

Research & Analysis Paper

Social Media and the Effects on Cognitive Adolescent Development

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Introduction

Social media and adolescent development are two emerging topics that with new and old research show a strong connection. Social media is a significant aspect of individuals' lives in today's society as individuals are spending an increased amount of time online. Social media is generated for an audience of the age 13+ although the question arises if that is too young of a target audience. Guidelines are in place to create a safe space to allow anyone over the age of thirteen to partake in the use of different social media platforms. But are these platforms really safe for developing adolescents? Are social media platforms such as Instagram, Facebook, Twitter, and Snapchat positive for cognitive development or negative for cognitive development?

As social media becomes more popular with over 1.2 billion monthly users it is also becoming more popular among adolescents. Adolescents are using social media as a primary form of communication with their peers, using it as a tool to measure their own self-worth, using it as a platform for a career, as well as exploiting themselves online for the world to see. As these platforms are becoming more popular and can most likely be found on any adolescents cellular device, it is important to look into the effects they will have on adolescent development. Cognitive development in adolescence is a critical time in one's life when one begins to transition from a child into a more mature and sophisticated individual. With cognitive development in adolescence, they begin to form new ideas on life and ask questions. With social media as an aspect of an adolescent's life drawing the parallels between cognitive development and social media is very important. Throughout this analysis different research, old and new, will help to explain the benefits and consequences of social media use and how it relates to adolescents' cognitive development.

Literature Review

The first aspect of the connection between cognitive development among adolescence and the connection with social media is understanding the importance of cognitive development. Understanding the changes in cognition through the transitions throughout adolescence will help us understand the way the adolescent brain works in connection to social media at younger ages. To understand the changes in cognition, defining the changes in cognition in adolescent teens is the first step. Steinberg's textbook *Adolescence* defines these changes of cognition are as the following: Begin to think more of possibilities and different outcomes rather than what is factual, begin to think more abstractly, begin to think about the process of thought, think multidimensional, think about many issues and not just one, and think relative than absolute (Steinberg 2022). Steinberg's text shows that as the body develops so does the mind, the mind begins to think more broadly and more abstractly. Adolescence is now capable of solving bigger issues, thinking about larger world issues, and emerging themselves in situations like social media use that can be both beneficial and harmful.

Alongside the growing cognition of adolescence, the importance of cognitive development also affects behavior. The article, *The Importance of Cognitive Development in Middle Childhood for Adulthood Socioeconomic Status, Mental Health, and Problem Behavior*, explores how the changes in childhood and adolescence will affect the outcome of adulthood (Feinstein 2004). For example, if a child grows up in a wealthy family and is given the right tools to string education and is guided by their parents to make correct choices they will end up somewhere different from a child in a lower-class home who does not have access to the right

education and gets in trouble with the law. This example can help show the importance of cognitive development because as researchers have clearly stated it can have an effect on the outcome of an adolescent future. Cognitive development is a huge aspect of the development that occurs in an adolescent lifespan. Cognitive development also influences brain development.. As cognitive development so does the structure of the brain. The physical form of the brain and organization that is created within the brain helps show patterns of the brain activity that explain the developmental changes that are happening (Steinberg 2022). Because of this changing brain structure, the brain is malleable and open to the influences of the world.

As researchers explore cognitive development one aspect that is showing up in research more commonly is social media. Social media is now part of our society and children at younger ages are getting onto social media platforms and making it a part of their life. The article Social Media use in Children and Adolescents states that this is a direct result of the increased availability of smartphones and computers where social media can be accessed (Shychuk 2022). This article states that the following are positive impacts of social media, “The benefits of social media include staying connected with friends and family, obtaining new information, becoming involved in community activities, and accessing health care. Social media allows completion of classroom activities, such as group projects, and can improve grades” (Shychuk 2022). Social media allows children at a younger age to have more access to things online. For example, they will be able to answer questions that they might have with access to search engines like google, as well as use social media as a creative outlook to express themselves on platforms like youtube. The article “Turn that thing off”, provides parents' testimony about what they view are positive impacts of social media on youth at younger ages. The majority of the parents who

responded to the study stated that they feel like a positive aspect of media use in young adolescence is the availability of being able to monitor what goes on on social media sites (Padilla-Walker 2010). Parents believe that if they allow their children to be on social media platforms and that they can closely monitor their use, children can use social media for the positive benefits talked about by Shychuk. Being able to maintain access to connections to peers and family at a young age with parental supervision can be beneficial for children transitioning into adolescence to stay positive (Padilla- Walker 2010). Allowing adolescents to fit in with their peers is also something that needs to be considered when exploring the positive benefits of social media. Adolescence is a critical time in childhood and the main part of this transition is fitting in with peers (Steinberg 2022). Fitting in, including having social media to fit in, is something that parents need to consider as it is becoming more prevalent in today's society.

