sensitivity, and an increasing need for social belonging and identity formation. During this period, individuals strive to form stable self-identities and engage more intensively with peer groups, as peer acceptance becomes a central source of validation and a key context for testing social roles, values, and emotional boundaries. In today's digital society, such engagements increasingly occur through social media platforms, which provide both opportunities and risks for adolescents. These platforms serve as virtual arenas where adolescents not only connect with peers but also construct and perform aspects of their identities, often under the influence of algorithm-driven content and public feedback mechanisms such as likes, shares, and comments. Among various platforms, TikTok has emerged as one of the most popular spaces for adolescent expression and interaction, drawing millions of active users daily.

The platform allows users to create and share short-form videos, participate in viral trends, and receive instant feedback from a global audience—features that are particularly appealing to adolescents seeking validation and visibility. While TikTok enables creativity, self-exploration, and social connectivity, it also

harbors substantial risks, particularly in the form of cyberbullying and online harassment. The open comment sections, algorithm-driven exposure, and the possibility of going viral can inadvertently amplify peer scrutiny and negative social comparison. As adolescents navigate issues of identity and self-worth, they may become both targets and perpetrators of online aggression, often driven by peer pressure, perceived anonymity, or emotional impulsivity. Cyberbullying, defined as intentional, repeated harm inflicted through electronic devices, poses serious threats to the psychological well-being and social development of adolescents. Victims may experience a range of adverse outcomes, including anxiety, depression, low self-esteem, social withdrawal, and in extreme cases, suicidal ideation. Additionally, unlike traditional bullying, cyberbullying can be persistent, borderless, and inescapable—following the victim across time and digital spaces. Given the intensity of peer engagement on TikTok and the often blurred boundaries between online persona and real-life identity, the platform becomes a critical context for examining the mechanisms behind adolescent online behavior and the psychological effects of cyber aggression. To fully understand why such risks emerge on digital platforms, it is essential to explore the psychological mechanisms that govern online behavior.

The widespread and almost ubiquitous use of digital media has blurred the boundaries between online and offline behaviors. In many cases, adolescents and even adults no longer compartmentalize their digital interactions as separate from real life; instead, the internet becomes an extension of their social space, where norms, roles, and emotional reactions increasingly carry over between contexts. A growing body of psychological literature suggests that individuals may exhibit disinhibited behaviors in online settings that diverge significantly from how they behave in face-to-face interactions. This is largely because the digital environment alters social cues—such as tone of voice, facial expression, and immediate feedback—which typically serve as regulators of behavior in direct human interaction. This phenomenon, known as the online disinhibition effect (Suler, 2004) encompasses both benign and toxic disinhibition, where individuals either self-disclose more openly or engage in aggressive and hostile behaviors due to perceived safety and anonymity online. An important factor underlying online disinhibition is anonymity, where individuals feel shielded from social consequences because their real identities are hidden. Research has demonstrated that anonymity contributes to reduced accountability, thereby increasing the likelihood of deviant behaviors such as cyberbullying (Lapidot-Leffler & Barak, 2015). These effects are particularly salient among adolescents, who are at a stage of increased sensitivity to peer influence and still developing emotional regulation skills (Kowalski et al., 2012).

