

Digital Platform Use, Gender, and Age Differences in Cyberbullying Experiences Among Adolescents in Ondo State, Nigeria

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Abstract

The rapid expansion of digital communication technologies has increased adolescents' exposure to cyberbullying, thereby raising concerns about its psychological and social consequences. This study examined digital platform use, gender, and age differences in cyberbullying experiences among adolescents in Ondo State, Nigeria. The study adopted a descriptive survey research design. The population comprised adolescents in Ondo State, with a sample of 375 respondents selected through online survey sampling. Data were collected using a structured questionnaire titled "Cyberbullying Questionnaire". The instrument was validated through content validity, while reliability was established using Cronbach Alpha which yielded a coefficient of 0.76 and 0.82 for the two subscales of the instrument. Data were analysed using descriptive and inferential statistics. Findings revealed that cyberbullying was prevalent among adolescents in Ondo State. WhatsApp was the most used digital platform for cyberbullying. There was no significant difference in the cyberbullying experiences of the adolescents by gender ($t(373) = -1.05, p > 0.05$) and by age ($F(4, 370) = 0.554, p > 0.05$). The study concluded that cyberbullying is prevalent among adolescents in Ondo State, and the experiences of both genders and different age groups are the same. It recommended increased gender-inclusive digital literacy programmes, school-based counselling interventions, and stricter policies by digital platform providers to reduce cyberbullying.

Keywords: Digital platforms, gender, age, adolescents, cyberbullying

Introduction

The rapid expansion of digital technologies has seriously transformed the social experiences of adolescents worldwide. Young people increasingly interact with one another through digital platforms. Digital platform use refers to the frequency, purpose, duration and pattern of adolescents' engagement with internet-enabled digital platforms such as social media (Facebook, X (formerly Twitter), Instagram, Snapchat, and TikTok), instant messaging applications (WhatsApp, Telegram, Facebook Messenger, Snapchat, and Kik), online forums and chat rooms, gaming platforms, emails, photo and video-sharing platforms like YouTube, Snapchat, Anonymous Apps and Websites. These platforms have created new opportunities for

communication, learning, and identity formation. However, they have also introduced new risks, particularly the emergence of cyberbullying as a pervasive form of peer aggression among adolescents.

Adolescents are individuals who are in the transitional stage of development between childhood and adulthood. According to the World Health Organisation (2026), adolescence generally covers the age range of 10 to 19 years and is characterised by rapid physical, emotional, cognitive, and social changes. It is a critical developmental period during which young people begin to form their identity, develop independence, establish social relationships, and become more exposed to societal influences, including digital technologies and social media platforms. Adolescents appear to represent a vulnerable group to cyberbullying because they are active users of digital platforms such as WhatsApp, Facebook, Instagram, TikTok, and other online communication channels where cyberbullying frequently occurs. Their frequent online interaction and emotional sensitivity increase their susceptibility to both experiencing and perpetrating cyberbullying, which may subsequently affect their mental health and psychological well-being.

Cyberbullying has been defined in various ways by different researchers. Abaido (2020) defined it as the use of social media to harass and intimidate others. Ray et al. (2024) see cyberbullying as the deliberate use of digital technologies to manipulate, target, and exploit vulnerable individuals through online aggression, harassment, or repeated threats, often involving the sharing of harmful or embarrassing content with the intention of causing psychological and emotional distress, and in some cases resulting in physical harm. In the point of view of Hellfeldt et al. (2019), cyberbullying is a deliberate aggressive behaviour aimed at harming another person through the use of electronic communication or digital devices. Kumar and Goldstein (2020) explained that although it first emerged through electronic mail, cyberbullying has gradually expanded to include a broader range of digital communication channels, such as personal blogs, text messages, and video content shared on streaming platforms like YouTube, as well as, more recently, social media platforms like Instagram, Snapchat, and TikTok. It involves the intentional and repeated use of digital communication platforms to harass, intimidate, embarrass, or inflict harm on another individual. Traditional bullying, which Makinwa (as cited in Makinwa and Akomolafe, 2025) defined as an intentional act of cruelty carried out to oppress, distress or make life difficult for individuals who are less powerful or younger, is carried out physically and reaches a limited number of people at a time. Cyberbullying, by contrast, spreads to a large audience within a very short period.

