



The Hidden Effects of Social Media: Depression and Aggression in Adolescents

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Abstract

According to the Pew Research Center (2023), in a recent survey, almost one-third of US teens said they used social media almost constantly. This high rate of social media use in teens can lead to a variety of problems, including increased prevalence of mental health issues such as depression and aggression. Research shows that adolescents who use social media excessively are more likely to experience symptoms of depression, such as sadness, low energy, and less sleep. These symptoms are also sometimes linked to higher levels of aggression, such as verbal and physical aggressive behavior. Some studies suggest that depression acts as a link between social media addiction and aggression, which helps explain why they are connected. While social media can have benefits, like communication and social support, using it excessively can lead to negative mental health outcomes. This paper investigates how social media overuse affects depression and aggression in adolescents aged 10-19. This paper reviews studies examining the relationships among time spent on social media, mental health, and aggressive behavior. Overall, this paper shows the importance of understanding the value of setting better daily social media habits for adolescents.



The Hidden Effects of Social Media: Depression and Aggression in Adolescents

Many adolescents start and end their day by checking social media, usually without realizing how much of their time they spend scrolling. A recent study by Rustamov et al. (2023) shows that excessive social media use, often referred to as social media addiction, in which individuals increasingly rely on social media and experience distress when unable to access, among adolescents, is associated with lower psychological well-being. The study closely inspected 1,354 adolescents ages 10-18 and found that higher levels of social media addiction were associated with increased aggression, anger, and verbal aggression. These aggressive behaviors were shown to explain why adolescents who overuse social media experience worse-than-average mental health. Their findings suggest that aggression plays a significant role in the relationship between social media overuse and negative mental health symptoms in adolescents.

Even though social media is common among adolescents, its effects on mental health are still not fully understood. How is social media overuse associated with symptoms of depression and aggression in adolescents aged 10-19? This paper argues that adolescents who overuse social media are more likely to experience symptoms of depression and aggressive behavior, which in turn negatively affects their mental health. This literature review first looks at current research on overall adolescent social media use. Then it explores the deeper relationship between social media overuse and depression, and looks at the impact on adolescent mental health.

Social Media Addiction in Adolescents

Social media plays a major role in the daily lives of many adolescents worldwide. Social media use refers to the time adolescents spend on platforms such as Instagram, TikTok, Snapchat, and similar apps for communicating, sharing multimedia content, and unwinding. Even though regular use, referring to using social media in moderation without it interfering with daily life, of social media is common and not always damaging, excessive use can lead to addiction and result in negative psychosocial outcomes. According to Ali et al. (2025), social media addiction and overuse, difficulty controlling time spent on these platforms, and emotional distress occur when social media is limited. Social media addiction is different from normal or healthy social media use because it involves feelings of less control. While many teens use social media daily to communicate or entertain themselves, healthy users can still limit the time spent on it and focus on other parts of life, such as school and sleep. On the other hand, teens with social media addiction can find it hard to stop using these platforms even when they want to, which can lead to anxiety, stress, and other negative outcomes. Many teens feel that spending too much time on social media can make it harder to focus on schoolwork and maintain healthy habits.

Adolescent Mental Health

Mental health concerns among adolescents are on the rise (Wilson & Durmonay, 2022), even leading to the declaration of a national emergency in child and adolescent mental health (American Academy of Pediatrics, 2021). Some of the most common serious mental health concerns in teens are depression and aggression. Teen depression frequently includes sadness



and feelings of hopelessness. Ali et al. (2025) explain that adolescents with depression symptoms can also experience low energy, low attention span, poor sleep habits, and a loss of interest in the activities they used to enjoy. Ali et al. (2025) further note that depression in adolescents does not always show as sadness, but could appear as irritability or low motivation. These mental health symptoms can hinder performance in school and negatively impact family/friend relationships and overall emotional well-being.

Aggression is another important concept when considering adolescent mental health in the context of excessive social media use. Aggression can be defined as behaviors or emotions intentionally used to harm others (Buss & Perry, 1992). Researchers usually divide aggression into three categories: verbal aggression, anger, and physical aggression (Buss & Perry, 1992). Verbal aggression can include yelling, insulting, or mocking others (Buss & Perry, 1992). Anger refers to an intense feeling of rage that does not always result in physical action. Physical aggression can include actions such as hitting or pushing other people (Buss & Perry, 1992). Studies suggest that excessive social media use can increase exposure to negativity, which could result in aggressive thoughts and behaviors in teens.