The urgency of studying this issue is underscored by rising global and national concerns regarding the mental health implications of cyberbullying. Reports from the Center for Digital Society (Society, 2021) show that nearly 38% of Indonesian adolescents have admitted to engaging in cyberbullying. This data aligns with international findings indicating that adolescents are both the most frequent users and victims of online aggression (Venkatesan S, 2024; Sticca & Perren, 2013). These numbers point to a troubling trend where digital aggression is no longer an isolated phenomenon, but rather a systemic problem embedded in youth digital culture. Additionally, case studies such as the cyberbullying incident targeting the TikTok account @dilanbekasi in 2021 illustrate how adolescent users can become both victims and perpetrators of digital harassment. The perpetrators used flaming, impersonation, harassment, and exclusion in the comment sections—a behavior pattern that aligns with identity-based aggression often rationalized under fan loyalty or perceived social justice motivations (Alfian et al., 2025). Such incidents reflect not only the normalization of aggression in digital environments but also the psychological distance users feel when acting behind a screen. More importantly, this form of aggression can have long-lasting psychological consequences. Victims of cyberbullying are at increased risk for anxiety, depression, self-harm, and suicidal ideation (Kowalski et al., 2012; Patchin & Hinduja, 2015). Meanwhile, perpetrators may develop desensitization to violence and reduced empathy, reinforcing maladaptive interpersonal patterns (Pabian et al., 2016; Yosep et al., 2024). These outcomes highlight the urgent need for preventive and educational interventions that address not only online behavior but also underlying emotional competencies such as empathy, self-regulation, and moral reasoning (Pabian et al., 2016; Mateus Francisco et al., 2024).

A number of previous studies have independently explored the relationship between online disinhibition and cyberbullying (Utomo et al., 2024) as well as between anonymity and cyberbullying (Amry & Pratama, 2021; Wang, L.; Jiang, S.; Zhou, Z.; Fei, W.; Wang, 2024). However, few have examined the combined effects

of these two psychological constructs, particularly among adolescent TikTok users—a demographic that is simultaneously vulnerable and highly active in digital environments. Given the interactive nature of TikTok, where anonymity can be partial (e.g., through pseudonyms or temporary accounts) and disinhibited behavior is amplified by viral trends, it is important to investigate how these variables co-function to shape aggressive behavior. Moreover, most existing studies have not considered the multiple dimensions of the online disinhibition effect as outlined by Suler (Suler, 2004), such as dissociative anonymity, invisibility, and asynchronicity, which may differentially influence behavioral outcomes online. For example, dissociative anonymity may reduce personal accountability, while asynchronicity—characterized by the lack of immediate feedback—can embolden users to express hostility without fear of instant social repercussion. These nuances are especially relevant in platforms like TikTok, where interaction is largely asynchronous and often lacks direct confrontation.

Therefore, there is a pressing need to explore not only the direct relationships among these constructs but also the nuanced psychological mechanisms through which disinhibition and anonymity jointly facilitate cyberbullying behaviors. Such understanding could inform more precise interventions, including digital literacy campaigns that target specific online affordances contributing to adolescent risk. Therefore, there is a pressing need to explore not only the direct relationships among these constructs but also the nuanced psychological mechanisms through which disinhibition and anonymity jointly facilitate cyberbullying behaviors. Such understanding could inform more precise interventions, including digital literacy campaigns that target specific online affordances contributing to adolescent risk.

While previous studies have explored online disinhibition and anonymity independently, the present study offers a novel contribution by situating these constructs within the socio-educational context of TikTok, a platform increasingly embedded in adolescent identity development and peer interaction in Indonesia. This platform-specific application yields insights with potential educational implications, particularly for digital literacy and youth development programs. This platform-specific application yields insights with potential educational implication

Based on the gaps in the literature, this study aims to investigate the relationship between online disinhibition effect and anonymity with cyberbullying behavior in adolescents who actively use TikTok. Despite the growing popularity of TikTok among adolescents, it has also become a breeding ground for cyberbullying due to its permissive interactional features. While the phenomenon of cyberbullying is well documented, there is limited understanding of the specific psychological mechanisms—such as online disinhibition and perceived anonymity—that drive such behaviors in the TikTok environment. Moreover, little is known about how these factors manifest among Indonesian adolescents and what implications they hold for education and youth development. By integrating these two psychological constructs and situating the research within the context of one of the fastest-growing social media platforms, this study seeks to offer a comprehensive understanding of the psychological mechanisms behind cyberbullying. Ultimately, the findings are expected to inform targeted interventions and digital education programs that promote safer and more responsible online interactions among youth.

