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The Impacts of Problematic Social Media Use on Youths: Evaluation and Treatment Recommendations

Carianne Archer
National Louis University

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Carianne Archer

Florida School of Professional Psychology at National Louis University

Lisa Costas, Ph.D.
Chair

Sharie Fabregas, Psy.D.
Member

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CERTIFICATE OF APPROVAL

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This is to certify that the Clinical Research Project of

Carianne Archer

has been approved by the
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Examining Committee:

Lisa Costas, Ph.D.

Committee Chair: Lisa Costas, Ph.D.

Sharie Fabregas, Psy.D.

Member: Sharie Fabregas, Psy.D.

Abstract

Youths' frequency and time spent on social media continues to increase over the years parallel to the growing concern of the status of the mental health of youth. This critical literature review project focuses on the impacts that social media use has on youth (ages 8 to 18 years) and what methods of evaluation and treatment are being used clinically, with recommendations provided to clinicians based on the available literature. The questions that guided this review included: What are the impacts of social media on the self-concept and interpersonal functioning of youths?; What clinical presentations are associated with youths who exhibit problematic social media use?; and What clinical approaches are being used to evaluate and treat problematic social media use in youths? Both positive and negative impacts have been associated with social media use. However, there are different factors that contribute to how youth are affected by their social media use. There is no conceptual model available to diagnose problematic social media use that includes the broad range of impacts observed. Evaluations and treatment options available in the literature tend to focus on issues related to addiction. Findings and recommendations useful for clinicians working with youth with problematic social media use are discussed, and including how to assess their social media use and other areas known to be negatively impacted.

DEDICATION

I dedicate my clinical research project to my dear husband, who has supported me and propelled me through my graduate studies from the beginning to the end. I hope you know how much I appreciate you and everything you have done. To our baby girl, who is on the way, thank you for hanging in there with me through this process. To my beautiful family, thank you for your continuous support and love from a distance. I look forward to being close again once my studies are completed. Last, this project is dedicated to all the individuals I have encountered in my training who have helped me learn and grow to be able to provide mental health care for others in the future.

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CHAPTER 1: THE IMPACTS OF THE USE OF SOCIAL MEDIA ON YOUTH AND ASSESSMENT OF USAGE

The smartphone and social media revolutions combined have changed the way individuals communicate and function. As of October of 2021, more than half of the people in the world use social media (58.4%), which is 4.62 billion people (Kemp, 2021). The five primary reasons given for using social media include (a) keeping in touch with friends and family, (b) filling spare time, (c) reading news stories, (d) finding content, and (e) seeing what is being talked about (Kemp, 2021). Not only has there been a significant increase in the use of technology and social media, but the number of concerns, specifically in its use by youths, has shown an increase in recent years. By age 12, 69% of youths own a smartphone, and on average, by age 14, they have used social media for the first time (Rideout & Robb, 2019). Smartphone ownership in youths has risen in the past 6 years, with 43% of tweens and 88% of teens owning a smartphone (Rideout et al., 2022). Among youths who own a smartphone, 27% say that they use some kind of tool to track the amount of time spent on their smartphone, while 42% say their parents use some kind of tool to track the amount of time spent. Parents tend to be more engaged in monitoring *what* their children are doing on their smartphones, as 76% of parents of youths reported using some kind of tool to track specific activities used on their children's smartphones (Rideout & Robb, 2019).

A nationally representative survey of 1,306 8- to 18-year-olds was conducted in the United States from September 29 to October 25, 2021, to examine screen media use among young people (Rideout et al., 2022). Participants were randomly gathered through address sampling and random-digit-dial telephone calls. The 2019 U.S. Census was used to ensure that the final sample represented the U.S. population, including geographically, demographically

(e.g., age, gender, race/ethnicity, income), and accessibility to home Internet. The study identified tweens as individuals aged 8- to 12-years-old and teens as individuals 13- to 18-year-olds. However, when applicable, this clinical research project refers to the two groups combined as "youths." *Non-specified media use* includes all activities conducted online. One key finding was that media use by youths has grown faster since the start of the COVID-19 pandemic than it did over the four years before the pandemic. From 2019 to 2021, the amount of time that tweens and teens spent on screen media went from 4:44 to 5:33 hours and 7:22 to 8:39 hours, respectively. Using social media accounted for eight of the additional minutes for tweens and 17 additional minutes for teens, plus another 23 minutes per day watching online videos for teens. Thirty-eight percent of tweens have used social media in some form, with an average use of 18 minutes per day, and the top social media sites used were Snapchat (13%), Instagram (10%), Facebook (8%), Discord (5%), and Pinterest (4%). Of teens, 84% say they have used social media. The average amount of time spent on social media for teens is 1:27 hours, with the top social media sites used being Instagram (52%), Snapchat (49%), Facebook (30%), Discord (17%), and Twitter (16%). Interestingly, 62% of teens reported using social media "every day," but only 34% stated they enjoyed it "a lot." Watching videos online was the most preferred screen activity among all groups, including boys and girls, Whites, Blacks, Latinx, and lower-income and higher-income families. Watching videos is an activity that can occur while on social media but is often observed separately from social media use. Youths spend an average of 57 minutes to 1:22 hours per day watching online videos, with YouTube (32%), Snapchat (20%), TikTok (13%), and Instagram (13%) being the platforms teens reported they "would not want to live without." When examining the use of social media and watching videos online combined, teens reported using YouTube (24%), TikTok (22%), Snapchat (21%), Instagram (15%), and

Discord (8%) the most, with a combined average time of 1:15 hours for tweens and 2:09 hours for teens.

The level of connectedness people, especially youths, have with their social media accounts is often portrayed as negative. However, there are positive aspects of social media usage that may be overlooked. Staying connected with friends, meeting new people, finding community, social support, self-expression, and inspiration are all potential positive impacts associated with social media use (Rideout et al., 2021; "Social media and teens," 2018). In addition, support found on social media can serve as a protective factor against loneliness, depression, and cyberbullying (Rideout et al., 2021).

A study from the University of Leicester (O'Reilly, 2020) presented "the good, the bad, and the ugly" themes of social media and adolescent mental health as perceived by adolescents and mental health practitioners. A sample of 62 participants consisted of 6 focus groups of adolescents ages 11-18 ($N = 54$) years and 2 focus groups of mental health practitioners from Child and Adolescent Mental Health Services (CAMHS; $N = 8$). The themes were extracted from how participants rhetorically connected the relationship between social media and mental health. The "good" themes were items considered to impact well-being positively. The perceived positive impacts of social media use included reduced isolation, improved social skills, the ability to communicate at any moment, accessible resources to help maintain friendships, and a tool for distraction or coping skills to utilize. The "bad" themes included possible risks faced and overuse of social media. These themes included not being able to limit one's use of social media, managing fear of missing out, and pressure to have a presence on social media. The adolescent groups reported anxiety, depression, and low self-esteem associated with getting "likes" and comparing themselves to other body images on social media. Practitioners reported concerns

based on research and clinical observations about the negative impact on adolescents' sleep. The "ugly" themes are the perceived more severe negative impacts of social media on mental health. One major theme found was being a victim of cyberbullying and *trolling*. The authors did not specifically define the two terms, but they were included in comments from the adolescents. One 15 or 16-year-old stated, "I feel like cyberbullying plays a huge part in everyday life, and that comes mainly from social media" (O'Reilly, 2020, p. 4), while one mental health professional stated, "I mean I've had girls who've said, you know, they've been trolled, and people have told them to kill themselves, and then they feel they have to" (O'Reilly, 2020, p. 5). Trolling behaviors have been defined as behaviors outside of the acceptable bounds defined by several community guidelines, including hostility, swearing, or personal attacks, and defined cyberbullying as behavior that is targeted, intended to harm, and repeated (Cheng et al., 2017). In the O'Reilly (2020) study, thoughts of self-harm and suicide were also concerns of both groups of participants, although adolescents thought it was more of a concern for others rather than for themselves. The study also found that the practitioners thought adolescents should follow restrictions regarding screen time, but adolescents thought they should have the freedom and autonomy to make their own choices about their social media use. O'Reilly (2020) stated that given the extent of adolescent social media use and their view that social media can be "dangerous," the use of social media should be one of the core areas assessed during a clinical interview. In addition, O'Reilly added that the benefits of social media use should not be undermined, and the use of social media for health communication and promotion should be embraced by practitioners (O'Reilly, 2020).

In addition to "the good, the bad, and the ugly" themes identified related to youths' use of social media, there are subsequent concerns about mental health practitioners' abilities to

respond to youths' issues related to social media. Gallo et al.'s (2016) qualitative study examined school counselors' experiences working with students wanting assistance handling the effects of social media use. They referred to the ethical guidelines of the American School Counseling Association (ASCA), stating "professional school counselors promote the responsible use of technology in collaboration with families and educators to increase student safety" (ASCA, 2012, p. 53). They went on to explain that school counselors have an ethical responsibility to keep their students safe from harm, which includes harm that occurs through the use of technology (ASCA, 2016). Potential harm through technology includes but is certainly not limited to cyberbullying, cyberstalking, posting inappropriate pictures, sending inappropriate messages, and posting about illegal activities (Barrett, 2006; Oriji & Efebo, 2013). School counselors must consider the additional layer that youths may not fully comprehend the permanency of what they do online and the potential consequences (Barrett, 2006; Quitney & Rainie, 2010). The concern that the study examined was how school counselors could help their students navigate social media use when their students knew more about the topic than they did. They referred to the students as *digital natives* (Prensky, 2001), young people of the technologically connected generation who use technology as primary mediators of face-to-face connections (Palfrey & Gasser, 2008). In addition, they discussed *digital immigrants*, which they considered most school counselors to be, which included individuals who experienced human interactions without technology and knew how to use digital technology (Palfrey & Gasser, 2008). Gallo et al. found little research regarding the degree of familiarity and comfort school counselors had with digital technology or working with their digital native students. The purpose of their study was to gain a deeper understanding of how high school counselors managed to work with the digital native population. They administered a semi-structured interview to 8

public high school counselors with more than 5 years of experience who work with 500 to 2,000 students. All the participants held master's degrees and were certified to practice school counseling. The interviews were analyzed using inductive analysis, in which the researchers consistently reviewed the transcripts of the interviews while identifying emerging themes. The three themes that emerged from the data were "the digital cultural divide, frustration and fear, and embracing change" (Gallo et al., 2016, p. 17). The *digital cultural divide* refers to the gap between the students' and the school counselors' understanding of and immersion in digital technology. *Utilitarian use of technology* was a subtheme of the digital cultural divide, which identified that school counselors used digital technology to enhance their work and for communication or dissemination of information, and students used it as an expressive outlet. One counselor stated, "It's a lot more . . . It's almost woven into their lives to such an extent that it's almost the question is 'what isn't a part of social media?'" (Gallo et al., 2016, p. 17). *Instant gratification* was another subtheme identified within the digital cultural divide, citing the immediacy of information to be an important part of digital-native culture. The second theme that emerged in the data was *frustration and fear* of the counselors related to what they had seen and read about their students' personal/social involvement in social media. There were three subthemes within frustration and fear, the first being *too much information* (TMI). This referred to the fear the counselors experienced for their students due to the consequences of poor choices made on social media. They feared that their students did not have the impulse control to filter the personal information they shared on social media and felt frustrated that the students did not always realize the consequences of their actions. The second subtheme identified was *shrouds kids wear* or cowardice behind media, which describes the feelings of anonymity the students seemed to experience when they were interacting on social media. The third subtheme of

frustration and fear was *school counselor effectiveness*. The school counselors described their experiences working with students on issues related to character assassination, bullying, and harassment that occurred through social media. Some of the counselors felt they were able to help their students with these issues if they had support from their administration in using a developmental counseling perspective. The counselors also reported feeling frustrated with students who continued to engage in social media exchanges, often making matters worse or resulting in physical altercations. Another source of frustration for the counselors was when they could not act on their student's concerns related to bullying or harassment on social media because they had no documentation or proof. Gray areas often come up as online exchanges trickle onto school property. While the counselors reported that they wanted to help the students with these issues, they noted that the issues related to social media exchanges took a significant amount of time to unravel and took away the student's focus on academics, the primary reason they were at school. The final theme that emerged from the interviews with the school counselors was *embracing change*. The participants thought it was important and wise for school counselors to learn about and engage with the latest digital technology to help them connect with the students better. One participant stated, "A couple of my coworkers, they have no idea what a 'wall' is. They're like, 'Somebody wrote on a wall. I don't understand. . . . Was it with a marker? What, what is that?'" (Gallo et al., 2016, p. 20). The participant further explained that communication breaks down if the counselors do not understand what the students are bringing to them. Another participant added, "They'll respect you more. They come to you more and trust you more" if counselors appear to understand their values and experiences (Gallo et al., 2016, p. 20). Within embracing change, participants had suggested positive ways to support students and other staff in the use of social media by "developing a curriculum that addressed student cyber-

safety, etiquette, and Internet savvy" (Gallo et al., 2016, p. 21). They further added that they could teach students "how to work with people including social skills, reading nonverbal behaviors, not getting sucked into online social media exchanges, and practicing 'unplugging'" (Gallo et al., 2016, p. 21). Implications of this article shed light on reasons to be concerned about social media use. One is related to changes in student interactions due to social media use, and the other includes the skills and knowledge clinicians have about social media and how to address the impacts it is having on youths as they reported the number of students needing help with issues stemming from social media interactions continues to increase. The authors stated, "Digital natives have created a new culture, a culture that has its own language, values, and customs" (Gallo et al., 2016, p. 21). Implications discussed in the study are directed specifically toward school counselors. However, these implications can likely be generalized to any mental health professionals working with youths. First, they encouraged school counselors to seek professional development around technology and how to address situations involving social media. They did not provide specific resources in which this type of information would be available. Second, they suggested that school counselors consider a curriculum "that connects social skills with online activities and incorporates school/family partnerships in teaching online etiquette" (Gallo et al., 2016, p. 22). Third, they stated that school counselors might need to seek additional training in how to ethically and legally handle situations related to social media that occur at school. Last, they proposed that school counselors be more involved in creating policies related to the appropriate use of technology. The authors stated, "Professional development related to social media topics combined with child and adolescent development could be very useful to many practitioners" (Gallo et al., 2016, p. 22).

Challenges in researching the impacts of social media use include the newly developing social media platforms and their ever-changing utility. As today's youths only know human interactions to be a combination of face-to-face and online exchanges, they may be less able to or less willing to see the range of impacts social media use could be having on them and their development. Therefore, relying on self-reports of youths to research the impacts may not fully encompass the experiences or effects of social media use in youths. In addition, because difficulties related to social media use are not yet considered to be diagnosable difficulties, measures of evaluation are scarce, and subsequently, so is information on the treatment of difficulties related to social media use. This is a significant gap between the quickly growing experiences of youths and the competencies of clinicians.

Definitions

There is no universal definition of what social media or social networking sites exactly are. After a critical review of the literature examining definitions of social media utilized by researchers, Carr and Hayes (2015) defined *social media* as "Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception of interaction with others" (Carr & Hayes, 2015, p. 8). The term *users* refers to individuals who use at least one social media account (Perrin et al., 2015). Considering Erik Erikson's psychosocial theory (1950) with adaptations from Newman and Newman (2012) and Albert Bandura's social learning theory (Bandura, 1971, 1977), for purposes of this critical review, the term *youths* was generally defined as individuals ages 8 to 18 years.

Statement of Problem

The smartphone and social media revolutions combined have changed the way individuals communicate and function. The impacts are not only societal but individual as well. While each person's experience with social media is different, concerns about young people's use of social media and its impact on their development and functioning have been reported. Some of the areas of particular concern are the impacts of social media on the mental health, self-concept, and interpersonal functioning of young people.

In October of 2021, the American Academy of Child and Adolescent Psychiatry (AACAP), the American Academy of Pediatrics (AAP), and the Children's Hospital Association (CHA) declared a national state of emergency in children's mental health. They stated that between 2010 and 2020, rates of childhood mental health challenges and suicide consistently increased, and by 2018, the second leading cause of death for youths ages 10 to 24 was suicide (AAP, AACAP, CHA, 2021). The declaration discusses how the COVID-19 pandemic has intensified the crisis as there has been a dramatic increase in mental health emergencies and suspected suicide attempts. In addition, the declaration cites structural racism as a contributor to the disproportionate effects on children from minority groups. Rates of depression, anxiety, trauma, loneliness, and suicidality are becoming more common in youths and have lasting impacts. The organizations came together to advocate to policymakers for better mental health care for children and adolescents, which includes increased federal funding to ensure evidence-based mental health screenings, diagnosis, and treatment (AAP, AACAP, CHA, 2021). Youths would benefit from access to mental health services, but what if clinicians are missing a major piece contributing to their mental health status? As the amount of time that youths spend on social media continues to increase and research continues to show that there are associations

between problematic social media use (PSMU) and mental health challenges, the evaluation of social media use becomes a critical part of a mental health assessment. The tools to assess symptoms related to PSMU measure symptoms of depression, anxiety, or addiction. Better mental health care for children and adolescents requires evaluation and possibly treatment of an aspect that has become an integral part of their daily life. Following the declaration, the AAP and the AACAP met with Frances Haugen, a data engineer and whistleblower who revealed Facebook's practices of prioritizing company profits over public safety (AACAP, 2022). They met to discuss social media's role in youths' mental health. President of the AAP, Moira Szilagyi, MD, PhD, FAAP, stated, "It is in our power to create a digital ecosystem that works better for children and families, and we are always looking for new ways to make progress in achieving that goal" (AACAP, 2022, para. 4).

A 2021 U.S. Surgeon General's advisory shared information about protecting youths' mental health. After a 40% increase, since 2009, in young people reporting persistent feelings of sadness or hopelessness, the U.S. Surgeon General, Vivek Murthy, stated, "We also know that, too often, young people are bombarded with messages through the media and popular culture that erode their sense of self-worth—telling them they are not good looking enough, popular enough, smart enough, or rich enough" (U.S. Surgeon General's Advisory, 2021, p. 3). He went on to say, "When not deployed responsibly and safely, these tools [technology platforms] can pit us against each other, reinforce negative behaviors like bullying and exclusion, and undermine the safe and supportive environments young people need and deserve" (U.S. Surgeon General's Advisory, 2021, p. 3). This report further emphasized the importance of knowing how youths use social media and their positive and negative experiences with it. There is no widespread use of or commonly known tools or assessments used to assess young people's social media use, even

though most of the youths reported using social media “every day” or even “constantly” (Kemp, 2021; Rideout & Robb, 2019). A few publications state the importance of assessing social media use, and some offer suggestions, but research presenting valid, evidence-based assessments for evaluating social media use is scarce.