Empirical evidence indicates that cyberbullying has become a global public health concern, with increasing prevalence among adolescents and significant implications for psychological well-being (Abaido, 2020; Hellfeldt et al., 2019; Kumar and Goldstein, 2020; Mendy et al., 2025; Ray et al., 2024; Schonfeld et al., 2023). This outbreak has been greatly

enhanced by the use of digital platforms through technological devices like smartphones, laptops, and other related devices. Studies have also been conducted in Nigeria to substantiate the prevalence of cyberbullying and its negative consequences on adolescents across the nation (Iqbal and Jami, 2022; Nwosu et al., 2018; Olasanmi et al., 2020) to mention a few.

According to Webster (as cited in Omoteso and Olusegun, 2015), cyberbullying can be classified into seven forms: flaming, masquerading, cyber stalking, exclusion, outing, pseudonym use and harassment. Englander (2019) opined that cyberbullying can occur in form of posting or sending embarrassing or harmful comments and images to a victim, spreading false rumours online, making sexual remarks or gestures, issuing threats through messages, sharing offensive videos or web content about them or impersonating the victim on digital platforms.

The use of digital platform plays a central role in shaping cyberbullying experiences. Platforms such as messaging applications, image-sharing networks, and short-video platforms differ in their structure and affordances, which influence how interactions occur and how harmful behaviours are expressed. For instance, private messaging platforms such as WhatsApp may facilitate covert harassment, while public platforms such as Facebook increase the visibility and potential impact of bullying incidents. Karpagam et al. (2026) observed that widely used digital platforms in cyberbullying include WhatsApp, Facebook, X (formerly Twitter), YouTube, and Instagram. The intensity and nature of platform usage have been shown to significantly predict both exposure to and involvement in cyberbullying.

In addition to digital platform use, individual and contextual factors such as gender and age are critical in understanding cyberbullying. Gender differences in online behaviour have been widely documented, with evidence suggesting that males and females differ in both the forms of cyberbullying they engage in and their responses to victimisation. Additionally, female victims tend to experience outcomes such as social anxiety and sleep disturbances, whereas male victims are more likely to exhibit antisocial behaviours, often influenced by prior negative experiences (Cataldo, 2021). Females are often more vulnerable to relational and emotionally driven forms of cyberbullying, while males are more likely to engage in direct and overt aggression. These differences are shaped by broader socialisation processes and cultural expectations regarding gender roles. Patchin (2025) findings revealed that adolescent boys now report higher rates of cyberbullying victimisation than girls (36.6% compared to 28.6%), marking a shift from earlier years when both groups experienced similar levels. Nonetheless, girls continue to be more frequently targeted by particular types of abuse, such as rumour spreading and image-based harassment.

Age is another variable that could influence cyberbullying experiences. Younger adolescents often possess limited emotional regulation and digital literacy skills. Older adolescents generally spend more time on social networking platforms and maintain larger online peer networks. Mendy et al. (2025) investigated bullying and its effects on mental health among

students of a senior secondary school in Banjul, The Gambia. The mean age of the participants was 17 years, which falls within the 17–19 year age range. Only 9 out of the 167 students recruited for the study did not report experiences and manifestation of bullying which indicated that bullying is more prominent among late adolescents than the young adolescents. Developmental differences in peer relationships, identity formation, and technology use contribute to variations across age groups.

The consequences of cyberbullying extend beyond immediate emotional distress to include serious mental health outcomes. Research consistently links cyberbullying victimisation to depression, anxiety, low self-esteem and, in severe cases, suicidal ideation which Schonfeld et al. (2023) referred to as cyberbullycide. The persistent and often public nature of cyberbullying amplifies its psychological impact, making it a critical issue for adolescent mental health. Given that adolescence is a developmental stage characterised by heightened emotional sensitivity and identity formation, exposure to cyberbullying can have long-lasting effects on well-being and social functioning. Mendy et al. (2025) reported that the most prevalent mental health concerns among the participants in their study were linked to four major areas which included hyperactivity-related issues such as aggression, impulsivity, poor concentration, and easy distraction; peer relationship difficulties; conduct-related problems like stealing, violating others' rights, manipulative behaviour, and substance abuse as well as emotional disorders.