Materials and Methods

This study applied a quantitative correlational research approach to investigate the relationship between online disinhibition effect, anonymity, and cyberbullying behavior among adolescent users of TikTok. The correlational design was selected to measure the strength and direction of association between two or more variables based on statistical data (Chadha, 2012). This method was considered appropriate due to the study's objective of examining how psychological constructs such as disinhibition and perceived anonymity contribute to adolescents' tendencies to engage in cyberbullying on social media platforms. The participants were aged between 13 and 20 years, representing both early and late adolescence stages. The sample included a total of 297 respondents. Participants were recruited through a non-probability convenience sampling method, as the survey was distributed online via social media platforms and school-based digital networks. This approach was selected due to the accessibility and voluntary nature of participation, which is common in studies involving youth populations in digital settings.

Data collection was conducted using three self-report questionnaires. The Online Disinhibition Effect Scale was adapted from Suler's (2004) six-dimensional framework and consisted of 24 items measuring dissociative anonymity, invisibility, asynchronicity, solipsistic introjection, dissociative imagination, and minimization of authority. The Anonymity Scale, based on the work of Pfizmann and Hansen (2015), consisted of 22 items assessing three core components of perceived anonymity: unlinkability, unobservability, and pseudonymity. The Cyberbullying Behavior Scale, adapted from Willard's typology and Patchin and Hinduja (2015), comprised 30 items capturing seven forms of online aggression, including flaming, harassment, exclusion, and cyberstalking. All instruments used a 4-point Likert scale ranging from "Strongly Disagree" (1) to "Strongly Agree" (4), with higher scores indicating greater presence of the measured construct. Prior to formal data collection, a pilot test was conducted with 30 adolescents to evaluate the clarity and appropriateness of the questionnaire items. Expert judgment was used to ensure content validity, with item formulation reviewed by academic psychologists. Reliability was confirmed through internal consistency analysis, with Cronbach's alpha coefficients exceeding 0.70 in the pilot, and a final reliability score of $\alpha = 0.961$ on the full sample, indicating excellent reliability.

Data analysis was performed using IBM SPSS Statistics version 26. Multiple linear regression was applied to assess the predictive relationships between the independent variables (online disinhibition effect and anonymity) and the dependent variable (cyberbullying behavior). Before running the regression, assumption tests were conducted to ensure statistical validity: normality was confirmed via histogram and P-P plots; linearity was checked using scatterplots; and multicollinearity was ruled out, as all predictors showed Variance Inflation Factor (VIF) values below 2. The significance level was set at $\alpha = 0.05$. The regression model was statistically significant, $F(2, 294) = 412.21, p < .001$, and accounted for 73.5% of the variance in cyberbullying behavior (Adjusted $R^2 = .735$). Both predictors were significant: online disinhibition effect ($\beta = .173, p = .019$) and anonymity ($\beta = .670, p < .001$). This methodological framework, from participant recruitment to statistical validation, was designed to ensure empirical rigor and replicability. By detailing the psychometric tools and analytic techniques used, this study provides a transparent account of how data quality and validity were maintained, in line with best practices in psychological research.

Results and Discussion

This study involved 297 adolescents aged 13 to 20 years who were active users of the social media application TikTok. The research aimed to examine the relationship between two key psychological variables, online disinhibition effect and anonymity, and cyberbullying behavior. The quantitative approach employed enabled both correlational and predictive analysis to determine the extent to which the two independent variables influence the dependent variable, namely cyberbullying behavior.

Descriptive statistical analysis was first conducted to describe the score distribution of each variable, as presented in Table 1. The results showed that the online disinhibition effect had a minimum score of 20 and a maximum score of 80, with a range of 60. The anonymity variable ranged from 26 to 104, with a range of 78. Meanwhile, the cyberbullying variable ranged from 18 to 72, with a score range of 54. These wide score ranges across all three variables indicate significant variability in adolescents' perceptions and experiences of disinhibited behavior, anonymity, and involvement in cyberbullying.