Purpose of the Study

The purpose of this clinical research project (CRP) was to critically review the literature to identify the researched impact of social media use on the self-concept, interpersonal functioning, and mental health of young people. In addition, the literature was reviewed to identify current methods of clinical assessment and treatment of social media use in young people. Finally, based on this critical review, clinical recommendations for assessing social media use in young people and treatment recommendations for maladaptive social media use in young people are offered.

Literature Review Questions

The following questions guided this review of the literature:

1. What are the impacts of social media on the self-concept and interpersonal functioning of youths?
2. What are the clinical presentations in youths who exhibit maladaptive social media use?
3. What clinical approaches are being used to evaluate and treat maladaptive social media use in youths?

Research Procedure

Information regarding the topics discussed was gathered through searching EBSCO and Google Scholar. The literature was gathered through searches of terms such as *impacts of social media, adolescent use of social media, impacts of social media on mental health, links between*

social media use and depression, links between social media use and anxiety, impacts of social media on self-concept, impacts of social media on interpersonal functioning, positive impacts of social media on mental health, positive impacts of social media on self-concept, positive impacts of social media use on interpersonal functioning, assessments for social media use, screeners for social media use, how to assess the use of social media, treatment of problematic social media use, and *treatment of social media addiction.* Additionally, relevant studies were reviewed for potential references. Studies conducted outside the intended population age, 8 to 18 years, were excluded unless the results were generalizable to youths when considering development. Studies that did not differentiate between online gaming and social media use in their purpose, methods, or findings were excluded due to difficulty generalizing the information purely to social media use.

Limitations/Delimitations

This literature review was intended to be comprehensive regarding the impacts of social media use on youths' self-concept, interpersonal functioning, mental health, and well-being. Attempts to include a multitude of resources were made. However, it is not an exhaustive review. Access and availability to research may have been restricted, and this author acknowledges the restrictions as a limitation of this literature review.

CHAPTER II: THEORETICAL FOUNDATIONS OF ADOLESCENT DEVELOPMENT

To understand the potential impacts that social media can have on adolescents, it is important to have an understanding of adolescent development. While using social media likely has some type of impact on everyone, the impacts may interact differently depending on the level of development of the consumer. Several different theoretical frameworks are helpful in explaining human development when attempting to understand the impact of social media use on youths. This chapter highlights development of adolescents while incorporating psychosocial theory and social learning theory.

Psychosocial Theory

Psychosocial theory, developed by Erik Erikson (1950), emphasizes the development of individuals across the lifespan. He and his wife, Joan, first formulated eight states of human development (Erikson, 1988), each with identified developmental tasks and central issues. This theory places importance on each individual's contribution to their own development through their beliefs and behaviors in addition to biological and societal influences (Newman & Newman, 2012). Additionally, this theory considers how culture impacts individual development and growth. Psychosocial theory operates from five assumptions: (a) there is growth occurring at every period of life, from conception through elderhood; (b) as time passes, individual lives demonstrate both continuity and change; (c) cognitive, physical, social, and emotional competences all have an impact on one's behavior; (d) every person's actions must be evaluated in light of their surroundings and personal relationships; and (e) people actively participate in their growth (Newman & Newman, 2012, p. 5).

Each stage of development has different social expectations, cultural goals, aspirations, and demands that may vary from culture to culture and impact how individuals move through

stages (Erikson, 1988). Psychosocial theory utilizes six basic concepts to explain development through life: (a) stages of development, (b) developmental tasks, (c) psychosocial crises, (d) a central process for resolving crises, (e) significant relationships, and (f) coping behaviors. Psychosocial theory considers a stage of development to be a period influenced by biological, psychological, and societal systems in which individuals experience changes in self-concept with acquired skills and capacities (Erikson, 1988). Each stage provides necessary resources for mastering new challenges in preceding stages. However, there may be a period of instability while the person reorganizes and attains a more complex level of functioning (Dawson-Tunik et al., 2005). Influenced by Freud's psychosexual development theory (1962), Erikson proposed eight stages of psychosocial development (1963). These initial stages proposed by Erikson followed the epigenetic principle, which is a more biological approach: (a) oral-sensory, (b) muscular-anal, (c) locomotor-genital, (d) latency, (e) puberty and adolescence, (f), young adulthood, (g) adulthood, and (h) maturity. The stages are not rigid, and one may move back and forth between stages, strengthening previously learned skills. Newman and Newman (2012) further identified 11 stages of psychosocial development based on Erikson's psychosocial theory and formulated new stages. Each stage has an approximate age range: (1) conception to birth, *prenatal*; (2) birth to 2 years, *infancy*; (3) 2 and 3 years, *toddlerhood*; (4) 4 to 6 years, early school age, (5) 6 to 12 years, *middle childhood*; (6) 12 to 18 years, *early adolescence*; (7) 18 to 24 years, *later adolescence*; (80 24 to 34 years, *early adulthood*; (9) 34 to 60 years, *middle adulthood*; (10) 60 to 75 years, *later adulthood*; and (11) 75 until death, *elderhood* (Newman & Newman, 2012). The two stages of focus in this review were middle childhood, specifically the later years, and early adolescence.

Each stage of development includes developmental tasks, which were introduced by Robert J. Havighurst in 1972, that individuals are expected to achieve by society (Havighurst, 1972). These tasks involve physical, cognitive, social, and emotional development and allow for mastery over one's environment (Newman & Newman, 2012). Erikson believed that a psychosocial crisis could occur when an individual's competencies at the beginning of a stage and society's expectations for that developmental period did not align. An individual can experience stress due to expectations, which the term *crisis* refers to. Before the end of each stage, an individual attempts to find a resolution to the crisis faced, which can come from both positive and negative experiences. Ideally, a person would cope with the stress positively and receive positive feedback from society. This is referred to as the central process and is how a person modifies themselves to meet cultural expectations (Newman & Newman, 2012). When a person has a positive resolution of the psychosocial crises, prime adaptive ego qualities are developed (Erikson, 1978). Erikson defined these qualities as mental states that influence how one interprets life events and serve as resources for the next developmental stage. The ego qualities include hope, will, purpose, competence, fidelity to others, fidelity to values, love, care, wisdom, and confidence. A positive resolution of the psychosocial crisis provides ego strengths and skills needed to face the challenges in the next stage of development. Alternatively, when a person fails to manage a psychosocial crisis effectively, a core pathology may emerge (Erikson, 1982). These pathologies may prevent the resolution of psychosocial crises in future developmental stages and can obstruct further exploration of interpersonal relations. The core pathologies identified include withdrawal, compulsion, inhibition, inertia, dissociation, repudiation, exclusivity, rejectivity, disdain, and diffidence (Erikson, 1982).

Middle Childhood

As an individual moves from early childhood to middle childhood, ages 6 through 11 years, the focus shifts from play to more productive behaviors such as planning, competition, and achievements (Newman & Newman, 2012). During this development period, children observe and mimic behaviors that they see are valued in their culture. This is often when children begin to see what their skills and strengths are and the areas where they feel competence and confidence. New abilities may help them begin to have ideas about what they want to be when they grow up (Newman & Newman, 2012).

Developmental Tasks. Achievements within middle childhood typically involve friendship, concrete operations, skill learning, and self-evaluation (Newman & Newman, 2012). Children in this stage begin to expand their network of social connections or friendships. They begin building relationships with classmates, teammates, or peers in any social setting. Children tend to be more intellectually and socially stimulated when they are able to immerse themselves in social environments. Newman and Newman (2012) discussed three lessons children receive from daily interactions with peers. The first lesson is in perspective-taking and cognitive flexibility. Well-adjusted individuals have strong social cognitive abilities, such as social perspective-taking, interpersonal conflict resolution, information processing, and communication skills, all of which begin development in childhood. When these skills first come into development, children are able to use them to initiate peer interactions, which subsequently allows these skills to develop further. Newman and Newman (2012) explained that their ability to see others' perspectives expands when they begin to interact with peers who have different life experiences and interact with the world differently. Children are more willing than some adults are to confront things that do not align with what they know, which allows them to grow and be

more flexible. The second lesson in daily interactions with peers is in learning about social norms. Within peer groups, social norms for acceptance and rejection are established. In the later years of middle childhood, children become more and more aware of these norms and begin to pressure one another to conform. Their peers' thoughts and opinions become more valued than those of trusted adults such as teachers or parents. This is also when children begin to develop parts of their personality and decide how they want to portray themselves to others. They may become the class clown or the athletic person as a way to gain approval from their peer group. During this time, they not only learn the "right way" to look and act, but they learned what emotions are acceptable to externalize versus internalize (Newman & Newman, 2012). Emotions that would contradict their cool and confident image to peers, such as vulnerability, sadness, and anger, are often inhibited (von Salisch, 2001). The third lesson of daily social interactions with peers is emotional closeness (Newman & Newman, 2012). Asher and Paquette (2003) identified close friendships as those with high levels of shared activities, companionship, help or guidance, and ease of conflict resolution. These friendships are important to development because they are the building blocks for adult relationships (Sullivan, 1949). They learn to resolve conflict between each other rather than forced conflict resolution that may occur in more authoritative relationships with parents (Newman & Newman, 2012).

Another developmental task of middle childhood is concrete operational thought, applying logic and reasoning to one's judgments (Piaget, 1972). Piaget found that the three conceptual skills used the most during the concrete operational stage are (a) conservation, (b) classification, and (c) computational skills. These skills help children develop a better understanding of the world's logic, order, and predictability. They apply these skills to their personal experiences, to solve interpersonal problems, and to accommodate their own interests

and needs. Eventually, they are able to see problems from their own perspective as well as that of others, and they are then able to formulate a plan to reach a goal.

The third developmental task of middle childhood is skill learning. Intellectual competence is built on the foundation of skills. They bring together information (what they know) and experience (how they know it) to recognize and solve important, concrete problems (Kuhn et al., 1995). Skills are goal-oriented and intended to be specific functions in specific environments. Once learned, proficiency increases and skills can be built upon to be able to perform more complex functions (Newman & Newman, 2012). In the United States, skills in reading, mathematics, and abstract reasoning are valued, whereas other cultures may place more value on skills in agriculture or social intelligence.

Children incorporate their internalized goals and external standards to create achievements they wish to make. This process is part of their self-evaluation, another developmental task of middle childhood (Newman & Newman, 2012). While performing tasks, they receive feedback from various sources, which they then incorporate into their self-evaluation. As children move into middle childhood and awareness of adults and the larger society increases, their self-evaluation process is further influenced by the social comparisons, criticism, and approval of adults (Newman & Newman, 2012). Children begin paying attention to their own abilities and those of others, such as athleticism, intelligence, or artistic abilities, and begin forming profiles of others and themselves. (Butler & Ruzany, 1993). Comparison of these skills contributes to their self-evaluation, and this process is impacted by their resolution of psychosocial crises in earlier stages. They may approach self-evaluation either with confidence or doubt (Newman & Newman, 2012). Susan Harter (1985, 1993) found that by the age of eight, children have differentiated specific areas of competence and have placed their own value on

what areas of competence are more important. The abilities in the areas of competence children deem more important have more of an impact on their self-evaluation than those they deem unimportant. Included in self-evaluation are self-efficacy and social expectations. Self-efficacy is a person's belief in their ability to perform the required behaviors in a given situation. Albert Bandura (1982) theorized that prior experiences, watching others, being taught by others, and feeling either nervous or confident influence self-judgments and self-efficacy. Feedback and expectations from people considered important become part of one's own self-concept and are factored into one's self-evaluation (Chen et al., 2006). Children rely on various external sources of assessment when trying to evaluate their own skills, including school grades, teacher feedback, and parent and peer assessments (Hergovich et al., 2002).

Team play is the final developmental task of middle childhood. Children become more cooperative as well as competitive in their play, and this is often the time when they join team sports. Interdependence, division of labor, and competitiveness are three significant characteristics of team membership that are important for growth during this stage (Newman & Newman, 2012).

According to Erikson's psychosocial theory (1963), children's attitudes toward work are established as part of their resolution of the psychosocial crisis of middle childhood, industry versus inferiority. Industry is a desire to learn new skills and do meaningful work. Kowaz and Marcia (1991) described three dimensions within the concept of industry: (a) cognitive, (b) behavioral, and (c) affective. The acquisition of basic skills and knowledge valued by the community was identified as the *cognitive* component of industry. The *behavioral* component of industry includes concentration, perseverance, work habits, and goal-directedness as qualities that help one apply one's skills and expertise effectively. The positive emotional outlook toward

acquiring and applying skills and knowledge was identified as the *affective* component of industry. When children in middle childhood attempt to master skills, they are at risk of feeling inferior if not mastered to their satisfaction or that of others. Feelings of inadequacy and inferiority come from the self and the social environment (Newman & Newman, 2012). Children who are unable to master certain skills experience feelings of inadequacy. Individual differences in aptitude, physical growth, and previous experience may lead to feelings of inadequacy in some areas. Via the mechanism of social comparison, the social environment often creates feelings of inferiority. At both home and school, children may often be compared to others and become more aware of skills they are not meeting the expectations for. Children who are becoming increasingly sensitive to peer approval and rejection may refuse to try a new activity for fear of being outperformed or criticized by their peers (Newman & Newman, 2012). Additional feelings of inferiority come from the negative value that society places on any kind of failure. Whether a child is told they did not try hard enough or that they lack the ability, they receive a message that they do not have the ability to succeed (Newman & Newman, 2012). When children overcome their psychosocial crisis by feeling inferior, they do not see themselves as having the ability to contribute to the wider community's well-being, which can have serious consequences.

A major way in which children are able to gain skills and knowledge is through education, which is the central process of middle childhood and can vary from culture to culture (Erikson, 1982). Education is the primary means by which children feel the sense of mastery and achievement associated with industry, as well as the critical feedback or unfavorable reviews associated with inferiority (Newman & Newman, 2012). When the central process helps a child come to a positive resolution of their psychosocial crises, they develop their prime adaptive ego quality of competence in middle childhood (Erikson, 1982). Erikson defined competence as

one's ability to navigate and master a situation's demands. Children who have developed an intrinsic sense of competence enjoy learning and working. They are enthusiastic about learning new skills and confident in their ability to succeed. Alternatively, some children experience a strong sense of apathy or disinterest, which Erikson referred to as inertia. Inertia is the core pathology of middle childhood and develops as a negative resolution of the psychosocial crisis. Rather than acting on belief in oneself, it is being withdrawn, passive, and inhibited. Children who leave middle childhood with a sense of inertia tend to carry that with them and have difficulty initiating actions or making changes in their lives (Newman & Newman, 2012). They lack belief in themselves and may struggle more to find success.

Early Adolescence

Erikson's original psychosocial theory perceived adolescence as one stage spanning from age 11 to 21. Through research and reviews of literature, later psychosocial theorists (Newman & Newman, 2012) observed two distinct periods of adolescence. The first stage is early adolescence, which includes individuals from about 12 years to 18 years of age or puberty through high school graduation. Many changes occur in individuals during this stage of life, including swift physical changes, maturation of cognitive and emotional functioning, increased sexual interest, and more delicate responses to peer interactions.

Developmental Tasks. Puberty is often known as the hallmark of early adolescence. As puberty begins, these individuals undergo many rapid physical changes such as height, muscle strength, body weight redistribution, the appearance of secondary sex characteristics, and maturation of the reproductive system. The appearance of secondary sex characteristics and maturation of body structure contribute to the amount of social acceptance by peers depending

on how much one's body matches the idealized body of society. Changes in their bodies can negatively or positively impact their self-esteem (Newman & Newman, 2012).

The gradual release of hormones from the adrenal glands contributes to the development of romantic and sexual relationships (Shirtcliff et al., 2009). This is also the period in which gender identity and sexual orientation are defined (Moore & Rosenthal, 2006). Dating is what initiates sexual activity in early adolescents as they learn how to flirt, to express interest, or to decline pursuers (Garguilo et al., 1987). Udry and Billy (1987) developed a model describing motivation, social controls, and attractiveness as the three basic dimensions of adolescents' initiation of sexual activity. Motivation includes the biological drive associated with sexual arousal, pleasure, and other interpersonal aspects. Social controls refer to the impacts of parental socialization and practices, educational aspirations, and the thoughts and sexual experiences of peers. Attractiveness contributes to the availability of partners. It is influenced by puberty and determines if one is judged as handsome or pretty (Udry & Billy, 1987).

In addition to physical and hormonal changes, early adolescents also gain new conceptual and reasoning skills. They also see increased emotionality and changes in memory as their brains begin to increase connections throughout the brain that regulate emotions, impulse control, and judgment (Brownlee, 1999; Spear, 2000). As formal operations develop, early adolescents begin to see themselves differently through introspection, increased integration of external sources, and more goal-oriented planning and control of behaviors. They are now able to incorporate multiple dimensions into their perspective rather than just one domain or issue at a time (Keating, 2004). There are approximately six new conceptual skills that emerge as an early adolescent develops formal operations: (a) the ability to simultaneously mentally manipulate more than two categories of variables, (b) the ability to think about changes that can happen over time, (c) the

ability to foresee a logical sequence of events, (d) the ability to predict consequences of actions, (e) the ability to detect consistency or inconsistency within a context, and (f) the ability to think about one's self, others, and the world in relativistic terms (Acredolo et al., 1984; Demetriou & Efklides, 1985; Gray, 1990; Neimark, 1982). As an early adolescent transitions from preoperational thought to formal operational thought, they also become less egocentric and de-center, meaning they gain an understanding that not all others share the same ideals (Inhelder & Piaget, 1958; Newman & Newman, 2012). Egocentrism in early adolescence can impact both social interactions and problem-solving as they can become preoccupied with their own thoughts and believe that others are also preoccupied with their thoughts. Their minds become saturated with thoughts about the possible, probable, distant future (Newman & Newman, 2012). They may conclude that they are unique individuals with unique thoughts and experiences that no one else could understand, also known as a personal fable (Elkind, 1967). This personal fable thinking could lead them to feel isolated. Additionally, early adolescents may also assume that others are also focused on their personal thoughts and experiences (Elkind, 1967). Rather than other people also being consumed by their own thoughts and beliefs, early adolescents may envision that they are the center of others' attention. Elkind referred to this concept as an imaginary audience, which can cause an uncomfortable self-consciousness in the early adolescent. A beneficial result of the imaginary audience is that it can sometimes help individuals develop cognitive perspective-taking.

Early adolescence can be an intense period of emotional development and often includes emotional variability, moodiness, and emotional outbursts. These things occur as they experience and learn about more complex emotional experiences and gain a wider range of emotions (Kang & Shaver, 2004).

Social Learning Theory

Another theory that may be considered a lens for understanding adolescent development is Albert Bandura's social learning theory (1971, 1977). This theory is based on the concept that much of learning results from observation and imitation. This process involves a model, the person being observed, and the act of modeling when another individual imitates the model (Bandura & Walters, 1963). Through their studies, Bandura and Walters found that children observe the behaviors of models and follow through to see what happens to the model. Children are more likely to imitate models when the model's behavior is rewarded and less likely to imitate the behavior when it is punished. In addition, when bad behaviors are not punished, they are more likely to be imitated. This learning process is known as vicarious reinforcement. Powerful and prestigious models are among those that children are most likely to imitate (Bandura, 1971, 1977).