In Nigeria, the rapid adoption of digital technologies among adolescents has not been matched by adequate research, policy development, or intervention strategies addressing cyberbullying. While some studies have explored cyberbullying in urban centres, there is a paucity of context-specific research examining how digital platform use, gender, and age interact to influence cyberbullying experiences. Ondo State has experienced steady growth in digital technology adoption among adolescents. Secondary school students increasingly depend on digital platforms for communication, entertainment, and educational activities. Schools encourage technology supported learning through online assignments, electronic communication, and digital learning resources. These developments increase opportunities for positive educational outcomes. They also expose adolescents to harmful online interactions. Evidence regarding the prevalence, forms, and consequences of cyberbullying within the state remains inadequate. However, limited empirical data exist despite increasing internet penetration and social media usage among young people. Given these gaps, this study examined the interplay between digital platform use, gender, and age differences in shaping cyberbullying experiences and their associated mental health outcomes among adolescents in Ondo State, Nigeria.

Specifically, the study aimed to:

- examine the prevalence of cyberbullying among adolescents in Ondo State.
- investigate the forms of cyberbullying among adolescents in Ondo State.

- identify commonly used digital platforms for cyberbullying among adolescents in Ondo State.
- determine gender differences in cyberbullying experiences among adolescents in Ondo State.
- determine age differences in cyberbullying experiences among adolescents in Ondo State.

Research Questions

The following research questions were raised in the study:

- i. What is the prevalence of cyberbullying among adolescents in Ondo State?
- ii. What forms of cyberbullying are experienced by adolescents in Ondo State?
- iii. Which digital platforms are commonly used for cyberbullying among adolescents in Ondo State?

Research Hypotheses

The following research hypotheses were tested in the study;

- i. There is no significant difference in cyberbullying experiences among adolescents in Ondo State on gender basis.
- ii. There is no significant difference in cyberbullying experiences among adolescents in Ondo State on age basis.

Theoretical Framework

This study used Social Cognitive Theory (SCT) of Bandura (1986). Albert Bandura (1925–2021) was a Canadian-American psychologist and one of the most influential psychologists of the twentieth century. The theory was an expanded framework of social learning theory. The central assumption of SCT is triadic reciprocal determinism, which states that behaviour results from the continuous interaction of personal factors (beliefs, emotions, cognition), behaviour and environmental influences. Secondly, people learn by observing the behaviours of others and the consequences those behaviours receive. Thirdly, people are more likely to imitate behaviours when they believe those behaviours will produce desirable outcomes or social rewards.

The theory is applicable to this study on the principle of reciprocal determinism which explains that cyberbullying experiences among adolescents are influenced simultaneously by personal characteristics (such as age and gender), behavioural patterns (frequency of online interaction and previous cyberbullying involvement), and environmental factors (digital platform characteristics). Adolescents spend considerable time on digital platforms where they are constantly exposed to the behaviours of peers, influencers, and anonymous users. Through observational learning, they imitate aggressive online communication, harassment, insults, or exclusion after witnessing such behaviours being rewarded with likes, comments, followers, or

peer approval. Thus, digital platform use provides an environment where cyberbullying behaviours can easily be learned and reinforced.

The theory further helps to explain the experiences of males and females in cyberbullying. Male adolescents may be more likely to observe and imitate overt aggressive online behaviours if such actions are perceived as socially acceptable within their peer groups, whereas female adolescents may engage more frequently in relational forms of cyberbullying, such as spreading rumours or social exclusion, depending on the behaviours modelled within their social networks. The theory also explains age differences in cyberbullying experiences. Older adolescents generally have greater access to smartphones, broader social networks, increased digital independence, and more exposure to diverse online interactions than younger adolescents. Consequently, they may encounter more opportunities both to observe and to participate in cyberbullying. Conversely, younger adolescents may have more limited exposure due to greater parental monitoring and less autonomy in digital platform use.