Variable	N	Minimum	Maximum	Range
Online Disinhibition Effect	297	20	80	60
Anonymity	297	26	104	78
Cyberbullying	297	18	72	54

Table 1. Descriptive Statistics of Research Variables

These findings suggest considerable variation among participants, which may reflect different psychological profiles, social media usage patterns, or contextual influences from the TikTok platform. This variability underscores the importance of exploring individual and situational factors when addressing online

aggression among adolescents. Subsequently, multiple linear regression analysis was conducted to examine the relationship between the two independent variables (online disinhibition effect and anonymity) and the dependent variable (cyberbullying). The resulting regression model is as follows:

Multiple Linear Regression Equation

$$Y = 15.065 + 0.173X_1 + 0.670X_2$$

Where:

Y = Cyberbullying behavior (dependent variable)

X₁ = Online Disinhibition Effect — Disinhibition in online interactions

X₂ = Anonymity — Perceived anonymity in social media environments

The interpretation of the regression model indicates that when the values of online disinhibition effect and anonymity are zero, the predicted value of cyberbullying is 15.065. However, since both independent variables tend to have positive scores in reality, their effect on increasing the cyberbullying score becomes statistically significant.

The regression coefficient for online disinhibition effect is 0.173, meaning that each one-unit increase in the online disinhibition score will increase the cyberbullying score by 0.173 points (see Table 2). The significance value of $p = 0.019$ (< 0.05) indicates that this relationship is statistically significant. This suggests that the higher the level of perceived online disinhibition—reflecting the reduction of social restraints in digital interactions—the greater the tendency of adolescents to engage in cyberbullying behavior.

Variable	Unstandardized Coefficient	Significance Level (p-value)
Constant	15.065	-
Online Disinhibition (X ₁)	0.173	0.019
Anonymity (X ₂)	0.670	0.000

Table 2. Multiple Linear Regression Analysis

Furthermore, the regression coefficient for the anonymity variable is 0.670, with a significance level of $p = 0.000$ (< 0.001). This indicates that anonymity is not only significantly associated with cyberbullying but also has a stronger influence than the online disinhibition effect. To illustrate the thematic interpretation more clearly, the findings were organized into the following categories. Each is supported with a clear summary and contextual interpretation of the data:

1. **Variability in Online Behaviors:** Wide ranges in descriptive statistics reflect heterogeneous psychological patterns and levels of online aggression. This suggests that adolescents' experiences with TikTok are not uniform—some perceive and behave with high levels of disinhibition and cyber-aggression, while others show lower levels. The observed variation (e.g., disinhibition score range of 60) implies that individual psychological profiles or situational triggers—such as peer pressure or exposure to aggressive content—may influence their online behavior differently.
2. **Predictive Power of Psychological Constructs:** Anonymity has a greater predictive impact than disinhibition, reinforcing its role in cyber-aggressive behavior. The regression coefficient for anonymity ($B = 0.670$, $p < 0.001$) was almost four times that of disinhibition ($B = 0.173$, $p < 0.05$), indicating that adolescents who perceive themselves as anonymous are substantially more likely to engage in cyberbullying. This result highlights the pressing need to understand how digital platforms shape users' perceptions of identifiability and accountability.
3. **Mechanism of Influence:** The co-functioning of disinhibition and anonymity shows that adolescents may exhibit deviant online behavior even if they behave prosocially offline. This is consistent with Suler's theory (2004), which explains how reduced self-awareness and lack of real-time social feedback enable individuals to bypass their internalized social norms. The digital context, especially in TikTok's performative culture, encourages users to push boundaries for attention and engagement, sometimes resulting in hostile behavior that contrasts with their offline identity.