Adolescents are more likely to have depression and aggression because their brains are still developing. According to Ali et al. (2025), the brain regions responsible for impulse control and decision-making are not fully developed during adolescence. This makes teens more sensitive to comparison online. Constant use of social media can make these emotional reactions more intense, increase their anger, and make it harder for them to handle stress. This immature stage of brain development helps explain why social media overuse could have particularly strong negative effects on mental health in adolescence.

Social Media Addiction and Depression

Research consistently shows that social media overuse is linked to depression symptoms in adolescents. Rustamov et al. (2023) did a study with 1,354 adolescents between the ages of 10 and 18, and found that teenagers who overused social media were more likely to experience depression. These depressive symptoms included sadness, hopelessness in life, low energy, and difficulty concentrating, which can interfere with performance at school, family bonds, and after-school social activities. Similarly, a qualitative study by Popat and Tarrant (2023) found that adolescents regularly experience social comparison and fear of being judged on social media, which can also affect their low self-esteem. For example, teens described constantly comparing their lives and bodies to pictures and posts from friends and online creators, creating a sense that they are “not good enough” or can “never be good enough” (Popat & Tarrant, 2023). These experiences highlight how social media platforms, while they are popular, can increase depressive thoughts in adolescents.

Depression in adolescence can look different from how it does in adults. Ali et al. (2025) explain that teens often show depression through increased irritation, frustration, and regular mood swings rather than openly showing sadness. Teens can be perceived as easily annoyed or unmotivated, which can make depression harder for parents to notice. Rustamov et al. (2023) also signify that depression symptoms are not only emotional but can also affect physical and functional aspects, such as insufficient sleep, low attention span, and low energy levels. When

this is paired with social media overuse, these symptoms can get much worse, because adolescents often use these platforms late at night and sometimes to avoid problems and responsibilities. Popat and Tarrant (2023) say that some teens feel trapped by social media, constantly checking what others are doing and comparing themselves to their peers. This need to check social media can increase feelings of depression, and can create a recurring cycle where social media use affects depression. Depression makes adolescents more likely to use the internet as a distraction from these feelings.

Social Media Addiction and Aggression

Social media addiction itself has been directly linked to aggressive behavior. Ali et al. (2025) define social media addiction as a behavioral pattern that involves excessive use, difficulty controlling time spent on the internet, and distress when not online. Teens who are addicted to social media frequently prioritize it over more important things like sleep, schoolwork, or crucial time with family, which adolescents need for proper development. Popat and Tarrant (2023) say that adolescents often feel pressured to stay online through daily streaks, likes, and comments that can potentially cause anxiety when they are not able to log on. One teen said, "Social media is like an online drug, you cannot stop, even when you want to" (Popat & Tarrant, 2023, p. 5). This anxiety can contribute to aggressive behaviors, especially when they have negative experiences online. For example, experiences such as cyberbullying, hate comments, or arguments online can also increase anger and can lead to verbal or physical aggression offline. These findings show that social media addiction does not just affect emotional health but can also influence behaviors in adolescents.

Social Media Addiction, Depression, and Aggression in Adolescents

Significantly, some studies also suggest that depression acts as a mediator between social media overuse and aggression. Ali et al. (2025) say that teens with depressive symptoms often show anger, irritability, and verbal aggression. Popat and Tarrant (2023) also describe adolescents' experiences with "stress posting," where they shared angry messages when they felt upset. Teenagers admitted that these posts sometimes caused some offline tension with friends and family (Popat & Tarrant, 2023). These studies show that depressive symptoms can make them more likely to react aggressively in stressful situations.

Rustamov et al. (2023) found that adolescents who overused social media and reported depressive symptoms were more likely to show verbal aggression, such as arguing, rather than physical aggression or anger. Furthermore, they found that depression symptoms partly explained the link between social media addiction and aggressive behavior. This means that social media overuse increases depressive feelings, and these depressive feelings make adolescents more likely to act aggressively. Popat and Tarrant (2023) describe how the need for attention or validation, fear of being judged, and online comparisons contribute to low self-esteem and sadness, which then increases irritability and aggressive reactions. In this way, depression is a bridge connecting social media overuse and aggression, which highlights that the emotional impact of social media is as important as the behavioral aspect. These experiences show that social media overuse, depression symptoms, and aggression are all intertwined rather than independent variables.

Adolescents described always feeling on edge and nervous when checking notifications or comparing themselves to peers online (Popat and Tarrant, 2023). These feelings of stress and sadness usually turned into verbal aggression with friends or family. Rustamov et al. (2023) saw that aggression in teens usually occurred with a side of overall low mood and irritability, which suggests that depression symptoms can create more tension from daily hassles. Ali et al. (2025) also add that because adolescents' brains are still developing, emotional regulation is still immature. This developmental stage makes teens more prone to experience stronger emotions, both positive and negative, from social media interactions.