Through observational learning, a child may gain motivation to perform behaviors or find resistance to behaviors with unfavorable consequences. This process can promote self-regulation for engaging in and resisting behaviors (Grusec, 1992). The application of this concept to an adolescent in the 2020s could be seen in their behaviors on social media. Adolescents observe literal models and other influencers on social media and learn what content the post receives the most "likes," "hearts," or comments. If their goal is also to get likes, comments, or followers, they may post similar content to achieve the same results as the influencers with a large following. If a following is not their goal, they may enjoy the likes or comments they receive, which reinforces them and results in them continuing to post similar content to achieve their desired results. Newman and Newman (2012) discussed the importance of models recognizing potential impacts or influence they have on those they know are observing them, whether it be a

parent, teacher, or social media influencer. Bandura discussed how youths not only have to manage major biological, education, and social role transitions, but they also adapt to cultural changes and new forms of social interactions due to developing technology and media. He stated that contemporary teenagers fill the unoccupied moments of their everyday lives with texting messaging or chatting online. Their ability to control their self-presentation, shape their identity, and communicate privately has added a layer of independence from parental supervision.

In addition to social learning theory, Bandura and National Institute of Mental Health (1986) is also credited with expanding the theory related to learning, social cognitive theory. This theory adds to the idea that people learn from observation with the concept that there are additional cognitive or internal factors that facilitate the learning process, such as self-efficacy. Bandura and National Institute of Mental Health (1986) described self-efficacy as an individual's belief in their capability to plan and execute the action required to achieve desired results. He emphasized "self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (Bandura & National Institute of Mental Health, 1986, p. 71). Social cognitive theory suggests that self-efficacy develops through four major psychological processes to produce actual behaviors: cognitive, motivational, affective, and selection processes. Cognitive processes include self-appraisal capabilities, skills, and resources; goal selection, development of success and failure scenarios; problem-solving options; and attention and focus on task completion. Motivational processes include self-regulation of motivation, attribution, the value of expected outcomes, and clarity and value of goals. Affective processes refer to a person's self-perception of how they are able to cope with distress and emotions. Selection processes include decisions on where to live, career, family, and use of time. These processes are always changing and contributing to an individual's self-efficacy.

Furthermore, these processes are constantly impacted by at least five primary sources. *Mastery* of a skill or task will raise self-efficacy. *Vicarious experiences* such as seeing a similar peer complete a task successfully contribute to a strong sense of self-efficacy. *Social persuasion* includes convincing verbal persuasion given by people important to the individual. *Physiological and affective states* refer to the actual and perceived physiological and emotional conditions that function through affective processes. These states also include physical and mental readiness for action, vulnerability to fatigue, and ability to decide to continue or give up. *Imaginal experiences,* such as imagining successful or unsuccessful outcomes, can be a coping strategy and can boost self-efficacy (Bandura, 1977). Usher and Pajares (2008) added that the beliefs that people develop about themselves and others contribute to an individual's perspective of the world and create self-efficacy beliefs. Klassen and Usher (2010) suggested the importance of collective self-efficacy as youths are constantly interacting with peers and teachers, indicating the impacts the efficacy of a whole class or subgroups in a class has on individual self-efficacy.

CHAPTER III: WHAT ARE THE IMPACTS OF SOCIAL MEDIA ON THE SELF-CONCEPT AND INTERPERSONAL FUNCTIONING OF YOUTHS?

Adolescence is an important stage of development that contributes to forming an individual's self-concept; yet, it is a time filled with contradictions and confusion about oneself (Harter, 2012). During adolescence, changes associated with puberty, such as increased hormones and brain maturation, impact social-cognitive development. Social-emotional experiences are intensified as adolescents become more sensitive to their social environment (Crone & Dahl, 2012; Nelson et al., 2005). Friends are an important factor in developing self-concept during adolescence (Harter, 2012). Therefore, interpersonal functioning has more impact on adolescents' self-concept than any other age group.

Self-Concept Defined

Carl Rogers was one of the first psychologists to define self-concept (Rogers, 1959). He described self-concept as how individuals perceive of and what they believe about themselves in an organized and consistent manner. He believed that an individual's self-esteem, self-image, and ideal self were all components of one's self-concept (Rogers, 1959). Later, researchers studied the self-defined self-concept in similar ways. Morris Rosenberg (1979) described self-concept as being the sum of an individual's thoughts and feelings toward themselves, and Roy Baumeister (1999) defined it as an individual's beliefs about themself, which includes their attributes and who and what the self is. Wehrle and Fasbender (2019) defined self-concept as "the totality of a complex, organized, and yet dynamic system of learned attitudes, beliefs, and evaluative judgments that people hold about themselves" (p. 1).

Self-esteem, sometimes referred to as *global self-esteem*, is a component of the self-concept and is known as how people view themselves and how worthwhile or competent they

believe they are (Rosenberg, 1979; Rosenberg et al., 1995). In addition, self-esteem can be on a spectrum of negativity and positivity (Coopersmith, 1967). Within the self-concept, domain-specific self-concepts, such as physical or academic self-esteem, are thought to make up the parts of global self-esteem (Marsh & Shavelson, 1985; Rosenberg et al., 1995). Self-esteem develops over time and has a certain stability, known as *trait self-esteem*, but it is also fluid and can change in response to events or contexts, known as *state self-esteem* (Brown & Marshall, 2006; Heatherton & Polivy, 1991). There are two primary theoretical perspectives on global and domain-specific aspects of self-esteem. The first is an *intrapersonal* perspective that claims that global self-esteem is based on people's own perspectives and valuations of performing in specific domains that they consider important (James, 1890; Moller et al., 2006). The second is an *interpersonal* perspective, which proposes that global self-esteem is developed through the internalization of others' perceptions and evaluations of oneself (Cooley, 1902; Kenny et al., 2006; Mead, 1934). According to the interpersonal perspective, the foundation of global self-esteem is an individual's self-esteem in the domain of social relevance and is primarily influenced by self-evaluations that are significant for the individual's social status (Gentile et al., 2009; MacDonald et al., 2003). Furthermore, it has been suggested that the major role of global self-esteem is to identify threats of social exclusion (Leary et al., 1995). Research, including that conducted with adolescents and young adults, has shown global self-esteem to be a predictor of important life outcomes such as anxiety and depression (Orth & Robins, 2014; Sowislo & Orth, 2013; von Soest et al., 2016).

Self-Evaluations

It is thought that humans use social comparison for various functions, including self-evaluations that contribute to their self-esteem and later to their self-concept (Festinger, 1954).

However, not all social comparison is conducted equally. Upward social comparison occurs when individuals compare themselves to others they perceive as superior and having positive characteristics. Downward comparison occurs when individuals compare themselves to others with negative characteristics and whom they perceive to be inferior (Wills, 1981; Wood, 1989). While upward social comparison has been shown to have a positive impact and can help to inspire people to reach their goals, it more often leads to more negative outcomes (Marsh & Parker, 1984; Morse & Gergen, 1970). Downward social comparison has a similar impact in that it can sometimes make people feel bad because it reveals how things could be worse, but it more often leads to improvements in self-evaluation (Aspinwall, 1997; Wills, 1981).

Self-evaluation transforms into a more complicated process in middle childhood. A child's worldview shifts from being centered around themselves and the adults in their lives to being heavily influenced by their peer groups (Newman & Newman, 2012). During middle childhood, children begin to observe others to assess their own abilities (Butler & Ruzany, 1993). In addition to the new sources of input, additional factors feed into the self-evaluation process, such as pressure to conform, competition, and the need for approval. *Self-efficacy*, which is a child's own personal judgment about their abilities, and *social expectations*, the influence of expectations of others, are two contributors to a child's self-evaluation, which feeds into their self-concept (Newman & Newman, 2012). It has been suggested that children generate profiles of one another as they begin to identify others' skills: "Oh, Rafael is good in math, but he runs like a girl"; "Jane is kind of fat, but she writes great stories"; "I like Rashidah best because she's good at everything" (Newman & Newman, 2012, p. 312). They then compare themselves to the profiles they generated for peers as part of their self-evaluation. The

comparison contributes to positive or negative feelings in areas of self-esteem and alters their overall self-concept (Newman & Newman, 2012).

Early adolescents continue to embody a level of egocentrism that includes two primary components that may impact their social interactions: (a) preoccupation with their own thoughts and (b) a belief that they are the center of other people's thoughts as well (Newman & Newman, 2012). These egocentric beliefs and behaviors could set adolescents up for disappointment when using social media if they are expecting everyone to "like" or interact with their posts and do not obtain the level of response they were anticipating. There is a lack of research that studies how profiles typically generated from observations in person are impacted when viewing profiles on social media that depict the strengths and characteristics that the creator wants others to see. Studies utilizing social comparison theory may aid in studying this area.

Social Media Impact on Self-Concept

Much of the research about the impacts of social media use is focused on self-esteem as a component of self-concept rather than self-concept as a whole. Social media allow users to construct their own identity online, and when they receive positive feedback, their self-concept improves in real life or offline (Urista et al., 2009). One study found that receiving positive feedback on social networking sites (SNS) was associated with adolescents' higher social self-concept, while negative feedback was associated with a lower social self-concept (Valkenburg et al., 2006). A study conducted in Australia surveyed 1,819 students with a mean age of 14.9 years across 34 high schools to investigate whether there was a relationship between their use of SNSs and their social self-concept, self-esteem, and depressed mood (Blomfield Neira & Barber, 2014). The students completed a questionnaire that took approximately 40 minutes and included questions about their demographics, use of SNSs, frequency of SNS activities, investment in

SNS, and their social self-concept, self-esteem, and depressed mood. The authors did not indicate questions or exclusions regarding other variables, such as mental health conditions other than depression. Assessment of SNS activities included making new friends, staying in touch with people one rarely sees in person, making plans with friends, flirting with someone, changing or adding content to one's profile, and communicating online with friends met on an SNS. *SNS investment* was defined as how important SNS are to the adolescents in addition to the frequency that they access SNS. The authors found this important to consider because two adolescents who access SNSs with the same frequency each day have different levels of investment. Adolescents with higher levels of investment might report feeling more out of touch if their access to SNSs were to be restricted more than the other adolescent would. This construct was measured with Likert scale responses to SNS being a part of the student's daily routine and feeling out of touch when not having accessed SNSs. The authors used Harter's (1999) definition of self-concept, which is the totality of knowledge structures about the self, in combination with the idea that SNSs facilitate identity exploration and reflection (Blomfield Neira & Barber, 2012) for the construct of the social self-concept. The study resulted in three core findings. The first was related to differences by gender, such that the use of SNS have more negative aspects for female youths than males and is a more positive leisure activity for male than female youths. They found that males with SNS profiles reported a better self-concept and higher self-esteem than males without SNS profiles. In contrast, females with SNS profiles reported poorer self-concepts, lower self-esteem, and significantly higher levels of depressed mood than females without SNS profiles. The authors relate this finding to previous research indicating that female youths use SNS as part of their self-evaluation, seeking feedback from others about themselves (Valkenburg et al., 2005a). The study's second core finding suggests that the frequency of SNS

use is a positive predictor of youths' social self-concept. Youths who access SNSs more frequently have more opportunities to engage with others or receive feedback and are more likely to experience satisfaction in their social interactions and social self-concept. The third core finding was that more investment in SNSs was linked to lower self-esteem and higher levels of depressed mood. They related this finding to the frequency and investment of upward social comparisons made on SNSs when evaluating themselves. Overall, the authors concluded that it is investment more so than the frequency associated with negative outcomes of social media use. They found frequency linked to positive outcomes but the level of investment to be linked with poorer self-esteem and a depressed mood. The authors acknowledged limitations and stated the possibility of more complex bidirectional relationships involved and proposed future studies to consider possible causal mechanisms that influence social self-concept, self-esteem, and depressed mood related to the use of SNSs (Blomfield Neira & Barber, 2014).

It has been suggested that SNS are used in a social comparison capacity and influence self-evaluations (Haferkamp & Kramer, 2011). Because SNS provide freedom to post whatever the user desires, it is more likely that users more frequently post perfectly crafted content that represents their ideal self-views (Rosenberg & Egbert, 2011). This results in more frequent upward social comparison because people are comparing their actual offline selves to the idealized online selves of others. This impact can be seen in frequent social media users who believe others are happier and more successful than they are (Chou & Edge, 2012). People, on average, are more likely to engage in upward social comparison while using SNS than they are to engage in downward social comparison. A University of Toledo correlational study (Vogel et al., 2014) surveyed 145 participants with a mean age of 19 years to determine whether people with more exposure to upward social comparisons on SNSs have lower trait self-esteem. Participants

answered questions regarding the frequency of Facebook use, completed the Rosenberg Self-Esteem Scale (Rosenberg, 1965) to assess the participants' global evaluation of themselves, and answered questions about the extent to which they observed people they considered better or worse off than themselves on Facebook. The study found that the frequency of Facebook use negatively correlated with self-esteem, and participants with higher use of Facebook tended to engage in both upward and downward social comparisons more often and tended to evaluate themselves more poorly. The researchers also conducted an experimental study with 128 participants with a mean age of 19 years to explore whether brief exposure to SNS-based social comparisons would impact state self-esteem and self-evaluations. Participants reported a lower state of self-esteem after exposure to fictitious profiles considered an upward social comparison, than when viewing profiles considered to be a downward social comparison (Vogel et al., 2014). These studies highlighted the negative correlation between frequent Facebook use and trait self-esteem, negatively impacting an individual's self-concept (Jan et al., 2017; Vogel et al., 2014).

Peer acceptance, interpersonal feedback, and control over one's environment were significant predictors of adolescents' self-esteem (Harter, 2003). The use of SNSs provides adolescents with exposure to all three predictors. Users of SNSs have full control over their environment and choose how they want to present themselves on their SNS profiles. Once the user has constructed their social media profile, the other two predictors of adolescent self-esteem, interpersonal feedback and peer acceptance, are accessible. Revisiting interpersonal theory assumes that a feeling of peer acceptance would result in increased self-esteem, just as feeling rejected by peers will decrease one's self-esteem (Heatherton & Wyland, 2003; Mead, 1934). Further research has found that feelings of acceptance can be obtained by receiving positive feedback on social media through comments or "likes," and conversely, negative

feedback on social media was associated with reduced self-esteem (Valkenburg et al., 2006; Valkenburg & Peter, 2011). Metzler and Scheithauer (2017) found that positive feedback from friends on social media is more likely to occur in response to a positive presentation of oneself, while another study found that people who post negative content are less liked than those who post positive content (Forest & Wood, 2012). Results indicated that to increase one's self-esteem and self-concept, one could elicit positive feedback from others by posting positive content on social media (Metzler & Scheithauer, 2017; Valkenburg & Peter, 2011; Yang & Brown, 2013). However, there was a personality trait that influenced the impact of getting more or fewer "likes" found by researchers who surveyed 1,996 Facebook users aged 13 to 90 years (Scissors et al., 2016). Participants completed a Likert-style response online survey requesting information about their personal characteristics and their attitudes and behaviors about likes on Facebook. Personal characteristics included constructs of self-esteem, self-monitoring, extraversion, and relationship maintenance behaviors. They described self-monitoring as how people monitor or regulate how they present themselves in social situations. The American Psychological Association (n.d.) added that people who were high self-monitors were more likely to conform to others in similar situations, whereas low self-monitors were more likely to stay aligned with their internal feelings. The study found that people with higher levels of self-monitoring and lower self-esteem tended to place more value on "likes" or positive feedback than those with lower levels of self-monitoring and higher self-esteem. For people with high self-monitoring and low self-esteem, getting no feedback or less feedback than expected could reduce self-esteem in ways similar to receiving negative feedback. They found that getting "enough likes" on their posts was important to 52.7% of participants. The average number of what participants considered "enough likes" was eight. In addition, the researchers found that 42.7% of participants reported that whom the

"likes" came from was more important to participants than the number of "likes" received, and 47.0% said it was equally important. Participants wanted the most "likes" from close friends, followed by romantic partners and family other than parents (Scissors et al., 2016). Similar research has found that people with lower self-esteem or social anxiety may value "likes" more because they have a higher desire to feel socially accepted (Leary et al., 1995; Van Zalk et al., 2011). This tendency of people with lower self-esteem to rely on positive feedback from others to feel good about themselves is associated with reduced well-being over time (Kernis et al., 2000). In addition to high self-monitoring and low self-esteem, people who are more introverted have different responses to interaction with peers online. Research findings show that interacting with peers found solely online was significantly related to enhanced self-esteem and fewer depressive symptoms in introverted individuals (Van Zalk et al., 2011). This finding aligns with the social compensation hypothesis, which states that youths who are less comfortable interacting with peers face-to-face can get their social needs met online without having to worry about social nuances such as eye contact, tone of voice, or facial expressions and, therefore, benefit more from the online interactions (McKenna et al., 2002; Valkenburg et al., 2005b).

Self-image, another component of a self-concept, consists of the views, thoughts, and emotions that revolve around one's own body (Jiotsa et al., 2021). It is compiled from a literal mirror image and a reflection of social constructs. Dissatisfaction with one's body image occurs when an individual's real body is not congruent with an idealized body (Blowers et al., 2003; Jiotsa et al., 2021). Using social media sites is associated with higher body dissatisfaction overall with specific positive correlations between the frequency of physical comparisons and higher rates of body dissatisfaction and desire to be thin (Holland & Tiggemann, 2016; Jiotsa et al., 2021). The type of content consumed makes a difference in the impact, as following celebrity or

health and fitness accounts is positively correlated with a desire to be thinner, whereas following accounts of friends, acquaintances, or non-appearance-based accounts are not found to have the same correlation (Cohen et al., 2017). Young people are more likely to become dissatisfied with their body image if they compare their physical appearance to people who have bodies similar to their idealized body, also known as an upward social comparison (McKee et al., 2013; Tiggemann et al., 2009). Behaviors on social media such as uploading and viewing photos and using status updates to seek negative feedback are also associated with higher body dissatisfaction (de Vries et al., 2016). Additionally, there is a positive correlation between negative feedback from peers and body dissatisfaction, meaning the more negative feedback or reactions an individual receives on posts, the higher their rate of body dissatisfaction will be (Holland & Tiggemann, 2016).