In this context, the higher an individual's perception of anonymity in online spaces—feeling unidentifiable or untraceable—the more likely they are to engage in aggressive behavior online. These findings support the online disinhibition effect theory proposed by Suler (2004), which posits that reduced social constraints, anonymity, and the lack of immediate feedback in online communication encourage deviant behavior, including aggression and harassment.

In TikTok's social media environment, anonymity is often facilitated by fake accounts, pseudonyms, or limited personal information, which creates opportunities for users to express aggression without fear of immediate consequences. A justification for the use of simultaneous analysis is warranted here. The primary objective of this study was to examine the combined or joint influence of the two independent variables (online disinhibition effect and anonymity) on the single dependent variable (cyberbullying). By using multiple linear regression, the researcher aimed to determine the contribution of each variable while controlling for the other, rather than analyzing them separately (i.e., partial correlation). This approach is appropriate because adolescent cyberbullying behavior is likely influenced by a complex interaction of interrelated psychological factors. Therefore, a simultaneous analysis offers a more holistic understanding of the dynamics underlying online behavior among youth.

These results are consistent with prior studies such as Lapidot-Lefler & Barak (2015), who identified anonymity as a key factor in reducing accountability and increasing online aggression. Similarly, Utomo et al. (2024) and Wang et al. (2024) found consistent associations between both variables and deviant online behavior. From a statistical perspective, the regression results demonstrate that both predictors account for a portion of the variance in cyberbullying behavior. The beta coefficient for anonymity (0.670) is larger than that for online disinhibition effect (0.173), indicating that anonymity contributes more dominantly in this model. Consequently, intervention strategies aimed at reducing cyberbullying among adolescents should specifically target perceptions of anonymity and emphasize the real-world consequences of online actions. From a practical standpoint, the findings of this study provide a foundation for the development of digital literacy programs that not only promote ethical use of social media but also foster psychological competencies such as empathy, impulse control, and digital responsibility. Schools and educational institutions have a strategic role in raising awareness about the psychological effects of unconscious digital interactions, including disinhibition and anonymity.

In summary, this study deepens the understanding of the psychological mechanisms that underpin cyberbullying in the digital era—especially on highly interactive and viral platforms such as TikTok. By integrating two key psychological constructs into a single analytical model, the study not only strengthens the empirical support for existing theories but also offers new directions for targeted policy and social interventions in the context of youth online behavior.

Discussion

The results of this study indicate that both the online disinhibition effect and anonymity have a significant positive relationship with cyberbullying behavior among adolescents who are active users of TikTok. These findings support the hypothesis that psychological factors such as reduced self-regulation and the perceived absence of social consequences in online interactions can contribute to aggressive behaviors in digital spaces. The regression analysis showed that both variables significantly predict cyberbullying, with anonymity having a stronger influence ($\beta = 0.670$) compared to online disinhibition effect ($\beta = 0.173$).

This means that, holding other factors constant, a one standard deviation increase in perceived anonymity is associated with a 0.670 standard deviation increase in cyberbullying behavior, whereas a similar increase in online disinhibition is only associated with a 0.173 standard deviation increase. In practical terms, anonymity accounts for a larger proportion of variance in cyberbullying than disinhibition, reinforcing its critical role as a psychological catalyst in the digital environment. These statistical results underscore the importance of addressing anonymity as a key mechanism in cyber-aggression prevention programs, potentially more urgently than online disinhibition alone.

The significance of the online disinhibition effect in predicting cyberbullying is in line with (Suler, 2004) conceptual framework, which posits that the absence of face-to-face cues, dissociative anonymity, and invisibility online may lead individuals to express behaviors they would normally inhibit in offline contexts. In

this study, adolescents with higher levels of disinhibition tend to engage more in cyberbullying, reinforcing the view that the digital environment diminishes behavioral boundaries. This aligns with previous research by Hutagaol, (2021); Lestari et al (2024) which also found a positive correlation between online disinhibition and cyberbullying behavior among youth. Moreover, the emotional distance created by the absence of real-time feedback in online settings may reduce adolescents' capacity to recognize the emotional consequences of their actions, contributing further to their disinhibited behavior (Wang et al, 2024). This emotional detachment, coupled with the immediacy and public nature of platforms like TikTok, creates a context in which aggressive behavior can rapidly escalate and be reinforced through peer attention.