Methodology

Descriptive survey research design was used for the study because it allows sample representation of the population which consisted of all the adolescents within the age bracket of 10–19 years old in Ondo State. A sample of 375 adolescents was selected through online survey sampling across institutions of learning in the state. The research instrument was a self-structured questionnaire titled “Cyberbullying Questionnaire” which was in two sections; the Section A was on the demographic data of the respondents like age, gender, level, school type and most used digital platform. Section B comprised 10 items for each of digital platform use and cyberbullying experiences subscales. Items sought information on the respondents’ experiences of cyberbullying, the frequency of those experiences and the types of cyberbullying they had experienced. Digital platform use was measured through adolescents’ self reported frequency, duration, and breadth of engagement with selected digital platforms. Responses were scored on a 4-point scale ranging from 1, Never, to 4, Very Frequently. Higher scores indicated greater levels of digital platform use. The instrument was subjected to content validation by experts in Educational Psychology as well as Test and Measurement. Reliability of the instrument was carried out on 20 adolescents who are not part of the study using Cronbach’s alpha internal consistency which yielded a coefficient of 0.76 and 0.82 for the digital platform use and cyberbullying experiences respectively. This indicated that the items demonstrated good internal consistency and were sufficiently reliable for use in this study.

The instrument was designed with Google form and the adolescents were invited through their WhatsApp group administrators, class teachers and level advisers, after which the Google form link was sent to the different groups. A part of the questionnaire sought parental consent and approval before proceeding to the questionnaire items. Participation was completely

voluntary, participants were assured of anonymity and high level of confidentiality of their responses. The responses were downloaded, coded, and SPSS IBM Version 20 was used to analyse the data. The research questions were answered with frequency counts, percentages, mean and standard deviations while t-test and ANOVA were used to test the hypotheses at 0.05 level of significance.

Results

Research Question 1: What is the prevalence of cyberbullying among adolescents in Ondo State?

Responses of adolescents on their experiences of cyberbullying were collated and analysed using frequency counts and percentages. The result is presented in Table 1.

Table 1

Prevalence of Cyberbullying Among Adolescents in Ondo State

<u>Gender</u>	<u>Yes F(%)</u>	<u>No F(%)</u>	<u>Total F(%)</u>
Male	83 (22.13)	65 (17.33)	148 (39.46)
Female	109 (29.07)	118 (31.47)	227 (60.54)
Total	192 (51.20)	183 (48.80)	375 (100)

Table 1 revealed that 83 (22.13%) males and 109 (29.07%) females, making a total of 192 (51.20%) had experienced cyberbullying among the sample of the study. This indicated that cyberbullying is prevalent among adolescents in Ondo State.

Research Question 2: What forms of cyberbullying are experienced by adolescents in Ondo State?

Responses of adolescents on the forms cyberbullying they had experienced are collated and analysed using frequency counts and percentages. The result is presented in Table 2.

Table 2

Forms of Cyberbullying Experienced by Adolescents in Ondo State

<u>Gender</u>	<u>Threatening or abusive messages f(%)</u>	<u>Exclusion from groups f(%)</u>	<u>Sharing information or images without consent f(%)</u>	<u>Online impersonation f(%)</u>	<u>Other forms f(%)</u>	<u>Total f(%)</u>
Male	28 (7.47)	59 (15.73)	18 (4.8)	30 (8.00)	13 (3.47)	148 (39.47)
Female	40 (10.67)	66 (17.60)	55 (14.67)	34 (9.06)	32 (8.53)	227 (60.53)
Total	68 (18.13)	125 (33.33)	73 (19.47)	64 (17.07)	45 (12.00)	375 (100.00)

Table 2 revealed that 68 (18.13%) of the respondents had experienced threat or abusive messages, 125 (33.33%) experienced exclusion from groups, 73 (19.47%) experienced sharing of their information or images without consent, 64 (17.07%) experienced online impersonation

while 45 (12.00%) experienced other forms of cyberbullying. The most experienced form is exclusion from groups.

Research Question 3: Which digital platforms are commonly used for cyberbullying among adolescents in Ondo State?

Responses on the different digital platforms used for cyberbullying were collated and analysed with frequency counts and percentages. The result is presented in Table 3.

Table 3

Digital Platforms Used by Adolescents in Ondo State

Digital Platform Use	Frequency	Percentage
Facebook	67	18%
X (formerly Twitter)	40	11%
Instagram	58	15%
WhatsApp	167	45%
Others	43	11%
Total	375	100%

Table 3 shows the different digital platforms used by the adolescents, 67 (18%) used Facebook, 40 (11%) used X (formerly Twitter), 58 (15%) used Instagram, 167 (45%) used WhatsApp while 43 (11%) use other digital platforms. Therefore, the most used digital platform for cyberbullying by the adolescents in Ondo State was WhatsApp.