A trend that has emerged on social media known as "fitspiration" or "#fitspo" is content that supposedly focuses on displaying healthy lifestyle habits, such as exercising and healthy dieting, to inspire individuals to exercise and be healthy (Carrotte et al., 2017; Easton et al., 2018). Research thus far on the impacts of viewing fitspiration content is limited; however, initial studies have focused on possible negative effects on body image and overall self-esteem (Boepple & Thompson, 2014; Holland & Tiggemann, 2017; Tiggemann & Zaccardo, 2015). One study conducted with young adults focused on users' viewing experience of fitspiration content and examined why they viewed fitspiration content and how they thought it impacted their thoughts, emotions, behaviors, and health (Easton et al., 2018). Qualitative results consisted of four themes: (a) a desire to gain information related to exercise techniques, workouts, and healthy recipes; (b) unrealistic and altered content; (c) negative effects on emotional well-being; and (d) vulnerability and protective factors. The most positive and beneficial themes found were

related to positive behavior changes. Participants reported they were able to find new ideas for exercise, experienced more motivation to exercise, followed a healthier diet, and had a positive mindset about goal setting and living a healthy lifestyle. However, all participants shared how they often felt that fitspirational content was unrealistic and difficult to relate to. They subsequently reported experiencing frustration and negative feelings toward the people posting fitspirational content and adverse feelings about their own goal setting and perseverance. Participants explained that it can be difficult to determine what fitspiration content can be trusted and what posters are qualified to be giving valid advice. Factors reported that make it difficult to trust posts are knowing that posters use good lighting, specific poses, filters, and choosing only the best photographs or videos to share. Fitspiration viewers also acknowledged that many fitspiration posters post content, advice, or brands for financial gain. Viewers perceived that it is difficult or impossible to attain or relate to the healthy lifestyles depicted by fitspiration posters for reasons including posters having a home gym or money for gym memberships, activewear, and healthy foods; prior cosmetic surgeries or body alterations; and often not having other employment obligations. While participants reported an increased ability to make more informed choices about their eating habits, many reported that it encouraged their obsession with calorie counting. The viewers of fitspiration content discussed factors they believed negatively impacted viewing the content, such as gender, age, mood, critical thinking skills, and decisions about what content to follow. Both genders believed that females and younger individuals were more vulnerable to the negative impacts of fitspiration content. Participants shared how their mood influenced how they interacted with fitspiration content, explaining that if they were in a good mood, the content could motivate them to engage in a healthy lifestyle and as a buffer against negative effects. Many also reported that viewing fitspiration content typically worsened their

mood if they were in a “bad” mood. Some participants reported that they tried to be conscious about how they consumed fitspiration content by trying to keep it at a distance rather than becoming immersed in it, critically assessing the images and messages being shown to them, and by following fitspiration posters that they felt as if they could relate to. Although participants could verbalize awareness about the unrealistic and altered realities of some fitspiration content and share tips and tricks to minimize negative effects, many still admitted to adverse effects from viewing fitspiration content, such as feeling guilty about their choices and behavior and negative feelings toward their own bodies (Easton et al., 2018).

Recognizing the negative impacts that social media can have on adolescent body image may have contributed to an increase in the concept of body positivity (Cohen et al., 2019). Body positivity is described as rejecting unrealistic ideas of what a body should look like and accepting and loving bodies of any shape, size, or appearance. Body-positive content intends to deconstruct mainstream ideas of what beauty is and encourages acceptance of all body types (Cohen et al., 2019). Research on this concept is still limited, but it is believed that viewing body positivity content is a buffer against unrealistic, idealized content and can lessen the likelihood of body dissatisfaction (Convertino et al., 2019; Rodgers et al., 2019). A study in which participants with a mean age of 22.4 years were grouped into viewing either body-positive, thin-deal, or appearance-neutral Instagram posts revealed that brief exposure to body-positive posts is associated with improvements in not only body satisfaction of young women but also in body appreciation and mood. Additionally, body-positive and thin-ideal posts were associated with increased self-objectification, whereas appearance-neutral posts did not result in self-objectification (Cohen et al., 2019). Knowing that self-evaluations of people in even younger age

brackets are more susceptible to impacts of what they view, it is important to consider that these findings may be magnified for youths (Newman & Newman, 2012).

While all the research included in this review was not conducted solely with youths, the findings are still meaningful and applicable. Some of the findings sound contradictory, but it can be argued that the findings related to self-concept were examined and presented differently. Blomfield Neira and Barber (2014) found that investment in social media use was more impactful on self-concept than the frequency of social media use, while another study found that frequency was associated with more negative outcomes (Vogel et al., 2014). The other studies included factors related to investment that they examined or labeled differently. Importance of "getting enough likes" (Scissors et al., 2016), relying on positive feedback to feel accepted (Kernis et al., 2000; Valkenburg et al., 2006; Valkenburg & Peter, 2011), and increased self-monitoring and conforming when using social media could be considered components of investment with social media use. More research is needed to examine the relationship between the two concepts of frequency and investment, as the mixed research does not allow us to draw evidence-based conclusions about the impacts of social media use on self-concept just yet.

Interpersonal Functioning

Research about the impacts socializing on social media has on interpersonal functioning offline is scarce, but some studies have examined similar concepts. Interpersonal relationships that develop through social media have been found to positively impact the development of offline relationships (Metzler & Scheithauer, 2017). Adolescents use social media to strengthen their offline relationships, and sending direct messages on SNS positively affects existing offline relationships among adolescents (Reich et al., 2012; Valkenburg & Peter, 2009). For individuals who find face-to-face interactions with others anxiety-provoking, SNS may serve as a less

threatening environment to practice social skills and disclose personal information more openly than offline (Valkenburg & Peter, 2007, 2009). Additionally, they can use the information they see on social media to start conversations offline (Metzler & Scheithauer, 2017). The AACAP ("Social media and teens," 2018) stated that the potential benefits that young users could experience through social media use are staying connected with friends, meeting new people with similar interests, and finding community and support for specific activities. The support found on social media by young users has been associated with increased self-expression, inspiration, and feeling supported (Rideout et al., 2021). In addition, support found on social media can serve as a protective factor against loneliness, depression, and cyberbullying (Rideout et al., 2021).

It can be difficult to measure how social media may affect peer relationships, but one study reviewed the literature and created a transformation framework to observe adolescent social media interactions (Nesi et al., 2018). The authors discussed taking this approach because they identified that much of the research conducted in this area utilized a mirroring framework, which is the idea that adolescents' social interactions and behaviors are the same offline as they are online. They felt it was important to investigate the differences between social interactions and behaviors online and offline. The authors did not focus on whether the differences were positive, negative, or neutral but highlighted that there were, in fact, differences. After a careful review and synthesis of the literature, they identified seven critical features in understanding the transformation of adolescent social interactions and behaviors when online: asynchronicity, permanence, publicness, availability, cue absence, quantifiability, and visualness. Asynchronicity is defined as the time lapse between points of communication. Communication through social media allows for more time between communication that can be used to consider responses, but

a longer response time may also create greater uncertainty in relationships. Permanence refers to the permanent accessibility of content shared via social media. Impulsive posts may remain available for others to see for an extended period. The permanence of posts allows for comparisons and co-rumination for longer periods. Publicness is described as the accessibility of information to large audiences. Social media users can receive support from a wide network though some feel the need to prove friendships through public displays. Availability refers to how easily content can be shared, regardless of physical location. Social media can provide immediate and frequent access to social support, but they may also result in people expecting to always have constant accessibility. Cue absence is defined as the degree to which physical cues are absent. Though social support may be more frequent, it may be less rich and lack more personable social skills. Removing the physical aspect of socialization can increase the comfort level of communicating with others for socially anxious youths, while it may leave others feeling dissatisfied with social interactions. Quantifiability refers to the allowance for countable social metrics. Friendships can be quantified through the number of "likes" or comments. Quantifiable support encourages users to share more information that may be more personal or dramatic to receive more "likes" and comments. Additionally, problematic behaviors may also be reinforced by quantifiable likes and comments. Finally, visualness is the extent to which photographs and videos are emphasized. Photographs provide more opportunities for friends to communicate visually, often with expectations that friends comment on friends' appearances. The authors concluded that the transformation framework suggests that social media alter peer relationships in a variety of ways, including increasing the frequency and immediacy of experiences, highlighting certain experiences and demands, providing new opportunities for compensatory behaviors, and providing new opportunities for completely novel behaviors (Nesi et al., 2018).

Online Interpersonal Harm

Internet harassment, *Internet bullying*, *Internet aggression*, and *cyberbullying* are all terms that have been used as forms of online harm toward others (Modecki et al., 2014). These terms include some set of behaviors utilized to intentionally harm others online. There is no uniform definition of what bullying is but the most commonly cited description of bullying is "harmful and repetitive behaviors enacted by a perpetrator who is more powerful than his or her victim" (Modecki et al., 2014, p. 603). Adding the element of technology further complicates the agreement on a definition of cyberbullying, and Modecki et al. (2014) argued that definitions affect prevalence rates, perpetration rates, and victimization rates found in studies. They stated that a proper understanding of cyberbullying is crucial to knowing how to intervene (Modecki et al., 2014).

Social exclusion and the emotional and neural effects experienced while using social media have been observed through the Cyberball paradigm using functional magnetic resonance imaging (fMRI; Williams & Jarvis, 2006). Cyberball is a virtual game with three players that involves tossing a ball to each other. After one round of ball tossing spread equally between players, the player being observed is excluded from the play. Adolescents studied using Cyberball displayed activity in the ventral striatum and the subgenual anterior cingulate cortex (ACC) when excluded from the computer game. The ventral striatum and the ACC are active areas of the brain when experiencing salient emotions such as depression (Lieberman & Eisenberger, 2009, 2015; Silk et al., 2014). Results of this research highlighted how youths are particularly sensitive to online rejection, peer acceptance, and peer influence as their neural systems are still developing through adolescence. There are many situations in which youths could feel rejected on social media, such as seeing others post about a gathering without them or

not receiving the feedback they were hoping for on a post. Likely, youths exhibit similar activity in the brain during these experiences as with the social rejection felt in the Cyberball experiment.

Social rejection has also been studied using techniques that closely mirror online communication (Guyer et al., 2009). In the social judgment paradigm, participants are judged when they enter a chat room based on their profile pictures. The result of being rejected or accepted is similar to that of receiving or not receiving "likes'" on social media. When rejected based only on one's profile pictures in children, adolescents, and adults, neuroimaging revealed increased activity in the medial frontal cortex, which is the area of the brain involved in processing, representing, and integrating social and affective information (Achterberg et al., 2016, 2017; Wood & Grafman, 2003). Furthermore, adolescents showed a larger cognitive load and emotional response to rejection through enhanced pupil dilation (Silk et al., 2012). This research showed that adolescents are particularly sensitive to social rejection than other age groups, whether from not receiving as much positive feedback as they expected on a post or from feeling excluded or rejected by peers posting on social media. These emotional experiences felt while using social media can influence their interactions with peers offline and their self-concept (Crone & Konijin, 2018).

Over the past two years, the frequency of exposure adolescents reported related to racist, sexist, and homophobic speech on social media has increased (Rideout et al., 2021). While online, 3 in 10 young women regularly encounter sexist comments, more than one-third of young Black people face racist comments, and more than 4 in 10 LGBTQ+ youths endure homophobic posts (Rideout et al., 2021). Exposure to online hate speech can significantly negatively impact the mental health of victims and has both short-term and long-term effects (Brown, 2015; Buf & Stefanita, 2020). Short-term effects can include severe emotional distress exhibited by anxiety,

panic, shame, and fear. Long-term effects of online hate speech can include stress, psychosomatic disorders, anxiety, depression, and alcoholism (Brown, 2015).

The last anonymously posted comments that a 14-year-old girl read on a popular social media platform in the UK called Ask.fm before hanging herself in her bedroom included: "Do us all a favour n kill ur self" (Henley, 2013; Smith-Spark, 2013). In April 2013, in the earlier years of the social media explosion, Ask.fm reported that its site had been used by 180 million users in 150 countries and had 13 billion page views. Approximately half of the users were under 18 (Henley, 2013). This is just one of many cases involving some form of self-harm related to experiences on social media (Bazelon, 2013). After being bullied on Ask.fm, Kik, and Voxer, a 12-year-old girl from Florida, Rebecca Sedwick, died by jumping from a tower in 2013 (Almasy et al., 2013). Messages such as "You should die" and "why don't you go kill yourself?" were allegedly exchanged online between Rebecca and her previous friends turned bullies. A sheriff on the case reported that following the death of Rebecca, one of the bullies posted on her Facebook, "Yes IK I bullied REBECCA, nd she killed her self but IDGAF," meaning "I don't give a (expletive)." This incident resulted in the arrest of the two girls who bullied Rebecca online and in-person under the charge of aggravated stalking, with the sheriff adding that he feared for the safety of other children (Almasy et al., 2013). Approximately one year later, it was revealed that, in addition to being bullied in-person and online, Rebecca had used social media platforms to post anonymous comments to herself. In Nova Scotia, Canada, following the suicide of 17-year-old Rehtaeh Parsons, local authorities attempted to enact a cyberbullying law that allowed victims to identify anonymous perpetrators and sue individuals or the parents of minors (Dahl, J., 2014). The law was not passed because it violated personal freedoms (Ruskin, 2015).

When the creators of Ask.fm were expected to respond publicly about how they would prevent bullying on their platform, they responded that bullying is a learned behavior and a cultural and social problem (Dickey, 2014). Other social media platforms have anti-bullying policies but still state that preventing bullying online is difficult. Facebook has a Bullying Prevention Hub on its site as a resource for those seeking support for issues related to bullying. They state that they have a team that reviews reports of bullying and harassment and have removed 8.8 million pieces of content and over 54% of bullying content (Facebook, 2022). In their Community Standards Report, in the Bullying and Harassment section (Meta, 2022), they state that they do not tolerate bullying and harassment on either Facebook or Instagram but added that it can be difficult to detect due to its highly personal nature. They count on users to report incidents of bullying and harassment and then use their metrics to capture "only bullying and harassment where a deeper understanding of context or meaning is not necessary to determine if it violates our policy" (Meta, 2022, para. 2). In their Bullying and Harassment policy, they state that for private users, they "remove content that is meant to degrade or shame, including, for example, claims about someone's sexual personal activity" (Bullying and Harassment, para. 3). They further state that their policies provide increased protection for users ages 13 to 18 years as they are the age range that experiences the most emotional impact from bullying and harassment (Meta, 2022). In addition, Facebook provides a nine-page PDF entitled Empower Teens for teenagers who have been a victim of bullying, for those who want to help others who are being bullied, and for those who have engaged in bullying (Facebook, n.d.).

The research regarding the interpersonal functioning of youths and social media has focused on interpersonal experiences that occur online and not on how those experiences online impact interpersonal functioning offline. Some research is available suggesting that interpersonal

interactions on social media can strengthen offline relationships (Reich et al., 2012; Valkenburg & Peter, 2009), can be satisfying for individuals with social anxiety (Valkenburg & Peter, 2007, 2009), and can help youths find supportive communities (Rideout et al., 2021). Some research has focused on the difference between offline and online interpersonal interactions, such as the time-lapse between communication, the publicness of interactions, the lack of social nuances, or the quantifiability of friends and interactions online (Nesi et al., 2018). Another theme found in the research related to interpersonal functioning of youths and social media of interpersonal harm such as cyberbullying or social rejection. Impacts of online interpersonal harm can be seen in brain activity and in negative effects on mental health and well-being (Brown, 2015; Buf & Stefanita, 2020; Williams & Jarvis, 2006). Furthermore, exposure to hate speech and discrimination online can have both short-term and long-term negative effects on well-being. Overall, more research is needed to further study the impacts that interpersonal interactions on social media have on interpersonal interactions offline.

CHAPTER IV: WHAT CLINICAL PRESENTATIONS ARE ASSOCIATED WITH YOUTHS WHO EXHIBIT PROBLEMATIC SOCIAL MEDIA?

Clinical Presentations

As rates of social media use and mental health challenges in children and adolescents have increased in the past decades, many researchers have devoted studies to examining whether the two are related and how. It is challenging to identify direct causal relationships due to numerous variables that have not been or are difficult to be controlled for. Many studies have found correlations between social media use and clinical presentations, such as self-harm and suicidality, sleep disturbance, attentional difficulties, addictive symptoms, depression, anxiety, and general psychological distress.

Self-Harm and Suicidality

As both rates of suicide and rates of social media usage among children and adolescents have increased, much research has been devoted to investigating any connections between the two. Thoughts and actions related to suicide or self-harm may result from viewing content around the topics on social media or as a side effect of other dynamics of social media use. However, most of the research related to social media and self-harm has focused on the amount of content related to self-harm rather than how social media use impacts self-harming behaviors. Non-suicidal self-injury (NSSI) is described as deliberate harm to body tissue without conscious intent to die, with common methods being cutting, burning, or scratching (Cipriano et al., 2017; Nock, 2010). NSSI tends to occur first during adolescence at 12 to 14 years of age, which is also the population with the highest prevalence (17.2%) of NSSI (Cipriano et al., 2017; Nock, 2010; Swannell et al., 2014).

Potential benefits associated with online activity related to NSSI include a reduction of social isolation through a sense of community, encouragement for recovery, a reduction in NSSI, and emotional self-disclosure. Risks of viewing content related to NSSI include triggered urges, normalization, acceptance of NSSI, and NSSI social reinforcement (Baker & Lewis, 2013; Dyson et al., 2016; Lewis & Seko, 2016). One study analyzed the top 100 videos that were generated on YouTube after searching "self-injury" and "self-harm," and they found varying messages (Lewis et al., 2011). Fifty of the videos analyzed contained a live person, and 50 were noncharacter videos that included other visual representations such as photographs or narrations. More videos were found to have a melancholic tone (51%) rather than an encouraging tone, with NSSI portrayed in the videos, most commonly in the form of cutting. Explicit self-injury could be viewed in 28% of the character videos and 90% of the non-injury videos. Many of the videos (58%) did not have trigger warnings at the beginning, and most of them (80%) had unrestricted access, meaning anyone could watch the video regardless of their age. Creators of these kinds of videos were predominantly female, with a mean age of 14 years (Lewis et al., 2011). Similarly, Miguel et al. (2017) collected data on 1,155 public posts related to deliberate self-injury across Twitter, Tumbler, and Instagram at randomly generated time points over six months. The first 10 posts generated after searching "#cutting" were examined for graphic content, negative self-evaluations, references to mental health terms, discouragement of deliberate self-injury, and recovery-oriented resources. They found that approximately 60% of the posts depicted graphic content, including active self-injury, self-injury tools, cuts, scars, and/or blood. About 50% included negative self-evaluations and referenced topics such as physical appearance, depression, anxiety, eating disorders, and borderline personality disorder. Only 9.5% discouraged self-injury, and less than 1% shared

formal recovery resources. Of the platforms where data were collected, Instagram posts contained the most graphic content and negative evaluations, while Twitter contained the smallest amount of each (Miguel et al., 2017). Both studies discussed how these easily accessible videos contributed to a dangerous trend as they normalized these self-harming behaviors in a vulnerable population (Lewis et al., 2011; Miguel et al., 2017). Brown et al. (2018) added additional findings that posts that depicted NSSI wounds on Instagram were mainly posted in the evening hours, with a small peak in the early morning. This finding aligns with other research stating that youths experience the strongest urge for self-harm in the evening and most often engage in NSSI during evening times (Turner et al., 2016). This information is important to consider when working with youths who experience thoughts of self-harm or suicide. Additionally, they discussed the danger of social reinforcement related to self-harm posts as they found that pictures directly depicting wounds generated twice as many comments from other users than the pictures that did not directly depict wounds. The posts that showed very severe wounds generated more comments than pictures with mild to moderate wounds, which has also been observed in previous research (Dyson et al., 2016; Lewis & Seko, 2016). The concern is that the additional reinforcement, whether abusive, neutral, or empathic, could lead to adolescents intentionally or even subconsciously posting content with more severe wounds. They also stated that the actual act of NSSI may serve as an emotion regulation function, while posting the act on social media serves more of a social function. Age was not a controlled variable in this study. However, of the users who voluntarily stated their age for whatever reason, the mean age was 14.8 years (Brown et al., 2018).