The stronger influence of anonymity in this study highlights how the perceived ability to remain unidentifiable significantly encourages deviant behavior. Adolescents may feel that their actions in the digital space are less likely to result in accountability or punishment, thus enabling them to engage in harmful behaviors such as cyberbullying. This finding resonates with the work of Rosemary et al (2024); Zhao et al (2022) who concluded that anonymity facilitates toxic disinhibition, particularly in adolescent online interactions. Furthermore, the role of anonymity as a predictor is also supported by the theoretical assertions of Barlett et al (2016); Lapidot-Lefler & Barak (2015); Szczygłowski (2018) , who emphasized that anonymity online fosters psychological distance and reduced empathy, contributing to more aggressive digital behavior. Interestingly, the dominance of anonymity as a predictor suggests that internal moral standards may be overridden when users perceive themselves as invisible. This mechanism explains why adolescents with relatively prosocial tendencies offline may still engage in harmful conduct online, as suggested by the cybervictimization model which highlights the enabling role of anonymity and reduced social cues in digital settings (Nugroho et al., 2024). In adolescent populations, where cognitive control and moral reasoning are still maturing, the disconnection between identity and action may act as a psychological loophole that bypasses guilt, shame, or social deterrents (Sun et al., 2025). This mechanism explains why adolescents with relatively prosocial tendencies offline may still engage in harmful conduct online (Lapidot-Lefler & Barak, 2012; Zhao & Yu, 2021)

These findings demonstrate how the digital communication environment—particularly in platforms such as TikTok—amplifies specific psychological conditions that can lead to problematic behaviors (Yang et al., 2025 ; Nonstad, 2024; Conte et al., 2024). In integrating the results into existing scientific discourse, the study confirms the mechanisms proposed by prior researchers and strengthens empirical evidence on how online environments shape youth behavior. The novelty of this study lies in examining both online disinhibition and anonymity simultaneously in the context of a specific social media platform, TikTok, which is especially relevant given the platform's increasing usage among adolescents and its algorithmic structure that encourages constant interaction. Additionally, TikTok's performative and viral culture may contribute to a competitive environment where adolescents seek attention, validation, and visibility—sometimes at the expense of others (Roth et al., 2021; Kobilke & Markiewicz, 2024). This competitive dynamic can intensify peer aggression and reinforce hostile behavior, especially when such actions are rewarded with views, likes, or comments (McLaughlin et al., 2024).

In conclusion, this study contributes to the growing body of research in cyberpsychology by empirically confirming that the online disinhibition effect and perceived anonymity are significant psychological constructs that influence adolescent cyberbullying behavior on TikTok. Although previous studies have separately examined these variables, the current findings demonstrate their combined and distinct predictive power, thereby offering a more comprehensive understanding of the psychological underpinnings of online aggression among youth. These insights are essential for designing effective intervention strategies in educational and policy settings that aim to reduce cyberbullying and promote healthier digital environments for adolescents.