Although there are positive effects to social media use among adolescents there are many negative aspects to social media use among adolescents as well. The article #SleepyTeens talks about various negative consequences as a result of social media use among adolescents including poor sleep quality, anxiety and depression, and lower self-esteem. The article states that when adolescence uses social media at night it affects their sleep patterns as it fires their brain (Woods 2016). When this occurs it disrupts sleep patterns in the following way: It stimulates the brain and fires neurons (Steinberg 2022). Affected sleep patterns can lead to more negative behaviors such as heightened anxiety and worry as well as depression. When social media is used in the evening before bed the article also states that because the adolescent is in a vulnerable state which makes them more susceptible to lower self-esteem, in these instances they compare themselves to others and form anxiety about life that they are living (Woods 2016). For example,

when an adolescent is in bed and on social media not only is the light affecting their sleep patterns but it allows them to scroll on social media and see what their peers are up to. They might find themselves comparing their life to theories or even figure out something that they would not like to know, like maybe they were not invited to a party or lost an award they were trying to achieve. When these things occur right before bed, the negative aspect of this would be anxiety and worry, they will be unable to sleep when these thoughts flood their mind.

Many adolescents focus on social media to be popular among their peers. They strive to get as many likes, comments, and engagement as they can. The article, *The Impact of Media use on appearance self-esteem from childhood to adolescence*, states, “Social media users are extensively exposed to photographs displaying idealized self-presentation. This poses a potential threat to youth's appearance self-esteem, but the negative impact may depend upon types of social media engagement” (Steinsbekk 2021). This direct quote from the article states that adolescents are trying to use social media as a platform to compete with their peers. This is negative because if they do not receive the engagement as their peers they will struggle with self esteem and body image. Adolescents seek confirmation from their peers on their social media posts. They want compliments on their appearance, what they are up to, and how they present their life on social media (Steinsbekk 2021). For example, this promotes negative behavior in adolescents when they are portraying a life on social media that might not be completely honest. In order to fit in with their peers and compete with them, they will post photos that make them look like they are living a glamorous, maybe unrealistic, life for more engagement from their peers. This is negative on both sides, it is negative for the one posting as they know they are not

being honest and are trying to seek an unrealistic lifestyle, as well as negative for the one viewing the post as they will compare their life to theirs and might feel bad about their own life.

As there are both positives and negatives to social media use among adolescents there are direct connections to cognitive development. The article *The extended warming effect of social media: Examining whether the cognition of online audiences offline drives prosocial behavior in 'real life*, discusses the effects of social media and how it can promote important prosocial behavior that is important in cognitive development (Lavertu 2020). Prosocial behavior is important to cognitive development because at this stage of development adolescents are beginning to spend more time with peers than associating themselves with their parents. Social media allows adolescents to connect with their peers more easily. They can communicate with peers at all hours, they can reach out to them via text, phone call, or social media use. They can post photos with their peers and create a digital memory of these events. All of these aspects promote prosocial behavior. The article also mentioned self-awareness, something that is also important to the cognitive development of adolescents. When social media promotes self-awareness through what they are posting they are able to take the self-awareness that they learn and apply it to other areas of life. They can become more confident in themselves, something that adolescents struggle with as their self-esteem can be affected (Lavertu 2020). Social media, talked about in the article, influences others to partake in positive behaviors. If they see someone talking about an important cause they might feel inclined to help out the cause, and they might also be exposed to issues around the world that they feel inclined to help also. This is another type of prosocial behavior that is important to cognitive development as it is

promoting good change in adolescents (Lavertu 2020). These positive aspects of social media aid in positive cognitive development.

The negative aspects of social media have a large impact on the development of cognition in adolescents. In cognitive development among adolescents, adolescents are trying to find a sense of self, they are trying to be liked by their peers to fit in. When this occurs they tend to keep to themselves and isolate themselves from others like their guardians or parents (Steinberg 2022). This concept can relate to social media for a term called FOMO, or fear of missing out. The fear of missing out, talked about in Fabris's article talks about how adolescents who have high FOMO experiences are more likely to have heightened stress that is connected to neglect by their peers online (Fabris 2020). The fear of missing out causes a lot of emotional distress in adolescents with cognitive development. This negative distress can also lead to social media addiction according to the journal. This addiction is rooted from a downward spiral where the individual seeks validation that they are not missing out on anything important to them (Fabris 2020). The emotional stress of the fear of missing out can be like the following: a child knows they have a big test coming up so decide to stay in a a friday night, they see their peers on social media went out to dinner and a movie, instead of studying more the child then gets distracted by social media and what they are missing out on. Like in this specific example, there is negative behavior associated around social media. The social media in this instance is causing anxiety, distraction, and ultimately affecting the cognitive development of the adolescent. Adolesce are not able to form their own ideas and thinkings because they are distracted by what they think they are missing out on,