A systemized narrative review examined 38 articles related to youths' use of social media and deliberate self-harm. One of the review's key findings was the prevalence of cyberbullying

victimization. Five of the 38 articles reviewed the impact of cyberbullying victimization on deliberate self-harm and suicidal risk of young people. Three studies found an independent association between a history of cyberbullying victimization and deliberate self-harm (Chen et al., 2018; Duarte et al., 2018; Perini et al., 2019). Two studies reported that cyberbullying victimization was a mediating factor between social media use and suicidal ideations and behaviors (Lee et al., 2017; Sampasa-Kanyinga & Hamilton, 2015). In addition, Oblad (2021) conducted a pilot study with 131 high school students ages 14 to 18 years old to examine adolescent behaviors and opinions on self-harm, suicidal ideas, and online behaviors, among other topics. A key finding of the study was that cyberbullying and depression were significant predictors of self-harm (Oblad, 2021).

Suicidality includes suicidal ideations, suicidal gestures, suicide-related communication, suicide attempts, and completed suicides (Memon et al., 2018; O'Carroll et al., 1996). Rates of death by suicide in the United States have steadily increased over the past two decades, and as of 2019, suicide was the 10th leading cause of death for individuals in the United States in 2019 (Hedegaard et al., 2021; Kochanek et al., 2020). Furthermore, suicide was the second leading cause of death in both age groups of 10 to 14 and 25 to 34 (Hedegaard et al., 2021). A systematic review was completed on the role of social media use on deliberate self-harm and suicidality in adolescents (Memon et al., 2018). Nine studies that met inclusion and exclusion criteria were reviewed. Overall findings support the idea that more time spent on social media leads to more exposure to and engagement in self-harm behavior. In adolescents diagnosed with depression, there is an increased risk of psychological distress and suicidal ideations with social media use. Social media were found to be an important form of communication for youths with self-harm or suicidal ideations or behaviors. It can be a positive form of communication when

they seek and find social support and help for self-harm or suicidal ideations or behaviors. It can be detrimental to their mental health if they receive advice encouraging the harmful behaviors (Memon et al., 2018).

Research has shown that more active use of social media is associated with an increased risk of self-harm, suicidal ideations, and suicide attempts. Having posted content about one's self-harm during the past 12 months was associated with an increased risk of suicidality and suicide attempts when controlling for other behavioral and social factors (Seong et al., 2021). Creating and posting content is observed more in youths who report suicidal ideations or attempts (Swedo et al., 2020). Viewing only related content was not found to have the same increased risk of suicide attempts but may increase suicidal ideations (Swedo et al., 2020).

Content related to self-harm and suicidality can be found across multiple social media platforms. Viewing the content can be triggering for those who engage or have a history of engaging in NSSI and suicidality. Even more than viewing, posting related content can be a predictor of suicidal ideations and suicide attempts. This information should be considered when assessing youths who have a history of or currently experience NSSI or suicidality and should include assessing their type of involvement with social media related to self-harm and suicide.

Sleep Disturbance

Adolescents need 9 to 10 hours of quality sleep at night to function at their best during the day (National Institute of Mental Health [NIMH], 2020). It is important for adolescents, especially because of the mental, physical, social, and emotional development occurring at this stage. The consequences of not getting enough sleep can lead to health issues such as diabetes and cardiovascular problems, difficulty paying attention, increased impulsivity, and multiple mental health disorders, especially depression (Lemola et al., 2015; NIMH, 2020; Raudsepp,

2019; Sunl & Dimitriu, 2020). Prolonged sleep loss can negatively impact emotional development, leading to interpersonal conflict and more serious mental health problems (Sunl & Dimitriu, 2020). Despite the importance of the quantity and quality of sleep in adolescents, many are not getting enough sleep and are facing the consequences. One contributing factor to improper sleeping habits in adolescents is the use of electronic devices at bedtime. More than 89% of adolescents keep at least one electronic device in their bedroom at night, and the use of electronic devices at night can cause disrupted and fragmented sleep (National Sleep Foundation, 2014; Sunl & Dimitriu, 2020). Many teens use their cellphones or other electronic devices to browse social media not only after dinner or at bedtime, but many adolescents also admit to waking up at night to send texts or look at social media (Royant-Parola et al., 2018). Some electronic devices have screens with light-emitting diodes (LED); when used before bedtime, these suppress melatonin secretion significantly and, in turn, alter our biological clocks (Brainard et al., 2001; Bues et al., 2012). A 2018 Canadian study conducted with data from 5,242 individuals aged 11 to 20 confirmed what previous research had found (Sampasa-Kanyinga et al., 2018). Overall, 36.4% of the sample met or exceeded the recommended amount of sleep for their age, while 63.6% slept less than recommended. Approximately 73% of the sample reported at least one hour of social media per day. Social media use was associated with a shorter sleep duration after adjusting for covariates (Sampasa-Kanyinga et al., 2018). With about 2 to 5 hours of LED exposure, melatonin secretion can be reduced by up to 70% causing disruptions to sleepiness, alertness, and sleep-wake rhythms, as well as decreased duration and quality of sleep and excessive daytime sleepiness (Bues et al., 2012; Cajochen et al., 2011; Chang et al., 2014). Another study examined sleep duration over time in adolescents from 2009 to 2015. They found that adolescents were 16 to 17% more likely to report sleeping less than seven hours on most

nights compared to 2009. The researchers noted how this was a period when screen time, including social media use, also increased and found it to be associated with short sleep durations. They considered other activities that may lessen sleep duration, such as homeworking, jobs, or watching TV. However, these activities were relatively stable during this period and less likely to cause a sudden increase in short sleep duration (Twenge et al., 2017).

There is extensive research documenting the impacts of smartphone and/or social media use associated with disrupted sleeping patterns (Cajochen et al., 2011; Chang et al., 2014; Sampasa-Kanyinga et al., 2018; Twenge et al., 2017). Vernon et al. (2017) conducted one of few studies that attempted to examine the effects beyond the identified disruption in sleep related to social media use, specifically at nighttime. They examined the effects of nighttime smartphone use and poor sleep habits on depressed mood, externalizing behaviors, self-esteem, and coping. Analysis of their data determined direct links between nighttime smartphone use and increased externalizing behaviors, and decreased self-esteem and coping abilities. They did not find a direct link with depressed mood (Vernon et al., 2017).

Attention Deficits

General or minded smartphone use includes activities such as sending and receiving text messages or using social media with a purpose, such as posting content or communicating with others (Marty-Dugas et al., 2018). Absent-minded smartphone use includes any use initiated without a specific purpose other than to occupy the mind or fill empty time. Absent-minded smartphone use tends to result in users using their phones for longer than they intended to, scrolling through information without a purpose or finding themselves checking their phones without even realizing it (Marty-Dugas et al., 2018). People who use their smartphones more frequently also generally use them more absent-mindedly (Marty-Dugas et al., 2018). Both

general and absent-minded smartphone use impact attention. However, there are greater impacts on the everyday attention of those users who engage in more frequent absent-minded smartphone use. Impacts of absent-minded smartphone use seen in everyday life include difficulty sustaining attention when required, difficulty engaging in single tasks, spontaneous mind-wandering, and other attention-related errors (Marty-Dugas et al., 2018).

Shuai et al. (2021) conducted a study with 192 participants aged 8 to 16 years diagnosed with attention-deficit/hyperactivity disorder (ADHD). They explored the effects of digital media use on core symptoms, emotional states, life events, learning motivation, executive function, and family environment of children and adolescents with ADHD. The Self-Rating Questionnaire for Problematic Mobile Phone Use and Young's Internet Addiction Test (IAT) were administered to determine whether participants exhibited problematic digital media use (PDMU) via the determined cutoff points. Children who met the criteria for ADHD and PDMU displayed more severe impacts than those with ADHD but did not display PDMU. Children with ADHD and PDMU showed more significant core ADHD symptoms, executive functioning challenges, impacts on the parent-child relationship, and decreased learning motivation than the group without PDMU. Children with ADHD tend to have deficits in executive functioning with challenges in self-control, self-regulation, and behavioral inhibition. These difficulties may result in children having a harder time monitoring and controlling their digital media use (Makris et al., 2009). These challenges are intensified in children with both ADHD and PDMU (Shuai et al., 2021). Children with ADHD and PDMU exhibit decreased learning motivation and increased stress regarding life, interpersonal, and learning problems than do youths with ADHD without PDMU (Shuai et al., 2021). In addition, children with ADHD and PDMU tend to exhibit more severe defiant behaviors, contributing to less family cohesion and negative impacts on the

parent-child relationship (Shuai et al., 2017). The authors considered other research suggesting that children and adolescents with ADHD might be attracted to digital media use as it can be an outlet for distraction and a way to soothe themselves from overactivity or difficulty sustaining their attention (Peeters et al., 2018). PDMU could exacerbate difficulties with attention and concentration and decrease the amount of time that otherwise would have been spent on activities that stimulate cognitive abilities and can help to build a longer attention span (Nikkelen et al., 2014).

It is estimated that almost one-third of youths' time spent using digital media involves using two or more sources simultaneously (e.g., browsing social media while watching television) (Rideout & Robb, 2019). There is mixed research on how the increased tendency of youths to multitask with the use of digital media impacts attention, cognitive functioning, and multitasking capabilities. Yap and Lim (2013) suggested that prolonged high levels of daily media multitasking reduce the effort needed to maintain split attention. Alzahabi and Becker (2013) reported a positive association between task switching abilities and media multitasking. Other research suggests that media multitasking (MMT) results from distractibility and poor executive control (Loh & Kanai, 2016; Ophir et al., 2009) and that excessive media multitasking is linked to a decline in attentional processes (Cardoso-Leite et al., 2015). One study predicted that the frequency that youths engage in MMT would be associated with increased distractibility but not with multitasking performance (Moisala et al., 2016), particularly when the brain's attention networks are still developing (Rothbart & Posner, 2015). They studied 149 participants aged 13 to 24 years who met the inclusion criteria, including no history of psychiatric or neurological illnesses. They provided six tasks under specific conditions, including undistracted attention conditions, distracted attention conditions, and divided attention conditions. Brain

activity was recorded using functional magnetic resonance imaging (fMRI) while the participants completed the tasks. The researchers specifically observed the right prefrontal regions of the brain associated with response suppression and attention skills (Clark et al., 2007). They saw more activity in those regions during tasks associated with distracted attention than with the undistracted attention and divided attention tasks. The youngest age group, the 13- and 14-year-olds, did not show as much activity in the prefrontal brain regions as the older groups did. They cited research that suggests this lack of response is due to the significant neural maturation that early adolescents undergo (Squeglia et al., 2013). Overall, the fMRI data revealed that the more a person engages in MMT in everyday life, the worse their performance is on tasks when attention is distracted, and the more effort is needed from areas of the brain involved in attentional and inhibitory control.

In conclusion, MMT in everyday life does not improve multitasking abilities in other activities. They noted that because the study was correlational, they could not directly state the relationship between MMT and attention. They added additional interpretation of their results, suggesting extensive daily MMT strengthens task switching behaviors and deteriorates the ability to sustain attention on one task (Moisala et al., 2016).

Addiction to Social Media

The average age that a child opens their first social media account is 11.4, and the amount of time spent on social media progressively increases into adulthood (Pew Research Center, 2015). As adolescents begin to increase the amount of social media usage, they are more likely to experience anxiety while away from their devices (Clark et al., 2018). A majority (80%) of young people interviewed said they felt agitated when unable to access their phones (Roberts et al., 2014). As research concerning addiction to social media increases, it is important to

distinguish between frequent social media use that does not always have negative impacts and social media addiction (Griffiths, 2010). Andreassen (2015) suggested that social media use becomes an addiction when its use is uncontrollable and compulsive with unfavorable consequences. Social media or SNS addiction has been described as being preoccupied with SNSs, being driven by a strong desire to use SNSs, and devoting so much time and effort to SNSs that it interferes with other social activities, studies/jobs, interpersonal relationships, and/or psychological health and well-being (Andreassen & Pallesen, 2014). For those who believe individuals can be addicted to social media, they cite the core symptoms this addiction has in common with established chemical and behavioral addictions, including salience, tolerance, mood modification, withdrawal, relapse, conflict, and problems (Andreassen & Pallesen, 2014; Grant et al., 2010; Griffiths et al., 2014). They argue that those addicted to social media spend a great deal of time thinking about it and how they can incorporate use into their time more, representing salience. They often spend more time using social media than they intended to and need to use social media more to feel satisfied, increasing tolerance. Social media may be used to manage feelings such as anxiety or depression, as a tool to fight restlessness or helplessness, or as an outlet to forget about personal problems, working as a mood modifier. When they are unable to use social media, they may become stressed, restless, irritable, or feel withdrawn. Individuals addicted to social media may have tried to cut down on use without success (relapse). They may prioritize using social media over hobbies, leisure activities, studies, a job, exercise, and social or familial interactions, which may lead to conflicts. Finally, individuals addicted to social media use may feel the negative impacts of their addiction, such as poor sleep quality, difficulties in relationships, or negative influences on their health (problems) (Andreassen & Pallesen, 2014).

Social acceptance online, via "likes," the ratio of followers to following, and positive comments have also been studied through neuropsychological research (Burrow & Rainone, 2017; Sherman et al., 2016). Results from chat room studies show that being accepted online stimulates the ventral striatum, similar to an area of the brain that is stimulated when receiving other rewards such as satisfying tastes or money, as seen in addiction (Gunther Moor et al., 2010; Guyer et al., 2012; Lieberman & Eisenberger, 2009;). Complementary to this finding, several studies have found responses observed in the ventral striatum peak in mid-adolescence. These findings suggest that adolescents are more sensitive and influenced by social rewards than other age populations (Braams et al., 2015; Schreuders et al., 2018; Silverman et al., 2015).

Some have argued that classifying even a high level of social media use as an addiction is pathologizing a normal behavior extremity (Andreassen, 2015). They state that people can spend hours on social media platforms for various reasons, even first thing in the morning and last thing before going to sleep, and still not experience the negative symptoms related to behavioral addictions. There is still a state of control maintained despite excessive use (Griffiths, 2010).

Mental Health Disorders

Several studies have measured youths' social media use and depressive symptoms that have found a statistically significant relationship between the two, with the most common finding being that the more social media use, the more likely youths are to experience depression (Dumitrache et al., 2012; McCrae et al., 2017; Morin-Major et al., 2016; Tiggemann & Slater, 2015). Hwang et al. (2009) collected data from 6,341 students aged 12 to 17 years in Taiwan using the Taiwanese Adolescent Internet Use, Daily Life, and Depressive Mood Survey. They studied data related to online activities, offline activities, and a depressed mood. They found a statistically significant relationship between online communication and depressed mood, stating

that young participants who reported a depressed mood were more likely to use online activities for friendships and express feelings than participants who did not report depressive symptoms (Hwang et al., 2009). Other systematic reviews have also found a meaningful relationship between social media use and depression (Best et al., 2014; Hoare et al., 2016). A study conducted with participants aged 11 to 17 years examining depressive symptoms, psychological distress, and Internet use found that greater time spent using the Internet was associated with experiencing more depressive symptoms among females. Greater use was also associated with psychological distress, defined as general symptoms of stress, anxiety, and depression in both males and females (Hoare et al., 2016). A meta-analysis of 23 studies showed a correlation between problematic Facebook use and psychological distress in adolescents and young adults (Marino et al., 2018). Primack and Escobar-Viera (2017) found that the number of social media accounts correlated with the level of anxiety in youths.

A recent meta-analysis (Keles et al., 2020) reviewed the influence of social media on depression and anxiety, and psychological distress in adolescents ages 13 to 18 years. After reviewing 13 studies worldwide that met strict qualifications, their findings were classified into four common domains often observed with exposure to social media: time spent, activity, investment, and addiction. Each domain was discussed as it relates to depression, anxiety, and psychological distress. Confounding, mediating, or moderating variables that were measured were also discussed. Regarding the amount of time spent on social media, the results were mixed, with one study finding an inverse correlation with psychological distress (O'Dea & Campbell, 2011), while other studies showed a positive relationship between heavy social media use and both depression and/or anxiety (Tsitsika et al., 2014; Yan et al., 2017). Additionally, Sampasa-Kanyinga and Lewis (2015) found that over two hours of social media use per day was

associated with psychological distress. Keles et al. (2020, p. 87) defined the *activity domain* as "the quality and quantity of users' engagement and interaction with social media sites and other users." Results within this domain also varied. A study conducted with a sample of Belgian high school students found an increased frequency of a depressed mood no matter the amount of activity on Facebook, regarding active or passive usage (Frison & Eggermont, 2016). Another study found a correlation between adolescents' social media activities and both anxiety and depression (Barry et al., 2017). The remaining two domains of investment and addiction found in the meta-analysis differed in that *investment* was defined as "the act of putting effort and time into social media" whereas addiction focused on the dependency aspects of social media usage (Keles et al., 2020, p. 87). Regarding investment, Blomfield Neira and Barber (2014) found that investment in social media was associated with increased feelings of depression. Additionally, they found that social media may have more negative impacts on female adolescents, while they may constitute a more positive leisure activity for males. Another study using sleep disruption as a mediating variable found an association between investment in social media and a depressed mood (Vernon et al., 2017). Several studies found significant relationships between addiction to social media and depression with mediating factors including insomnia and rumination. Low self-esteem was a moderating factor, meaning low self-esteem makes the impact of addiction on depression worse through rumination (Li et al., 2017; Wang et al., 2018). The review cited one study conducted in Serbia that did not find any relationship between adolescents' social media activities and depression (Banjanin et al., 2015). However, the consensus of the systematic review is that there is at least a general correlation between the use of social media and depression, anxiety, and psychological distress. While some authors tried to account for

extraneous or confounding variables, most noted that they are difficult to control (Keles et al., 2020).