Overall, the research indicates a pattern that excessive social media use increases depressive symptoms in adolescents, which in turn increases the amount of aggressive behaviors. Social media can lead to constant comparisons to others, pressure to be perfect, and exclusion from peers. These stressors can lead to sadness, hopelessness, and irritability. The emotional weight of depression also increases aggression, which can include verbal aggression and anger. Using depression as a mediator helps explain why social media overuse affects mental health in many ways, which impacts both mood and behavior. These studies also suggest that we should not only focus on adding a screen time limit but also on addressing and understanding depression symptoms and helping adolescents manage their emotional responses to online stress.

Alternate Perspectives

While many studies show that social media overuse is linked to depression and aggression, some researchers point out that social media can also have positive effects for adolescents. For example, Reid and Weigle (2014) find that social media enables teens to stay close to friends, build relationships, and express themselves. It can give them emotional support, especially for adolescents who feel alone or struggle with mental health. It can help them find others going through similar things, which can reduce feelings of loneliness. Additionally, social media can be a place where adolescents figure out who they are and build their confidence. These positive sides show that social media is not entirely bad and can play a beneficial role in teens' lives. However, even though we must consider the benefits that social media can have for teens, these benefits must be weighed against the risk of social media addiction and its links with depression and aggression. While social media can provide support and connections, overuse and addiction still increase the risk of mental health symptoms. Therefore, teens must use social media responsibly. Whether social media use leads to addiction may depend on how teens decide to use these platforms. For example, using social media to communicate with friends or find support can have positive effects, but excessive use, like spending several hours a day aimlessly scrolling, can lead to negative emotional effects. Signs that use may be becoming unhealthy can include difficulty focusing, feeling worse after using social media, or feeling unable to limit time spent online.

There are also limitations in the research that should be considered. Many studies collect data through self-report surveys, where participants report their own behaviors and feelings. This can lead to bias because adolescents may not always truthfully describe their social media use or mental health symptoms. Additionally, much of this research is correlational, meaning

that it remains possible that depressive symptoms drive teens to overuse social media, not the other way around (Heffer et al., 2019); more research is needed. Shahid et al. (2024) also note that their study did not examine specific online platforms, which means certain apps could have different effects than others. Some studies use small samples, such as only college students, which limits generalizability to all adolescents. For example, Shahid et al. (2024) studied only individuals aged 18-30, which does not include younger teens. These limitations show that more research is needed to better understand how social media affects adolescent mental health.

Broader Implications

Understanding the relationship between social media use, depression, and aggression is important because it directly affects mental and emotional health. During adolescence, the brain is still developing, which makes teens more sensitive to stress and comparison. If too much social media use increases depression and aggression, it can negatively impact school priorities, relationships, and overall life. Understanding this can help prevent long-term mental health problems. Parents can play a huge role by monitoring their child's social media use and encouraging healthier habits. For example, setting screen time limits can help reduce overuse and prevent addiction. Research recommends limiting screen time to around 2 hours a day for teenagers to help balance other activities (Houghton et al., 2015). Schools can also use this research to support their students' mental health. They can give lessons about the risks of social media overuse and teach coping methods for stress, comparison, and negative experiences online, like cyberbullying. According to Reid and Weigle (2014), awareness and education are key in helping adolescents understand both the benefits and risks of social media. Social media companies can use this research to create safer online environments. For example, features that track screen time and send reminders to take breaks can help teens control their usage.

Overall, encouraging healthy habits from an early age is very important. Encouraging children to do activities like sports and hobbies can help reduce social media addiction and improve mental health. Shahid et al. (2024) found that social media addiction can lead to lower levels of depression and aggression. Finding healthier ways to use social media can reduce its negative effects and support healthier lives in adolescents.

Conclusion

This paper looked at how social media overuse is connected to depression and aggression in adolescents aged 10-19. The research shows a pattern that teenagers who spend excessive time on social media are more likely to experience symptoms of depression, which can then lead to higher levels of aggressive behaviors. Studies also describe that depression acts as a key factor between social media addiction and aggression, which helps explain why overuse can negatively impact mental health. Social media can have benefits like helping teens stay connected and find support, but these positives can often be outweighed when social media is overused. Overall, this research highlights the importance of being aware of how social media affects mental health and of maintaining a healthy balance between social media interaction and daily offline routines. Setting screen time limits and having better habits can help adolescents reduce the negative effects of social media and protect their overall well-being.

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