Test of Hypotheses

Hypothesis 1: There is no significant difference in cyberbullying experiences among adolescents in Ondo State on gender basis.

An independent-samples t-test was conducted to examine whether cyberbullying experiences differed significantly by gender. The result is presented in Table 4.

Table 4

Independent-Samples t Test of Cyberbullying Experiences by Gender

Gender	<u>n</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>Df</u>	<u>p</u>
Male ^a	148	9.35	2.11	-1.05	373	.295
Female ^b	227	9.57	1.64			

Note. n^a = 148; n^b = 227; M = mean; SD = standard deviation; t = independent-samples t statistic; df = degrees of freedom. p > 0.05.

Table 4 shows the results of independent-samples t-test of cyberbullying experiences by gender. It revealed that male had M = 9.35 and SD = 2.11 while female had M = 9.57 and SD = 1.64. It indicated that there was no significant difference between male adolescents and female adolescents $t(373) = -1.05$, $p > 0.05$ in their experiences of cyberbullying. Therefore, the hypothesis was not rejected.

Hypothesis 2: There is no significant difference in cyberbullying experiences among adolescents in Ondo State on age basis.

Table 5

Means and Standard Deviations of Age Groups on Cyberbullying Experiences

<u>Age in years</u>	<u>N</u>	<u>Mean</u>	<u>Std. Deviation</u>	<u>Std. Error</u>	<u>95% Confidence Interval for Mean</u>	<u>95% Confidence Interval for Mean</u>	<u>Minimum</u>	<u>Maximum</u>
Age in years	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
10-11	6	8.83	.753	.307	8.04	9.62	8	10
12-13	12	9.00	.000	.000	9.00	9.00	9	9
14-15	12	9.42	1.929	.557	8.19	10.64	6	12
16-17	79	9.38	1.417	.159	9.06	9.70	6	14
18-19	266	9.55	1.996	.122	9.31	9.79	4	15
Total	375	9.48	1.838	.095	9.30	9.67	4	15

Table 5 shows the mean scores and standard deviations of the different age groups in this study. Age group 10–11 years had $M = 8.83$ ($SD = 0.73$), 12–13 years had $M = 9.00$ ($SD = 0.000$), 14–15 years had $M = 9.42$ ($SD = 1.929$), 16–17 years had $M = 9.38$ ($SD = 1.417$), 18–19 years had $M = 9.55$ ($SD = 1.996$).

A one-way analysis of variance (ANOVA) was conducted to examine whether cyberbullying experiences differed significantly across the age groups. The results are presented in Table 6.

Table 6

One-Way Analysis of Variance of Cyberbullying Experiences by Age Group

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>	<u>p</u>
Between Groups	4.52	4	1.13	0.55	.697
Within Groups	755.48	370	2.04		
Total	760.00	374			

Note. SS = sum of squares; df = degrees of freedom; MS = mean square; F = F value. $p > 0.05$

Table 6 indicated that there was no statistically significant difference in cyberbullying experiences across the age groups, $F(4, 370) = 0.554$, $p > 0.05$. Therefore, the null hypothesis was not rejected.

Discussion

The findings of this study indicated that cyberbullying is prevalent among adolescents in Ondo State, with 51.2% of respondents reporting exposure to at least one form. The most

common form was exclusion from groups. These results align with earlier studies (Abaido, 2020; Hellfeldt et al., 2019; Kumar and Goldstein, 2020) that described cyberbullying as a complex and evolving phenomenon involving harassment, manipulation, and identity-based harm across digital spaces. This pattern reflects the growing dominance of relational and covert forms of online aggression, which are often more psychologically damaging yet harder to detect. The findings also suggest that exclusion and image-based abuse are becoming central features of adolescent online interactions, reinforcing concerns about the subtle but harmful nature of digital peer aggression.

In terms of platforms, WhatsApp was identified as the most common medium for cyberbullying, followed by Facebook. Karpagam et al. (2026) highlighted the significant role of private messaging applications in facilitating covert harassment. While this study found lower usage of other platforms compared to WhatsApp, the difference may reflect regional usage patterns, where messaging applications are more dominant in daily adolescent communication in Nigeria.