Social media had different impacts on individuals, specifically during the COVID-19 pandemic (Rideout et al., 2021). Some youths have explained that the constant exposure to negative news and stories online made them feel even more anxious or depressed. More youths (28%) reported that they felt less anxious when using social media during the pandemic, while 19% of youths said it made them feel more anxious. Similarly, 25% said using social media during the pandemic made them feel less depressed, while 15% said it made them feel more depressed. A 15-year-old LGBTQ+ male stated:

> Social media has made me feel less depressed because I can connect with people. When I feel alone because of the pandemic, I can go onto Instagram or Snapchat and talk with friends and see what they are doing. Then, I see that we are all in this together and everyone is having a hard time, not just me. (Rideout et al., 2021, p. 48)

Social media plays a larger role for young people diagnosed with depression than for those without depression (Rideout et al., 2021). Thirty-four percent of young people with depression reported using social media "almost constantly," while 18% of young people without depression reported the same. Twenty-eight percent of young people with depression said that social media was "very important" to them for feeling less alone, and 26% reported that social media was "very important" for them in getting support or advice, compared to 13% and 15%, respectively, for young people without depression. The use of social media was found to be even more important for LGBTQ+ youths, as 52% said it made them feel better when they were depressed, stressed, or anxious compared to the 43% reported by non-LGBTQ+ youths (Rideout et al., 2021).

It is important to consider the limitations in studies examining social media use and mental health challenges, such as depression and anxiety. Many studies are correlational, meaning the researchers were not able to say that social media use caused depressive symptoms. They could only use their research to state that social media use and a depressed mood exist simultaneously in some youths, and there may be a correlation between the two (McCrae et al., 2017). Additionally, the relationships could be bidirectional, meaning depressive symptoms may prompt more use of social media (Hartanto et al., 2021). The correlational studies being conducted have not been able to distinguish a direction in the relationships. Some argue that compensatory social media use is a symptom of depression, which itself can aggravate depressive symptoms due to unhealthy uses of social media such as social comparison or negative social interactions (Appel et al., 2016; Seabrook et al., 2016). Seabrook et al. (2016) examined papers published between January 2005 and June 2016 that were relevant to depression, anxiety, and SNSs. They found that lower levels of depression and anxiety were related to positive interactions, social support, and social connectedness on SNSs and negative interactions and social comparisons on SNSs were associated with higher levels of depression and anxiety. This finding indicates that social media use can influence depressive symptoms, but not that it is the cause of depressive symptoms (Seabrook et al., 2016). Overall, the research overwhelmingly shows a relationship between social media use and depression and anxiety. However, it cannot be stated that one causes the other, which is an area for future research.

CHAPTER V: WHAT CLINICAL APPROACHES ARE BEING USED TO EVALUATE AND TREAT PROBLEMATIC SOCIAL MEDIA USE IN YOUTHS?

There are many reasons social media use should be evaluated when meeting with any client or patient, but especially with young people. Research shows that social media use can make up a significant part of their lives and has positive and negative effects. The negative effects of social media use concern many aspects of self-concept, interpersonal functioning, and mental well-being. Upon reviewing the literature, it is evident that clinicians and assessment developers have not been able to keep up with the explosion of social media users. Information regarding evaluation tools and screeners for social media use is scarce and has primarily focused on the criteria of other established addiction disorders (van den Eijnden et al., 2016).

Belfort and Miller (2018) found that evaluation of social media use is not incorporated as standard psychiatric practice. A recent study assessed the frequency with which child and adolescent psychiatry residents included assessment of social media use as part of their clinical interviews with patients (Raphaely et al., 2021). Within the study, the researchers also investigated how familiar the residents were with the impacts of social media on mental health, whether the residents had clinical cases in which social media use was either beneficial or harmful to their patients, and if they would find a simple interview guide to be useful in their clinical practice. The majority of participants (81%) said they were “somewhat familiar” with social media’s impact on mental health. The residents reported more cases in which social media was harmful to their patients (81%) than cases in which social media was beneficial (62%). A small percentage of the residents (10%) reported routinely asking their child and adolescent patients about their social media use. All the residents indicated that they would value access to a brief interview guide for assessing social media use. The residents completed the survey that

provided results just as “stay at home orders” were being passed around the country due to the COVID-19 pandemic. Knowing that the COVID-19 pandemic led to more social isolation and more connection and communication occurring through social media, the researchers sent out another survey to psychiatry residents to determine if the sociocultural changes prompted changes in their clinical interviews. Results were similar to pre-COVID-19 survey findings. However, the number of participants who said they routinely assessed social media use in their patients doubled to 20%, still a minority of the residents (Raphaely et al., 2021). These findings shed light on a gap in up-to-date evaluation training and the lack of knowledge about the impacts of the widespread social media use, as well as mental health professionals’ willingness or motivation to adapt their practice to sociocultural contexts and changes.

Evaluation

PSMU has not been included in the diagnostic manuals. Therefore, scales to evaluate PSMU in youths are typically based on general criteria of addictive disorders or on a foundation similar to Internet gaming disorder (American Psychiatric Association, 2013; Austermann et al., 2021; Griffiths, 2005). The Diagnostic and Statistical Manual of Mental Health Disorders (American Psychiatric Association, 2013) included the newly added diagnosis of Internet gaming disorder (IGD) as a digital media addiction, and the International Classification of Diseases (ICD-11; World Health Organization, 2019) included a gaming disorder (GD) under addictive disorders. Five of the 9 criteria for IGD need to be met for at least 12 months to meet the diagnosis, including: (a) preoccupation, (b) withdrawal (when not using), (c) increased tolerance, (d) persistence (unsuccessful attempts to reduce or stop usage), (e) continuation of usage despite problems, (f) deception (covering up usage), (g) escape (usage to avoid or reduce adverse moods), (h) displacement (giving up on other activities), and (i) conflict (risk or loss of

relationships or opportunities) (American Psychiatric Association, 2013; Paschke et al., 2021). GD in the ICD-11 (World Health Organization, 2019) is reported to be addictive behaviors described as a continuous or episodic pattern of use over a period of at least 12 months: "(a) impaired control, (b) increasing priority over other activities, (c) continuation or escalation despite the occurrence of negative consequences, and (d) the behavior results in clinically significant distress or impairment of personal, social, educational, work-related, and financial functions" (World Health Organization, 2019, chap. 6).

Similarities between IGD and GD criterion and PSMU were identified in a longitudinal study conducted through the German Center for Addiction Issues in Childhood and Adolescence. Approximately 1,200 families participated in the study intended to examine the frequency of pathological and risky Internet use for gaming and social media in children and adolescents using ICD-11 criteria for GD (DAK-Health, 2020). They reported that they mainly used social media to communicate with others (89%), fight boredom (86%), and get information on the pandemic (37%). In addition, the youths reported using social media to forget sorrows (38%), manage stress (36%), and escape reality (36%). The reported reasons for social media use, including forgetting sorrows, managing stress, and escaping reality, closely align with the "escape" criteria for IGD, which some have suggested is enough to warrant more research (DAK-Health, 2020; Paschke et al., 2021).

There are no official descriptors, terminology, or official diagnosis in the DSM-5 or ICD-11 regarding problematic or maladaptive social media use, despite the research indicating negative effects of PSMU. Consequently, there is a lack of instruments available to assess PSMU. Van den Eijnden et al. (2016) suggested that a lack of instruments available to measure social media addiction further impedes research development in this area. Therefore, they created

and tested the reliability and validity of a short and simple Social Media Disorder Scale (SMDS) that differentiates disordered or addictive users from high-engaging, non-disordered users. In preparing to develop an evaluation tool, van den Eijnden et al. considered the theoretical assumption that social media addiction and IGD are both a set of behaviors under the same overarching construct of Internet addiction and, in their opinion, should be defined by the same set of diagnostic criteria. Because of the similar effects and because they are under the construct of Internet addiction, they chose to base their SMDS scale on the DSM-5 diagnostic criteria for IGD. Furthermore, they stated that their scale would be tuned toward adolescents because the expected psychosocial stressors tend to be particularly disturbing for their age group. The authors acknowledged the advantages of having a short and easy-to-administer tool and decided they would intend for a nine-item scale. They began with a 27-item scale, 3 items for each IGD diagnostic criterion, including preoccupation, tolerance, withdrawal, persistence, displacement, problem, deception, escape and conflict. The scale was then dispersed in an online survey along with validity measures of the use of multiple social media applications, compulsive Internet use, self-declared social media addiction, self-esteem, depression, attention deficit, and impulsivity. The first survey was sent to 724 youths aged 10 to 17 years. After receiving the results, they chose one item from each criterion with the highest factor loading and created the 9-item SMDS scale. This scale was sent out in the second online survey to 873 youths along with scales measuring depression, attention deficits, impulsivity, and loneliness for testing construct validity. The third online survey included the 27-item SMDS scale and gathered more information about smartphone usage than the first survey did and was completed by 601 youths. The total time to complete the 27-item SMDS was approximately 2 minutes and 15 seconds, and the 9-item SMDS scale was found to take about 45 seconds to complete. Both the 27-item and 9-item

SMDS scales were valid and reliable measurement tools. A limitation of this research was that the criteria used were based on the DSM-5 criteria for IGD and were translated to SMD. Some of the criteria may not translate to SMDS with the same meaning as it has for IGD, such as the criteria of *deception* or lying about the amount of time spent on social media, which is socially or culturally subjective. There may be fewer conflicts and problems associated with SMDS than with IGD. The limitations indicate the need for more research and specific criteria for SMDS (van den Eijnden et al., 2016).

Although self-reports of youths have been considered valuable (Morgan & Cauce, 1999; Weil et al., 2013), young age, symptom denial, or inability to fully reflect on thoughts and behaviors due to development may reduce the accuracy of youths' self-reports. Therefore, Austermann et al. (2021) developed a parent scale of the SMDS (van den Eijnden et al., 2016), the SMDS-P. The first to notice changes or problems in youths' behaviors are often their parents, and therefore, they can aid in providing information about their youths' use of social media. (Austermann et al., 2021). The SMDS-P was developed to provide an external assessment of PSMU in youths. A final sample of 961 parents and 1,922 youths aged 10 to 17 who used social media at least once per week participated in the study. Nine statements were adapted from the SMDS to address the parents' opinions of their youths' behaviors. Each criterion of preoccupation, withdrawal, tolerance, persistence, displacement, problems, deception, escape, and conflict was reflected in one question on the SMDS-P. Several constructs were retained from the SMDS, such as the content and criterion being based on DSM-5 IGD criteria, the 12-month time frame, and the binary response format ("yes" or "no"). To determine if the SMDS-P was consistent with the youths' self-report of social media use, the young participants completed the SMDS. A sum score of higher than four was considered an indicator of PSMU, in accordance

with IGD diagnostic criteria. Results suggested good internal consistency of the SMDS-P and strong convergent validity between the SMDS-P and the SMDS. A satisfactory, moderate concordance was indicated between parent and youth ratings. In addition, "the SMDS-P was able to reliably discriminate between problematic and normal adolescent SM users in terms of age, usage time including weekly frequency and daily duration, emotion regulation abilities, and academic performance" (Austermann et al., 2021, p. 9). Additional results showed that average social media users reported social media use six days per week, whereas problematic social media users reported using social media daily and for one hour longer than average social media users. The researchers stated that their findings indicated parents were a valid source of information that could be used to predict PSMU in youths. They added that a major limitation of their study was the lack of clinical validation because clinically validated instruments to assess PSMU in youths are not yet available for self or external ratings. Furthermore, they stated that even though a diagnosis could not be given at the time, self and parent rating would be the gold standard to predict potential PSMU (Austermann et al., 2021).

Another tool that has been used in studies examining PSMU is the Bergen Social Media Addiction Scale (BSMAS; Andreassen et al., 2017). This scale was adapted from the original scale, the Bergen Facebook Addiction Scale (BFAS; Andreassen et al., 2012). The BFAS was developed based on Griffith's six core elements of addiction: salience, mood modification, tolerance, withdrawal, conflict, and relapse (Griffiths, 2005). The initial scale with 18 items was administered to 423 students resulting in the final 6-item scale including 1 item for each component of addiction that had the highest factor loading. As more social media platforms came into existence and trends shifted, the language of the BFAS was rephrased to reflect social media use in general over 12 months, resulting in the BSMAS (Andreassen et al., 2012, 2017).

Clark et al. (2018) suggested that a reason to assess aberrant social media use is that it mirrors addiction. They suggested adopting an adolescent psychosocial screener called HEADSSS (Klein et al., 2014). The acronym assists clinicians in assessing home life, education, activities, drugs, sexual activity, safety, and suicide and/or depression. Klein et al. provided an update that encourages clinicians to discuss screen media habits, but the assessment tool does not have a dedicated section to assess social media use and its effects. Clark et al. (2018) suggested adding a fourth "S" for social media usage questions, including (a) "Which social media sites and/or apps do you regularly use?"; (b) "How long do you spend on social media sites and/or applications in a typical day?"; (c) "Do you think you use social media too much?"; (d) "Does viewing social media increase or decrease your self-confidence?"; and (e) "Have you personally experienced cyberbullying, sexting, or an online user asking to have sexual relations with you?" (Clark et al., 2018, p. 2). Depending on responses provided by the youths, there may be follow-up questions. Should the screening raise concerns, the clinician could refer them for behavioral health services or continue with follow-up appointments.

Diagnosis

Currently, there is no inclusion of PSMU in the DSM-5 or the ICD-11. No research indicated how clinicians are approaching PSMU regarding diagnosing. Additionally, there is little to no research about what diagnosing could look like. Many studies conducted related to evaluation and treatment cite similarities to other addictive disorders, which could be a direction in further discussions about diagnosing PSMU. Brand et al. (2019) suggested applying the interaction of the person-affect-cognition-execution (I-PACE) model in developing a diagnosis, which they believe is valid for many addictive behaviors, including gambling, gaming, shopping, and compulsive sexual behaviors. The theory of the model is that addictive behaviors develop as

a result of predisposing variables interacting with affective and cognitive responses to specific stimuli and executive functions such as inhibitory control and decision-making. Carbonell and Panova (2017) suggested that caution be used when determining whether the impacts of social media use warrant clinical attention. They stated that although social media use can result in negative consequences for some individuals, the impacts are insufficient to support the notion that SNS has an addictive power. They argued that the side effects of social media use do not match the severity of side effects from substance addiction, and diagnosing social media use as an addiction could undermine the severity of psychiatric disorders and the experiences of those who suffer from them (Carbonell & Panova, 2017).

Treatment

Research regarding the treatment of PSMU is even more scarce than research about how PSMU is being evaluated. The more attention given to these issues, the more the need for evaluation and, therefore, treatment of PSMU should become. The lack of inclusion in the DSM-5 and ICD-11 of PSMU makes it more difficult for researchers to develop tools to evaluate PSMU (Andreassen, 2015; Paschke et al., 2021). They are forced to use criteria of other established behavioral addictions. The lack of evaluation instruments and ability to diagnose makes it difficult for researchers to develop evidence-based treatments specifically for PSMU (Andreassen, 2015). They are also forced to adapt interventions designed for similar addiction diagnoses, such as Internet addiction or IGD. When reviewing the literature, cognitive-behavioral therapy techniques have been the most recommended treatment intervention for Internet addiction and seem to be the most adapted treatment for PSMU (Liu & Peng, 2009; Starcevic, 2013; Turel et al., 2011).

As part of a comprehensive review of online social network site addiction, Andreassen (2015) discussed therapeutic interventions for SNS addiction. Reasons they cited for including these interventions in a review about SNS addiction were that the self-help strategies, therapies, and preventions have been proven to be effective for other types of addictive behaviors, and they believed they would also apply to SNS addiction (Andreassen & Pallesen, 2014; Grant et al., 2013; Griffiths et al., 2014). The first type of review consists of self-help interventions, which include smartphone applications designed "to help one cut down on time spent on social media and to eliminate digital distractions" (Andreassen, 2015, p. 180). Applications such as *ColdTurkey*, *Self-Control*, and *Freedom* allow the SNS user to block the sites they are trying to avoid. Other self-help strategies include limiting locations for using social media, such as not using while at work or school, placing one's smartphone out of reach when trying to avoid use, scheduling breaks throughout the day for social media use, monitoring thought patterns while using social media, setting limits and reasonable goals, and committing to offline activities (Andreassen, 2015). Andreassen (2015) reviewed the most common therapeutic interventions for behavioral addictions, including cognitive-behavioral therapy (Andreassen & Pallesen, 2014; Gupta et al., 2013; Young, 2007). They explained that this approach involves exploring thought processes and "focuses on how the addict perceives, remembers, thinks and speaks of, and solves problems" (Andreassen, 2015, p. 180). They went on to explain that dysfunctional cognitions about social media are then reconstructed to help cope with emotional discomfort, demands, and detachment. Andreassen (2015) also discussed motivational interviewing as an effective treatment for behavioral addictions (Grant et al., 2013). This treatment is described as being "a client-centered, semi-directive method of engaging intrinsic motivation to change behavior by developing discrepancy between current and wanted state and exploring and resolving

ambivalence within the client" (Gupta et al., 2013, p. 25). The primary goal of this treatment is for the client to discover the negative effects of the addiction and increase the internal motivation for change (Andreassen, 2015). Pharmacological interventions are the final intervention reviewed, and Andreassen (2015) cited research suggesting certain medications such as bupropion, escitalopram, and methylphenidate help treat videogame and Internet addiction, which indicates that they may have similar effects on social media addiction (Dell'Osso et al., 2008; Han et al., 2009, 2010).

Seo et al. (2020) used magnetic resonance spectroscopy, a type of MRI that measures the brain's chemical composition, to study the brains of 19 individuals with an average age of 15.47 years with a clinical smartphone and Internet addiction. There was another group of 19 individuals for the healthy control group who met the criteria of < 30 points on the IAT, < 30 points on the Smartphone Addiction Scale, and < 60 points on the summed Internet Addiction Test and Smartphone Addiction Scale. Those who met diagnostic criteria for psychotic disorders, bipolar disorder, or substance abuse disorder were excluded from the study. Before and after completing a cognitive behavioral therapy (CBT) program, the researchers measured levels of gamma-aminobutyric acid (GABA) and glutamate-glutamine (Glx). These are neurotransmitters that inhibit and excite brain signals, respectively. GABA and Glx are also modulators of dopamine in the mesocorticolimbic pathways linked to addiction (Jasinska et al., 2014; Mick et al., 2017). The program was modified from an existing CBT for Internet gaming addiction and the emotional identification and expression abilities improvement program and consisted of 75-minute sessions over 9 weeks. The program focused on seven areas: "recognizing Internet behaviors, modifying cognitive distortions, finding appropriate alternative activities, promoting self-control, recognizing self-emotions and those of others, expressing emotions, and resolving

interpersonal conflicts" (Seo et al., 2020, p. 1294). The researchers found that the group with Internet and smartphone addiction had higher scores related to depression, anxiety, impulsivity, insomnia, and poor sleep quality than the healthy control group. The individuals with Internet and smartphone addiction had a higher-than-normal GABA level, normalized after the CBT program. However, there was no significant difference in the Glx level post-therapy between the group that received CBT and the healthy control group. The findings could help researchers better understand the pathogenesis and treatment of Internet and smartphone addiction. Further research is needed to determine if this approach could be applied more specifically to social media addiction.