Implications and Future Research

The implications of these findings are both theoretical and practical. Theoretically, the study reinforces existing models of online behavior by validating the interaction between anonymity and online disinhibition as predictive factors of cyberbullying (Wang, et al., 2024). Practically, the results suggest the need for targeted digital literacy programs that educate adolescents about responsible online behavior, self-regulation, and the

consequences of anonymity-fueled aggression. Schools and parents must be made aware that adolescents may perceive online spaces as free of real-world norms, and thus require guidance and support to foster empathy and accountability in digital interactions (Muhammed & Samak, 2025). Furthermore, intervention efforts should prioritize the development of emotional regulation and moral reasoning skills in digital contexts, alongside promoting awareness of the long-term impact of cyberbullying. Integrative efforts from educators, platform developers, and mental health professionals are essential to construct a safer online environment tailored to adolescent developmental needs (Hedderich et al., 2024). From an educational standpoint, the findings of this study offer valuable insights into how psychological mechanisms such as online disinhibition and anonymity influence adolescent behavior in digital environments. These results underscore the need to incorporate digital behavior education into school curricula, especially in the form of digital literacy and emotional regulation training. By understanding the psychological underpinnings of online aggression, educators can design interventions that go beyond technical skill-building and instead foster critical awareness, empathy, and responsible digital citizenship. Furthermore, the study highlights the importance of addressing the emotional and social development of adolescents in tandem with technological engagement, thereby contributing to a more holistic approach to youth development in the digital era. Despite its contributions, this study is not without limitations. The use of self-report questionnaires may be subject to social desirability bias. Additionally, the correlational design restricts causal interpretations. The study also focused solely on TikTok users in Indonesia, which may limit the generalizability of the findings to other platforms or cultural contexts. Future studies could adopt a longitudinal or experimental design to explore causal pathways between psychological traits and cyberbullying. Researchers are also encouraged to examine the distinct components of online disinhibition (e.g., invisibility vs. solipsistic introjection) and their interaction with specific features of different social media platforms. Cross-cultural comparisons could further enrich the understanding of how online norms shape adolescent behavior.

Conclusions

This study concludes that both online disinhibition effect and anonymity significantly and positively influence cyberbullying behavior among adolescent TikTok users. Based on the results of multiple linear regression analysis, it was found that anonymity has a stronger effect on cyberbullying compared to online disinhibition effect. These findings empirically support the theoretical assumptions that the perception of being anonymous and the lack of social consequences in online interactions contribute to a greater likelihood of adolescents engaging in cyberbullying. The findings are aligned with the research objectives, which sought to examine the relationship between psychological factors and cyberbullying in a specific digital environment. Educators are encouraged to integrate digital behavior education into formal curricula. This includes teaching students about the psychological mechanisms of online disinhibition and anonymity, and how these can influence their behavior in social media environments. Schools should incorporate empathy training, emotional regulation strategies, and critical thinking about online identity into digital literacy programs. Involving parents through workshops or collaborative school-community programs can also strengthen the home environment in guiding adolescents' responsible digital engagement. Future research should consider examining the specific subdimensions of online disinhibition (e.g., invisibility, asynchronicity, dissociative anonymity) to determine which aspects most strongly contribute to cyberbullying. Longitudinal and experimental designs could provide insights into causal relationships over time. Furthermore, extending the study to other platforms or age groups, and conducting cross-cultural analyses, could enhance the generalizability and depth of understanding regarding psychological predictors of online aggression.

Declaration of Conflicting Interest

The authors declare that there is no conflict of interest with respect to the research, authorship, and/or publication of this article.

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About the Authors

Kurnia Juliati is a student at the Faculty of Psychology, Universitas Islam Riau (UIR), Pekanbaru, Indonesia. Her research interests include human behavior in digital environments. Email: kurniajuliati@student.uir.ac.id

Sigit Nugroho is a psychologist and lecturer at the Faculty of Psychology, Universitas Islam Riau (UIR), Indonesia. His research interests include psychology, philosophy, and religion, with a particular focus on bullying, cyberbullying, and the psychological dynamics of digital behavior. Email : sigit.nugroho@psy.uir.ac.id

Nasha Nuryati Qorifah is an assistant psychologist currently pursuing her studies at the International Islamic University Malaysia (IIUM), Kuala Lumpur, Selangor, Malaysia. Her research interests center on qualitative approaches in psychological research. Email: nasha.nq@live.iium.edu.my