The finding that there is no significant difference in cyberbullying experiences between male and female adolescents indicates that gender, by itself, may not be a strong determinant of cyberbullying victimisation among adolescents in Ondo State. Although the descriptive results showed a higher proportion of females reporting cyberbullying experiences, the difference was not statistically significant, suggesting that both genders are similarly vulnerable to online aggression. This finding is consistent with Hellfeldt et al. (2019), who viewed cyberbullying as an aggressive behaviour capable of affecting adolescents across demographic groups, but contrasts with Chun et al. (2020), who reported higher victimisation among females. It also aligns with Patchin (2025), whose findings demonstrate that gender patterns in cyberbullying can change across populations and over time.

The finding may be explained by the increasing similarity in males' and females' use of digital platforms, particularly WhatsApp, which was the most commonly used platform in the present study, thereby providing comparable opportunities for exposure to cyberbullying. This supports Karpagam et al. (2026) and Kumar and Goldstein (2020), who highlighted the role of digital communication platforms in facilitating cyberbullying. Therefore, cyberbullying prevention programmes in Ondo State should adopt a gender-inclusive approach rather than focus on one gender, particularly given the established association between cyberbullying and adverse psychological outcomes such as anxiety, depression, low self-esteem, and suicidal ideation (Schonfeld et al., 2023).

The finding that there is no significant difference in cyberbullying experiences by age indicates that adolescents across the different age groups in the study were similarly exposed to cyberbullying, despite the descriptive result showing that respondents aged 18–19 years reported the highest mean score of experiences. This suggests that age alone may not be a sufficient

determinant of cyberbullying experiences among adolescents in Ondo State. The finding is consistent with Hellfeldt et al. (2019), who conceptualised cyberbullying as an aggressive behaviour that can occur across adolescent age groups. Although Brandau (2019) identified adolescents and young adults as particularly vulnerable to cyberbullying, the present finding suggests that vulnerability may not necessarily differ significantly between specific adolescent age categories. Differences in findings across studies may be attributed to variations in digital engagement, social environments, cultural contexts, and the types of digital platforms used by adolescents.

The non-significant age difference may also be explained by the widespread availability and use of smartphones and digital platforms among adolescents. Younger and older adolescents increasingly participate in similar online environments, including WhatsApp, Facebook, Instagram, and other social networking and messaging platforms, thereby creating comparable opportunities for exposure to cyberbullying. In the present study, WhatsApp was the most frequently used platform, suggesting that frequent engagement with digital platforms may be more important in explaining cyberbullying experiences than chronological age. This interpretation is supported by Karpagam et al. (2026), who identified WhatsApp and other social media platforms as important environments for cyberbullying, while Kumar and Goldstein (2020) noted that the expansion of digital communication channels has increased opportunities for cyberbullying across different forms of online interaction.

Therefore, interventions should address adolescents across age groups rather than target only older or younger adolescents, with emphasis on responsible digital platform use, digital citizenship, online safety, and effective reporting mechanisms. This is particularly important because cyberbullying can have serious psychological consequences, including anxiety, depression, low self-esteem, and suicidal ideation (Schonfeld et al., 2023).

Conclusion

This study concluded that cyberbullying is prevalent among adolescents in Ondo State, Nigeria, with exclusion from online groups the most common form experienced and WhatsApp the most frequently used platform for cyberbullying. The findings further revealed that all adolescents, male or female, young or old experienced cyberbullying.

Recommendations

Based on the findings of this study, it was recommended that schools, parents, counsellors, and policymakers collaborate to develop effective strategies for preventing and addressing cyberbullying among adolescents in Ondo State. Schools should organise regular gender-inclusive digital literacy and cyber safety education programmes to educate students on responsible online behaviour and the dangers of cyberbullying. Counsellors should provide

psychosocial support and intervention services for victims. Parents should closely monitor adolescents' digital activities and encourage open communication regarding online experiences. In addition, social media and digital platform providers should strengthen privacy and reporting mechanisms to curb online harassment, while government and educational stakeholders should formulate policies and awareness campaigns aimed at promoting safe digital engagement and protecting adolescents' mental health.

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