A CBT program for Internet addiction was adapted by another study conducted with 38 college students with a mean age of 19 years (Hou et al., 2019). The researchers implemented an intervention to examine the effects of social media addiction and its negative associations with mental health and academic performance. They cited theory in the cognitive-behavioral model that suggests cognitive distortions and ruminations are the fundamental causes of excessive Internet use as part of their reasoning for choosing a CBT program (Davis, 2001). In addition, they stated that several CBT techniques have been recommended for the treatment of Internet addiction and because they view social media addiction as being a form of Internet addiction, they chose a similar treatment program (Liu & Peng, 2009; Starcevic, 2013; Turel et al., 2011). Each participant completed the six-item BSMAS (Andreassen et al., 2017) to measure the participants' use of social media. The final 38 participants were from a pool of 242 students who completed the BSMAS and scored higher than 18 and who scored 3 or above on at least 4 of the 6 items. The participants were randomly assigned to an experimental group or a control group. All participants then completed a survey with measures of social media use, self-esteem, and

mental health. Participants reported their daily social media use and sleep quality on a five-point scale. The control group received no intervention, while the experimental group participated in the intervention program. In the first week, the experimental group received 30 minutes of cognitive reconstruction. At the lab, they were asked to reflect on their social media use from five points:

> How much time they spent on social media per day and per week? What other meaningful things they could do with that time? What were the benefits of not using social media? Why did they use social media, and were there alternative ways to achieve the purposes? What were the adverse effects of social media use? (Hou et al., 2019, p. 7)

After writing down their responses and reflecting, they listed on a card "five advantages of reducing the use of social media and five disadvantages of excessive use of social media" (Hou et al., 2019, p. 7). Participants were asked to take a picture of the card and set it as the lock screen of their phones; that would serve as a reminder of their social media use. The card was to be posted at their desk for the remainder of the intervention. Phase two of the intervention occurred in the following week, during which participants were asked to "keep a daily record of their thoughts, emotions, and behaviors related to social media use" (Hou et al., 2019, p. 7). The daily reflection was to include:

> their daily use of social media every night before going to bed, including what social media they used, how long and how they used the social media, their thoughts and emotions related to their social media use, and the strategies they would like to use to reduce social media use. (Hou et al., 2019, p. 7)

Participants also recorded their emotional state, learning engagement, and the social media use they expected for the next day. Following the completion of week two of the intervention, both

the experimental and control group completed the same survey administered at the start of the experiment. An additional measure was completed to measure the participants' learning engagement over the past week with the 17-item Utrecht Work Engagement Scale—Student (UWES-S; Fang et al., 2008). Results indicated that participants in the experimental group exhibited a reduction in social media addiction and improved overall mental health, self-esteem, and sleep quality. Compared to the control, participants who received the intervention reported spending more time on learning and exhibited a higher level of learning engagement and a better emotional state. Overall, the findings suggested that the CBT-based intervention effectively reduced social media addiction and improved mental health and learning efficiency in college students. The authors noted that it is unclear whether the intervention has long-term effectiveness (Hou et al., 2019).

Zhou et al. (2021) also utilized CBT to treat PSMU with a short-term abstinence intervention. A total of 65 participants were divided into an experimental group and a control group. The experimental group took eight 2.5-hour breaks from social media over a 2-week period and kept daily diaries, while the control group used social media as usual and kept daily diaries. They found that the intervention positively affected life satisfaction (Zhou et al., 2021).

The AAP suggests that when media are used consciously and appropriately, they can enhance daily life. When used mindlessly or inappropriately, media can displace important activities such as face-to-face interactions, family time, outdoor activities, exercise, and sleep ("Family media plan," n.d.). They provided an online tool in English and Spanish at healthychildren.org, for families to create a personalized family media use plan. The tool helps families think about their media time and create goals and rules that align with the family's values. It includes suggestions such as "screen-free" zones or times, device curfews, diversifying

recreational media use, balancing online and offline time, manners on media, safety, sleep, and exercise. In addition, there is a "media time calculator" that includes presets for age groups with recommended sleep and exercise times. The tool allows parents to enter time for other activities such as after-school activities, chores, family time, homework, and meals, allowing the family to decide how much time is available for recreational media use ("Family media plan," n.d.).

Evaluation, diagnosis, and treatment of PSMU are not yet established despite the extensive research indicating negative effects of use on youths' mental well-being. The lack of tools to assess PSMU and treatment options leaves clinicians confronting the issues based on their own experiences or what research is available. Clinically validated tools for evaluation could potentially lead to the over pathologizing of behaviors related to social media use. The tools or treatments that have been developed use criteria from established addictive behavior diagnoses and treatments. This method can help spread awareness about the need for clinically validated tools to evaluate, diagnose, and treat PSMU and paves the way for future research utilizing specific criteria, should PSMU ever be included in the DSM-5 or ICD-11.

CHAPTER VI: DISCUSSION

The problematic use of social media and its potential consequences on youths remains a focus of concern. Despite the significant amount of research conducted since the explosion of SNSs in the late 1990s regarding the impacts of social media use, there is no universal definition of what problematic social use is. There is no evidence-based definition that clinicians can use to evaluate or treat clients experiencing distress related to social media. Some researchers use a broad definition of social media use as causing distress or impairment in daily functioning (Griffiths et al., 2014), while others use cutoff numbers with whatever measure they created to assess for PSMU (Shuai et al., 2021). Others do not acknowledge what their definition of PSMU exactly is. What is clear is that there are impacts of using social media, particularly with youths, whether they are correlational, causal, direct, indirect, unidirectional, or bidirectional, the impacts are there. Within the developmental framework of middle childhood and adolescence, this critical literature review project focused on the following questions related to the impacts of social media use on youths:

1. What are the impacts of social media on the self-concept and interpersonal functioning of youths?
2. What clinical presentations have been associated with PSMU in youths?
2. What clinical approaches are being used to evaluate and treat PSMU in youths?

Self-Concept and Interpersonal Functioning

Older children and adolescents are at developmental stages where they are more vulnerable to and influenced by their environments (Crone & Dahl, 2012; Nelson et al., 2005). Their interpersonal interactions help shape the development of their self-concept (Harter, 2012). Both intrapersonal and interpersonal perspectives of the development of self-esteem, which is

part of the self-concept, are supported through social media use. Intrapersonally, youths engage in social comparisons as part of their self-evaluation, contributing to their self-esteem. People are found to engage more frequently in upward social comparison, which has more negative effects on their self-evaluation than downward social comparisons (Vogel et al., 2014). Interpersonally, youths have access to the perceptions and evaluations that others have based on the feedback provided on SNSs. These experiences can lead to feelings of peer acceptance or rejection, which positively or negatively impact self-esteem, respectively (Jan et al., 2017; Vogel et al., 2014). Self-monitoring while using social media is a protective factor against negative impacts on self-esteem (Scissors et al., 2016). Using social media has been associated with another component of the self-concept, self-image, which consists of the view, thoughts, and emotions related to one's body (Jiotsa et al., 2021). Positive correlations have been found between the frequency of physical comparisons and higher dissatisfaction rates, the desire to be thin, and higher body dissatisfaction overall (Holland & Tiggemann, 2016; Jiotsa et al., 2021). Following friends, acquaintances, and non-appearance-based accounts do not have the negative impacts found with following celebrity or health and fitness accounts (Cohen et al., 2017). Young people are more likely to engage in upward social comparisons with people with their idealized body type (McKee et al., 2013; Tiggemann et al., 2009). "Fitspiration" and "body positivity" are both social media trends and content to combat negative impacts on people's self-image. However, studies have revealed that there are still negative outcomes associated with viewing these types of content, such as negative relationships with diet and exercise, altered moods, and feelings of shame and guilt (Easton et al., 2018). Appearance-neutral posts resulted in less self-objectification than body-positive and thin-ideal posts (Cohen et al., 2019).

Social media can be a place where youths establish new interpersonal relationships, strengthen offline relationships, practice social skills, and gain information to use in offline conversations (Metzler & Scheithauer, 2017; Reich et al., 2012; Valkenburg & Peter, 2007, 2009). Potential benefits could be staying connected with friends, meeting people with similar interests, and finding community and support ("Social media and teens," 2018). Support found on social media can serve as a protective factor against loneliness, depression, and cyberbullying (Rideout et al., 2021). Social media have been found to alter interpersonal interactions when online in ways such as increasing the frequency and immediacy of experiences, highlighting certain experiences and demands, providing new opportunities for compensatory behaviors, and providing new opportunities for completely novel behaviors (Nesi et al., 2018). However, there are harmful interactions that occur through social media, such as racist, sexist, and homophobic content, that can negatively impact the well-being of youths (Rideout et al., 2021). Concepts such as social exclusion and social rejection have been studied online and show similar effects in the brains of adolescents, indicating an increased sensitivity to online rejection, peer acceptance, and peer influence (Achterberg et al., 2017; Guyer et al., 2009; Silk et al., 2012; Williams & Jarvis, 2006). Emotional experiences related to feeling rejected online can negatively impact the self-concept of youths offline (Crone & Konijin, 2018). While some social media companies have policies and resources related to cyberbullying and actively work to eliminate situations considered to be cyberbullying, they admit that it is difficult to prevent or assuage bullying on social media platforms (Dickey, 2014; Facebook, 2022; Meta, 2022).

In sum, social media use can have both positive and negative impacts on the self-concept and interpersonal functioning of youths. The ways in which youths tend to interact with social media may shape the combination of positive and/or negative impacts they experience. Resisting

upward social comparisons, following acquaintances and friends, using self-monitoring skills, and finding supportive groups are ways to experience more positive than negative effects of social media use.

Clinical Presentations Associated with Problematic Social Media Use

PSMU is associated with many impacts on mental health and well-being that can be observed across various clinical presentations. One of the presentations seen is related to self-harm and suicide. Some researchers have noted that the parallel increase in rates of suicide and social media use among children and adolescents is a reason to focus on researching the connections (Lewis et al., 2011; Mitchell & Ybarra, 2007). Adolescents with a history of NSSI tend to be more active on social media, which can have motivating or triggering content related to self-harming or suicidal behaviors (Lewis et al., 2011; Mitchell & Ybarra, 2007).

Sleep is another area commonly disturbed in adolescents associated with social media use. Youths report using their phones to look at social media not only before bedtime, which disrupts their biological clock, but they also admit to waking up at night to check social media (Royant-Parola et al., 2018). In addition, absent-minded smartphone use, which includes scrolling through social media applications, is associated with difficulty sustaining attention when required, difficulty engaging in single tasks, spontaneous mind-wandering, and other attention-related errors (Marty-Dugas et al., 2018). Children diagnosed with ADHD who displayed PSMU were more severely impacted by the effects than were children with ADHD who did not use social media problematically (Shuai et al., 2017). Some research discussed how children with ADHD have difficulty monitoring and controlling their digital media use due to challenges in self-control, self-regulation, and behavioral inhibition (Makris et al., 2009).

Another clinical presentation observed in youths related to PSMU is what seems to be an addiction to social media. They show similar withdrawal symptoms observed in individuals with other addictions to substances or gaming (Clark et al., 2018). Neuropsychological research has shown that the same reward system activated after receiving monetary rewards or satisfying tastes is activated when using social media (Gunther Moor et al., 2010; Guyer et al., 2012; Lieberman & Eisenberger, 2009). Social media use has been associated with feelings of depression in numerous studies. However, outcomes vary. While one found any use of social media was associated with depression (Frison & Eggermont, 2016), another found that "heavy" social media use was associated with depression (Tsitsika et al., 2014; Yan et al., 2017). Time spent, activity, investment, and addiction-related to social media use were identified as domains that impact depression, anxiety, and psychological distress in adolescents (Keles et al., 2020). Young people diagnosed with depression tend to use social media more often than young people without depression. It is unclear whether they use it more because of depression or if they are depressed because they use social media more often.

Evaluation and Treatment of Problematic Social Media Use

There is not yet widespread inclusion of social media use in clinical or diagnostic interviews with clients, young clients in particular. With research showing both positive and negative effects associated with social media use, in addition to being such a large and important part of the lives of youths today, PSMU evaluation, diagnosis, and treatment have not kept up with this modern device. Some researchers have argued that some of the reasons youths use social media, such as forgetting sorrows, managing stress, and escaping reality, as well as the effects of using or not being able to use social media, such as impaired control and increasing priority, are similar to that of existing substance and gaming addiction disorders (Paschke et al.,

2021; van den Eijnden et al., 2016). They stated that the similarities are cause for more research and consideration of a diagnosis specifically addressing PSMU. Some have started creating tools, such as the SMDS, to evaluate social media use based on existing criteria for addiction diagnosis. However, limitations stated were that some of the criteria for GD are not as applicable for what might be considered social media use disorder (van den Eijnden et al., 2016). Citing the possibility that the accuracy of adolescent self-reports could be impacted due to young age or symptom denial, a parental scale has also been developed and validated, the Social Media Disorder Scale, parent version (SMDS-P; Austermann et al., 2021). The BSMAS (Andreassen et al., 2017) is another tool for evaluation based on Griffith's six core elements of addiction, with each element being assessed by one statement (Griffiths, 2005). Another approach taken to evaluate social media use during an assessment was to adopt a psychosocial screener such as HEADSSS, which assesses home life, education, activities, drugs, sexual activity, safety, suicide, and/or depression (Klein et al., 2014). Clark et al. (2018) suggested adding a fourth "S" to include questions about social media use and its effects.

As limited as the literature is regarding the evaluation of social media use, it is even more limited when it comes to the treatment of PSMU. Therapeutic interventions that have been implemented with PSMU tend to be a variation of a CBT program. This results from CBT being recommended as the first line of treatment for Internet addiction (Liu & Peng, 2009; Starcevic, 2013; Turel et al., 2011).

The AAP recommended using a family media plan to prevent problematic use and the effects of social media use ("Family media plan," n.d.). The online tool allows parents to enter time for other activities throughout the day, allowing the family to decide how much time is available for recreational media use. The plan serves to manage time in a way that promotes

activities for well-being and productivity and allows for realistic times for recreational social media use.

Clinical Implications

The literature included in this review and the research that continues to be published with ever-changing social media platforms suggests many implications for clinicians who work with youths. As there is no diagnosis established in the DSM-5 or ICD-11 addressing PSMU, this review may aid clinicians in determining whether their clients' use of social media is typical or problematic. Due to the lack of diagnosis and criteria, there are no widely accepted and clinically validated tools for evaluating PSMU and no evidence-based treatment protocols available if social media use is found to be problematic. The research discussed in this review is valuable and provides clinicians with guidelines for assessing and monitoring social media use in youths. It is recommended that clinicians consider the following and incorporate the topics discussed into a clinical interview conducted with youths at the start of treatment and as part of ongoing assessment.

Based on the review, it is recommended that clinicians incorporate regularly, in their clinical work with youth, questions and discussion regarding clients' social media use. The clinician should assess the frequency, investment, and type of social media activities of their young clients. The following questions are suggested as a guide, based on this review, during their initial clinical interview: What social media accounts do you have?; How often do you access social media?; What times of day do you use social media the most?; and How much time in total is spent on social media from the moment you wake up to the moment you go to sleep? Additional suggested questions for clinicians to evaluate social media use are included in Appendix A. These types of questions could help the clinician get an idea of how significant the

use of social media is in the youth's life. It is important to understand the frequency and total time spent on social media because the frequency is associated with both positive and negative effects on self-esteem and self-concept (Blomfield Neira & Barber, 2014; Vogel et al., 2014), higher rates of body dissatisfaction and desire to be thin (Holland & Tiggemann, 2016; Jiotsa et al., 2021), disruptions in the sleep cycle (Bues et al., 2012; Cajochen et al., 2011; Chang et al., 2014), feelings of depression and anxiety (Barry et al., 2017; Frison & Eggermont, 2016; Yan et al., 2017), and psychological distress (Hoare et al., 2016; Keles et al., 2020; Marino et al., 2018).

Additional information about social media use can be gathered though information from mobile phones. If the youth consents, time spent on social media would be best gathered from data collected and stored on many modern mobile phones, which tells exactly how much time is spent daily on each application. This would help get the most accurate picture of time spent on social media, as youths may be inclined to minimize their social media use or may underestimate their social media use. The research is mixed on how much frequency or time is required to be associated with the negative effects varying from any use at all (Frison & Eggermont, 2016) to two to five hours (Cajochen et al., 2011; Chang et al., 2014), while most studies did not define what exactly the frequency or time spent on social media was when finding the correlations. Some research indicates that the more youths use social media, the more likely they will experience depression (McCrae et al., 2017; Morin-Major et al., 2016; Tiggemann & Slater, 2015). Also knowing the number of social media accounts youths have may be helpful as the number of accounts has been found to correlate with the level of anxiety in youths (Primack & Escobar-Viera, 2017). In addition to assessing the frequency and time spent on social media, it is important to examine the level of investment or the importance placed on social media use by youths. Much of the research has indicated that investment or similar concepts can be a stronger

predictor for outcomes of social media use in adolescents than frequency and time are (Blomfield Neira & Barber, 2014; Keles et al., 2020; Vernon et al., 2017). Higher levels of investment, importance, or time and effort put into social media use have been associated with lower self-esteem (Blomfield Neira & Barber, 2014), increased depression and anxiety (Blomfield Neira & Barber, 2014; Vernon et al., 2017), and sleep disruptions (Vernon et al., 2107).

To gain more information about a youth's investment in social media, experiences on social media and their perspective of their social media use, the following types of questions may be useful for clinicians: Describe your activity on social media (e.g., Frequency of passive or absent-minded activity, such as scrolling through content versus purposeful activity such as posting content or communicating with friends); How do you feel about your social media use?; What are the benefits you observe from using social media?; and What are the negative effects you have observed from using social media? (see Appendix A for additional suggested questions). Knowing more about the type of activities youths engage in while on social media could provide insight into other effects they may be experiencing from the use. Youths who engage in more absent-minded use may have more difficulties sustaining attention and engaging in single tasks; they may experience mind-wandering, and may struggle more with other attention-related tasks (Marty-Dugas et al., 2018). These difficulties could impact their abilities to learn and perform at school and could require further assessment. Youths who report using social media for friendships and to express feelings are more likely to report depressive symptoms (Hwang et al., 2009). Gaining insight into youths' interpersonal experiences on social media can help the clinician understand the effects youths may be experiencing.