Like the fear of missing out, an adolescent might also have impairments in cognitive development with trying to fit into society's molds. With cognitive development, like talked about earlier, an adolescent is trying to find their own self. They are seeking individualization as they mature and are able to form their own thoughts and ideas. With social media present in this aspect of development. This individualization can be skewed. For example, in the article *Protect me From my Selfie*, social media is talked about as a negative aspect of how it affects body image and can even cause eating disorders (Lonergan 2020). As an adolescence sees positive engagements on posts on social media they will try to replicate them. they will try to fit society's mold to what beauty, lifestyle, and relationships look like. Since adolescence is just beginning to transition to new thinking where they are discovering themselves, social media can have an influence on who they become. They might develop unhealthy habits to try to look like the individuals they see on social media. The article states, "Cross-sectional research has found that engagement with photo based social media sites, such as Instagram, is associated with poor body image" (Lonergan 2020). Poor body image in development can cause issues such as eating disorders, depression, anxiety, and addiction.

As addiction is mentioned, in regards to both negative situations, addiction can cause distress in adolescence. An adolescent is not cognitively capable of forming addictive habits including those habits associated with social media use. An individual may be susceptible to an internet related disorder. According to the article *Non-Substance Addiction in Childhood and Adolescence—The Internet, Computer Games and Social Media*, it states that "Around 5.8% of adolescents have an Internet-related disorder. These figures underline the widespread concerns in our society regarding the potential dangers and risks associated with Internet and digital media

use” (Geisel 2021). The effects of being so concentrated on what is happening online and not what is your own life can create a wedge in reality of cognitive development. Reasoning, intelligence, memory, and language are all a part of cognitive development. With addiction to social media reasoning, intelligence, memory, and language can all be affected. As an adolescent spends time focused on what their peers are doing they are developing habits that might increase anxiety, depression, disrupted sleep patterns, attention deficit, personality disorders, substance abuse, and unhealthy lifestyle (Gisele 2021). For example, an adolescent might cut off from their parents, siblings, and friends to participate in social media activities. An adolescent who displayed this addictive behavior will spend an increased amount of time on social media, focused on the lives their peers are portraying. This can cause FOMO like talked about before as well as the medical conditions that were also mentioned. Overall these concepts do not promote the healthy development of cognitive development.

Summary

Social media can be both positive and negative in an adolescent's life. There are various different factors that can contribute to healthy cognitive development and negative cognitive development in adolescence with the influence on social media. Social media is a large aspect of today's world and most likely will not go away any time soon. Children are getting established on these platforms at younger ages therefore researchers need to be aware of the consequences that might present in cases of development. Social media is proven to have effects on cognitive development by affecting body image, increasing psychological disorders like anxiety and

depression, creating addictive behaviors, as well as disrupting sleep. Although there are still positive influences on social media the argument to be made if an adolescence at any age can result from social media use still is in question. In my own opinion based on the research conducted in the literature review there shows to be a large negative impact on cognitive development, an impact that outweighs the positives. Time will only tell the larger influence social media has on adolescents and their development.

Brain structure and brain function account for a significant amount of cognitive development. Online, from my own experience on social media I am able to see children at a young age participating in activities that I was not doing at that age. Social media can be argued to even influence maturation in children. Research even shows children abusing the guidelines social media has in place to regulate usage where children and parents are creating accounts to show their lives. An example of this would be celebrities creating accounts for their children. Individuals look up to these lifestyles and compare the children to themselves. They feel both negative and positive reactions to these posts. Brain structure at younger ages than these guidelines are not equipped for the consequences that social media presents. They are not able to fully comprehend that these lifestyles are not achievable to everyone and at the moment they are trying to seek the validation that the celebrities are reviving.

Overall there is sufficient evidence to support the claim that there is an influence on social media and cognitive development. It is up to the interpretation of researches and oneself to determine whether the infunce is a positive influence or a negative influence. In conclusion there are many different factors that indicate that adolescents are affected by social media in their daily

lives as the 1.2 billion monthly users of social media platforms try to navigate this new and changing world.

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