Socially anxious youths may report greater benefits from their social media use as it gives them a chance to socialize with less pressure to monitor social nuances and can even help to

strengthen offline relationships. Encouragement of positive social media use may benefit those particular youths (Metzler & Scheithauer, 2017; Valkenburg & Peter, 2007, 2009). They may feel the benefits of social media use if they report they feel more connected to friends, feel a sense of support or are part of supportive community groups, and if they feel inspired and supported in their self-expression (Rideout et al., 2021; "Social media and teens," 2018). If youths report feeling rejected or dissatisfied with their social interactions or feedback received on social media, they may experience more of the negative effects associated with social media use, such as feelings of depression (Silk et al., 2014; Williams & Jarvis, 2006). Negative emotional experiences resulting from feeling excluded or rejected online can result in psychological distress and negatively impact offline self-concept (Crone & Konijin, 2018; Silk et al., 2012). Youths who have reported exposure to discrimination or hate speech while online may require further assessment and treatment related to their experiences because of the negative short- and long-term effects, including anxiety, panic, shame, fear, depression, and alcoholism (Brown, 2015). Additionally, youths who reported being bullied online and experienced depression were more likely to experience self-harming ideations or behaviors, which could indicate a need for continued assessment (Oblad, 2021).

The information in this review could help clinicians identify clinical presentations that may be associated with particular social media or could be effects from social media use. Initial evaluations should include areas associated with PSMU such as self-concept, body image concerns or problematic eating behaviors, interpersonal relationships, experiences with bullying, anxiety, depression, and overall emotional connectedness and psychological wellbeing. If youths have a history of or currently report thoughts or behaviors related to self-harm or suicide, it is important to assess nighttime and early morning use of social media as those are most frequently

the times when related content is posted. They are more likely to post themselves or be exposed to self-harm or suicidal content during those times (Brown et al., 2018; Turner et al., 2016). If they admit to posting content about their self-harm in the past 12 months, they may be at a higher risk of a suicide attempt, which could cue the clinician and parents to monitor that youth more closely (Seong et al., 2021). Confirmed groups or pages that are supportive in the prevention of self-harming and suicidal ideations and behaviors impact youths positively and could be a valuable resource for clinicians to provide to young clients (Memon et al., 2018). If youths are experiencing difficulties falling or staying asleep, they could be asked to describe their social media habits in the hours leading up to the time they want to go to sleep, as use has been associated with poor quantity and quality of sleep (Bues et al., 2012; Chang et al., 2014; Vernon et al., 2017). These youths may benefit from psychoeducation about the physiological effects of LED screens they use to access social media, as well as the complications associated with prolonged sleep loss, including depressed mood, decreased self-esteem, increased interpersonal conflicts, and difficulty coping (Bues et al., 2012; Sunl & Dimitriu, 2020; Vernon et al., 2017). Youths diagnosed with ADHD who exhibit PSMU may experience exacerbated symptoms of ADHD, which can negatively impact the parent-child relationship learning motivation (Shuai et al., 2021). These may be areas for further assessment and treatment. Youths diagnosed with depression are more likely to use social media more often and report more importance or investment in their social media use than their non-depressed counterparts. Knowing that increased frequency and investment are predictors of negative outcomes from social media use, depression should be another sign to a clinician that further assessment of social media use is needed. Youths with depression also face an increased risk of psychological distress and suicidal ideations with social media use, and it emphasizes the importance of ongoing assessment of

social media use and depressive symptoms. Low self-esteem is another indicator of the negative impacts of social media use, as youths with low self-esteem may be more susceptible to depression due to rumination on social media interactions (Li et al., 2017; Wang et al., 2018). As most of the research about social media use and depression indicates a correlation between the two, it may take more exploration on clinicians' part to understand what aspects of youths' social media use may be contributing to feelings of depression, which can be done through a clinical interview and ongoing discussions. Anxiety is another clinical presentation or disorder associated with PSMU with similar findings as social media and depression. Greater use of and more social media accounts are associated with higher levels of anxiety, which is an area clinicians can assess further (Barry et al., 2017; Rideout et al., 2021; Tsitsika et al., 2014; Yan et al., 2017).

Another clinical presentation that has received extensive research is social media addiction. Based on the research, clinicians should include in their assessments, youths' experiences when not able to use their smartphones, as many reported feeling anxious and agitated when they cannot (Clark et al., 2018; Roberts et al., 2014). Symptoms of substance or behavioral addictions have been related to behaviors observed with PSMU, including salience, tolerance, mood modification, withdrawal, relapse, conflict, and problems (Andreassen & Pallesen, 2014). A clinician may use the descriptions provided by Andreassen and Pallesen (2014) to help assess youths' experiences with their social media use to determine if there are concerns related to an addiction to social media.

Addiction to social media can be assessed through a clinical interview. However, most of the tools developed to assess PSMU have been based on addiction criteria or gaming or Internet addiction disorders (American Psychiatric Association, 2013; Austermann et al., 2021; Griffiths, 2005). The evaluation tools discussed in this review include the SMDS (van den Eijnden et al.,

2016), SMDS-P (Austermann et al., 2021), and BSMAS (Andreassen et al., 2017), as well as other screeners such as the HEADSSSS (Clark et al., 2018; Klein et al., 2014), may help clinicians assess the frequency of which youths are using social media and may shed light on difficulties they are having due to social media use. When clinicians want to know more about youths' social media experiences, they may gain more insights from the qualitative information gathered through the tools and clinical interviews with youths and their caregivers rather than from a cutoff score from various evaluation tools based on addiction criteria. Clinicians need to conduct a thorough evaluation of youths' social media experiences as they are all impacted differently. As Rideout et al. (2021) found, youths reported different experiences with social media during the COVID-19 pandemic. While social media comforted and made some youths feel less depressed and anxious, it increased anxiety and depression in other youths. Rather than assuming pathology or negative impact, it is important to evaluate each youth as an individual.

There is a need for a comprehensive theoretical model that can conceptualize PSMU and if appropriate, provide diagnostic criteria based on research. A conceptual model and diagnostic criteria would allow for more applicable and accurate evaluations of PSMU to be developed, as well as evidence-based treatments. The model would need to be multifaceted to account for the many areas of functioning that PSMU can impact. It would need to be more than an explanation of addiction and should conceptualize and explain relationships between PMSU and concepts such as self-concept, interpersonal functioning, and various clinical presentations of mental health and well-being. The importance of the model being multifaceted is so that evaluations and treatments developed are comprehensive enough to address many areas related to PSMU that youths may experience. A model would assist clinicians in identifying and treating PSMU, resulting in better mental health outcomes for youths.

As with evaluation, treatment of PSMU has focused on adapting treatments developed for other behavioral addictions, with a specific focus on CBT (Andreassen & Pallesen, 2014; Gupta et al., 2013; Young, 2007). As CBT is an evidence-based treatment for many other clinical presentations and disorders, including anxiety and depression (Beck, 2011), clinicians may find that the use of existing CBT methods may help resolve issues associated with social media use, such as anxiety, depression, poor self-concept, body dissatisfaction, and challenges in interpersonal interactions. Psychoeducation regarding social media use could be a beneficial part of treatment. Youths who have experienced online interpersonal harm such as cyberbullying or those who reported observing it occur may benefit from knowing about resources such as Facebook's Empower Teens document and Bullying Prevention Hub that help them learn to identify and report cyberbullying situations (Facebook, 2022; Meta, 2022). Since there are no established evaluation tools, diagnosis criteria, or treatments available for PSMU, it is up to clinicians to use their clinical judgment in deciding what evidence-based treatments would be the most appropriate for whatever the impacts are that each youth is exhibiting from social media use. Based on the widespread applicability of CBT, it may be a leading choice for clinicians to use.

Clinicians and youths would benefit from a published guide based on the research that provides information about the areas PSMU is known to impact and how they can be incorporated into treatment. A clinician's version of the guide could start with psychoeducation about specific social media platforms and how they work to allow a deeper understanding of their clients' experiences. An introduction to social media could be followed by specific questions, such as questions found in Appendix A, to evaluate areas of functioning to determine primary concerns for treatment. In addition, the clinician's version of a guide could follow along

with a youth version of the guide with additional questions, prompts for discussion, and activities designed to provide education and skill building for youths related to their social media use. Throughout the clinician's guide could be tips on incorporating youths' actual social media accounts into treatment and interventions. However, further research is needed to determine the outcomes and effectiveness of doing so. A youth version of the guide could be in a workbook format to facilitate interventions designed to promote thought and reflection and could help youths visualize treatment. The youths' guide should include psychoeducation related to common areas of concern related to PSMU as well as interventions intended to develop useful skills related to social media use. Clinicians could use the guide to assist youths in being able to identify when their social media use is having a negative impact on any areas of their functioning. Psychoeducation about social comparison and the effects upward social comparison can have on one's body image and self-concept are an important area for youths to learn about. Youths would benefit from learning to evaluate and make informed decisions about their interpersonal interactions on social media. Role playing or examining actual social media experiences could be used in treatment to discuss effective ways to resolve interpersonal conflicts that occur through social media and may also impact life offline. Youths who report exposure to cyberbullying could work with a clinician to build skills in knowing how to respond to a bully online or how to disengage from interactions with a bully. Youths could benefit from learning how to identify how words or images can be perceived online in the absence of traditional social nuances. Discussing the seven identified differences between social interactions offline versus online and the benefits and consequences associated with each may be helpful for youths' understanding of social media use (Nesi et al., 2018). For example, impulsive youths may benefit from knowledge about the permanency of posts, even when deleted later, whereas a

socially anxious youth may benefit from discussion about cue absence in social interactions (Nesi et al., 2018). Other areas for psychoeducation and activities could include how PSMU interacts with clinical presentations such as self-harm, sleep disturbance, attentional capacity, addiction and how to limit social media use, anxiety, depression, and other factors of mental health and well-being. The AACAP Family Media Plan online tool may be a beneficial resource for families to use for prevention or to help youths and families manage their social media and smartphone use while seeking treatment for concerns with a professional.

To address concerns about a gap that may exist between clinicians' knowledge of the social media experience and their clients' lived experiences with social media, ongoing continuing education for clinicians is recommended. The sessions could focus on learning various components of social media platforms and how youths interact with them. Clinicians would benefit from hands-on training in learning at least the basics of recognizing and working with the most popular social media platforms to increase their familiarity with information youths may bring into treatment. Continuing education on social media platforms would need to be reoccurring due to the evolving nature of social media and technology. Knowing the basics of social media could help a clinician build rapport with youths. However, they should still express their curiosity and eagerness to learn from youths regarding information they do not understand.

Limitations of Research

A review of the current literature suggests that there are several limitations in studying the impacts of social media on youths and the evaluation and treatment of PSMU. One cited limitation is the varying definitions of social media, SNS, and digital media with a vast range of platforms, activities, and forms of communication (U.S. Surgeon General's Advisory, 2021). Another varying definition is that of PSMU. There is no consistent definition being used across

the research. The differences in definitions make it more difficult for research to be a unified body of accurate information that can inform future decisions about a diagnosis, evaluation, and treatment. In addition, to understand the impacts of social media use on youths, in particular, there is a need to devote studies to this specific population due to the differences in development in this period, such as hormones, brain maturation, emotion regulation, and the importance placed on social interactions. For example, while a 40-year-old female may not be affected by a comment on a post left by someone or from seeing her friends socialize without her and post it on social media, a 14-year-old girl may be devastated by either of those situations.

Another limitation related to age is the accuracy of youths' self-reports when surveyed about their social media use during research about the impacts and when developing tools for evaluation. Young age and symptom denial may reduce the accuracy of information provided by youths (Austermann et al., 2021). Despite the potential inaccuracies of self-reports by youths, much of the research is based on self-ratings. Social media platforms and capabilities are rapidly changing, and it can be difficult for research to keep up (Riehm et al., 2019). Facebook was the focus of much of the early research. However, it is now used by only about 50% of the young population. Research on youths' most popular social media sites, such as TikTok and Instagram, is less common than the research conducted on Facebook (Rideout et al., 2022). Many of the studies were conducted through online surveys, which could exclude individuals from low-income or rural areas (Austermann et al., 2021). One of the major limitations observed across studies in this review is that comorbidities and medication use were not addressed or used as exclusion criteria in participant samples (Meshi & Ellithorpe, 2021; Riehm et al., 2019; Shuai et al., 2021). Therefore, indirect relationships were not considered. This limitation makes it difficult to determine if and to what degree poor self-concept, poor social skills, or other clinical

presentations, such as depression, anxiety, or ADHD, are the cause of or the effects of PSMU. More research with young populations that control for confounding variables is necessary to truly understand the impacts of social media use on youths.

Recommendations

The use of social media is almost inevitable, and adults that have interactions with youths would benefit from understanding the dynamics and impacts of social media use. Parents or professionals can help youths understand safe use and learn to recognize when use is problematic or has negative impacts. For those reasons, it is so important that mental health professionals assess social media use as a standard part of the clinical interview. Middle childhood is when children begin incorporating opinions, feedback, and their own observations of others into their self-evaluations. Toward the end of middle childhood, many children create their first social media accounts. This adds another endless source of social comparison that becomes incorporated into their developing self-concept and interpersonal functioning. Knowing the negative impacts of social media use on self-esteem, extra care should be taken into how social media is used for youths whose evaluation of themselves and whose self-concept is still developing and in a fragile state. Considering the trajectory of development from the beginning of middle childhood through adolescence and the frequent changes of social media platforms, it is important that clinicians include evaluation of social media use throughout treatment. Interest in social media, type of social media activities, platforms or number of accounts, and overall experiences may change, and youths might not realize the impacts their use of social media could be having on them and might not initiate discussion themselves. Continual monitoring about the status of youths' social media and related concerns is a critical component in work with young clients due to the popularity of the platforms and their vulnerability in development.

The U.S. Surgeon General's Advisory on Protecting Youth Mental Health (U.S. Surgeon General's Advisory, 2021) suggested that adolescents can help themselves by being intentional about their use of social media. They provided questions to help guide technology use: (a) How much time is spent online?; (b) Does time spent online take away from healthy offline activities?; (c) What kind of content is being consumed, and how does it tend to make you feel?; and (d) Are you online because you want to be, or because you feel like you have to be? The 2021 report recommended that caregivers could ask themselves the same questions regarding their child's time spent online in addition to thinking about healthy limits they can set on their child's use of technology, such as limiting screen time or limiting certain kinds of uses. Caregivers may also consider questions to evaluate online content, such as (a) Do I know what devices and content my child has access to?; (b) Is the content and time my child spends looking at or sharing online meaningful and constructive?; (c) Are there healthier ways my child could be spending their time online?; and (d) Are there risk factors my child has that may make time spent online risker, such as a mental health condition that may make them more vulnerable or reactive to certain content? (U.S. Surgeon General's Advisory, 2021). To assess the impacts time spent online has on their child, caregivers could ask themselves (a) How does my child feel about their time online?; (b) Is my child spending time online because they want to or because they feel like they need to? (c) How can I support open communication with my child regarding their online experiences? (d) How do I feel about my own use of technology, and (e) What is my child observing? (U.S. Surgeon General's Advisory, 2021). The Surgeon General not only called on adolescents and their caregivers to assess their use of social media, but he highlighted how the business plans of social media and technology companies often focus on maximizing time spent rather than time well spent. In the report, the Surgeon General went on to discuss specific

features social media companies build into their applications, such as auto-play videos, which keep users scrolling through videos endlessly (U.S. Surgeon General's Advisory, 2021). This type of passive social media use is associated with higher rates of anxiety and depression in adolescents than more active use, such as commenting or posting (Rideout et al., 2021).

The U.S. Department of Justice (2021) released "Tips to Help Protect Children" when they are online. These tips include discussing Internet safety and developing an online safety plan, supervising young children's use of the Internet, reviewing social media sites before they are downloaded, and adjusting privacy settings and parental controls, as well as telling children not to share personal information or pictures/videos online, teaching children about body safety and boundaries, being alert to potential signs of abuse occurring online, and encouraging children to tell trusted adults if they feel unsafe (U.S. Department of Justice, 2021).

Reliable information about the impacts of social media use can help mental health professionals and parents know if youths could be at risk for negative impacts and PSMU. Future research needs to focus on investigating and including confounding variables to better understand who is more likely to be negatively impacted by social media use and how. A thorough mental health history needs to be collected from participants and information about self-concept, self-esteem, social skills, and experiences to determine if someone qualifies for participation in the study. More accurate data on social media use could be collected through volunteered access to data reports on cell phones. This variable is important as the current research varies significantly in the amount of time spent on social media that is considered problematic. In addition, there needs to be less reliance on the self-reports of youths and more collateral information gathered from caregivers. Studies may be more successful and reliable through in-person or video platforms that allow researchers to gather all of the information they

need from the youths and their caregivers rather than surveys completed online by youths. Future research should also focus on creating clinically validated instruments to help define and assess PSMU in clinical settings, facilitating research about the effects of social media use. Finally, future research should include longitudinal studies to identify the long-term impacts of PSMU on youths, focusing on the positive or negative impacts on social concept and interpersonal functioning observed throughout the lifespan.

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Appendix A
Suggested Areas for Clinicians' Evaluation of PSMU

- What social media accounts do you have?
- How often do you access social media?
- What times of the day do you use social media the most?
- How much time, in total, is spent on social media from the moment you wake up to the moment you go to sleep?
    - Would you be willing to access and share the data on your phone that tracks time spent on applications?
- Describe your activity on social media.
    - Frequency of passive or absent-minded activity such as scrolling through content
    - Active use such as posting content or communicating with friends
    - What kind of accounts do you follow?
- How do you feel about your social media use?
    - What are the benefits you observe from using social media?
    - What are the negative affects you have observed from using social media?
    - Has your social media use led to problems at home and/or school?
- How do you feel about yourself online?
    - How do you feel about your profile on social media?
    - How do you choose what to post on your social media profiles?
    - How does your online identity impact your sense of self offline?
    - Do you have concerns about how your body looks when you post content online?

    - Do you engage in the use of applications to change the way you look before posting online?
    - How do your thoughts about the way you look online impact how you feel about your body offline?
- Describe your interpersonal interactions on social media.
    - Do you feel satisfied with your interactions?
    - Are there parts of your interactions that are not what you would expect them to be?
    - Do you feel your interpersonal interactions on social media are more positive, negative, or a mixture of both?
    - Have you ever been bullied, harassed, or harmed in any way on social media?
        - How did you respond?
        - How do you feel like it impacted your mental health?
        - Was it a one-time occurrence or an on-going issue?
- Do you experience any difficulties related to your sleeping habits?
- Do you ever find it difficult to focus on tasks when not using social media?
    - Do you ever find it difficult to focus on one task at a time?
- Do you experience feelings of depression before, during, or after using social media?