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The Impact of Social Media on Teenage Females Self-Esteem

Amanda C. Perkovich
Minnesota State University, Mankato

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The Impact of Social Media on Teenage Females Self Esteem

Amanda C. Perkovich, RN, BSN, CEN

School of Nursing, Minnesota State University, Mankato

NURS 695: Alternate Plan Paper

Dr. Gwen Verchota, PhD, APRN, CNP

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Abstract

Social media has become the way we connect with the world. Social networking sites, including Facebook, Instagram, Snapchat, Twitter and TikTok, allow users to share intimate details of their lives, upload photographs, initiate and maintain relationships, plan social gatherings, observe the lives of others and express beliefs, values and emotions. In the last ten years, numerous articles have focused on the relationship between social media use and mental health however, very few studies have concentrated on self-esteem, especially in teenage females. The purpose of this literature review is to explore the associations between increased social media activity (greater than 2 hours daily) and self-esteem in adolescent (aged 13-19) females in comparison to those teens participating less than 2 hours of social media daily viewing. Five databases including Academic Search Premier, APA PsychInfo, CINAHL, MEDLINE and Pubmed were searched utilizing several key words resulting in a total of 11 articles for inclusion in this systematic review of literature. Studies were included if they addressed social media use, self-esteem and reported the total screen time adolescents used. The overwhelming evidence suggests a negative relationship between increased social media use and self-esteem.

Keywords: teenagers, adolescents, social media, screen time, self-esteem, youth, mental health, self-confidence, teens, self-worth, social media use, female

The Impact of Social Media on Teenage Females Self Esteem

Social Media & Screen Time

With the use of smartphones, laptops, tablets and computers, social media is at the tips of our fingers. In fact, 88% of teenagers aged 13-18 have a smartphone and are capable of accessing social networking sites (Robb, 2019). 75% of adolescents report having at least one active social media profile, and 51% report visiting a social media site at least daily (American Academy of Child & Adolescent Psychiatry, 2018). The world population is over 7.7 billion and Facebook alone has 2.7 billion users monthly, many of which are adolescents (Robb, 2019; United States Census Bureau, 2020). Previously, the American Academy of Pediatrics recommended limiting screen time to less than two hours a day, but new reports state teenagers spend over seven hours daily on screens (not including for schooling or homework) (Robb, 2019). Researchers have documented the increase in depression and anxiety with excessive screen time and social media use in youth, but studies specifically aimed at exploring the relationship between self-esteem and social media use is lacking. With the increase in mental health concerns globally as well as the rise in screen time, this review aims at answering the following question: How does social media use impact the self-esteem of female youth living in the United States?

Advanced Practice Providers require vigorous training and extensive education to care for the physical, mental and psychosocial well-being of patients of all ages. An understanding of the effects of social media on self-esteem of adolescents is clinically significant in order to provide the highest quality care for the overall well-being of youth.

Definitions

Self-esteem

The American Psychological Association definition (2021):

> The degree to which the qualities and characteristics contained in one's self-concept are perceived to be positive. It reflects a person's physical self-image, view of his or her accomplishments and capabilities, and values and perceived success in living up to them, as well as the ways in which others view and respond to that person. The more positive the cumulative perception of these qualities and characteristics, the higher one's self-esteem. A reasonably high degree of self-esteem is considered an important ingredient of mental health, whereas low self-esteem and feelings of worthlessness are common depressive symptoms." (p. 2)

Social Media

First formally defined in 2004 as "forms of electronic communication through which uses create online communities to share information, ideas, personal messages and other content" i.e. Facebook, Snapchat, Instagram, Twitter and TikTok. (Merriam Webster, 2021).

Screen Time

The total time spent using an electronic device such as a smartphone, tablet, laptop or computer (Merriam Webster, 2021).

The Rosenberg Self-Esteem Scale

A self-report tool used to measure global self-esteem, self-worth and self-acceptance (Ryan, 2014). 10 items are measured on a 4-point scale, resulting in a total score of 0-30. The Rosenberg Self-Esteem Scale (RSES) has excellent test-retest reliability (0.85 – 0.89), excellent internal consistency (0.85 – 0.88) and excellent concurrent validity (0.77 – 0.88) (Ryan, 2014).

Increasing Mental Health Concerns

The effects of low self-esteem have been extensively researched and documented. Adolescents are susceptible to low self-esteem due to peer comparison, parental criticism, physical appearance, unrealistic expectations, uninvolved/negligent family life, trauma, and bullying (Burns et al, 2017). Low self-esteem is linked to depression, anxiety, eating disorders, teenage pregnancy, high risk sexual behavior, behavioral problems, suicidal ideation, self-destructive behavior and violence (Burns et al., 2017).

Adolescent mental health concerns are on the rise. According the to the CDC (2020), among youth aged 6-17 years who answered "yes" to the question of "ever having been diagnosed with either anxiety or depression" increased from 5.4% in 2003 to 8% in 2007 and to 8.4% in 2011–2012. In 2017, there were more than 6,200 suicide deaths among ages 15-24, making it the second-leading cause of death for that age group (CDC, 2020). Results from the 2019 Youth Behavioral Risk Factor Surveillance System show that in the twelve months prior to the questionnaire, 18.8% of high school students seriously considered attempting suicide, with the prevalence being significantly higher in females (24.1% of females compared to 13.3% of males) (CDC, 2020). Nearly nine percent of the youth completing the school-based survey reported attempting suicide more than once, with the incidence again being significantly greater in females compared to males (11% to 6.6%) (CDC, 2020). These findings are significant and worrisome to all those who care for the adolescent population.

Methods

A systematic literature review of five databases was performed to explore the current literature related to how self-esteem is influenced by the use of social media. Diverse data from

Academic Search Premier, APA PsychInfo, CINAHL, MEDLINE and Pubmed was searched, restricting to only English language, full text and peer reviewed articles for review. Due to the ever-evolving world of technology and the increase in adolescents with personal electronic devices, review of articles was restricted to the year 2010 to 2021, with the vast majority of articles written within the last five years. Table 1 of the attached appendix includes an assessment of specific databases including the general subjects covered within each database. Search terms used included "teenagers," "social media," "social media use," "youth," "self-esteem," "adolescents," "females," and "female adolescence." This author then reviewed titles and abstracts to examine articles which measured either social media use or screen time in adolescents. Articles were excluded based on whether self-esteem was specifically measured as many articles included self-esteem under the umbrella of mental health concerns including depression and anxiety. Articles were also excluded if subject matters were not under the age of 19. Table 3 of the attached appendix includes nineteen articles for which specific inclusion or exclusion criteria is documented. Table 4 of the attached appendix contains the eleven articles that met criteria and were utilized for this literature review.

Summary of Literature

With 1.1 million participants over a fifteen-year span, the largest study reviewed included a nationally representative survey of United States 8th, 10th and 12th graders between 1991-2016 (Twenge & Martin, 2018). The study aimed to measure psychosocial well-being including self-esteem, self-satisfaction, life satisfaction, domain satisfaction and happiness. After 2012, it was observed that self-esteem significantly declined compared to previous years, which further indicated a need for an additional study (Twenge & Martin, 2018). The second study aimed at determining the possible causes for the decline in self-esteem. Results revealed that adolescents

who spent more time on electronic communications (social media, texting, gaming, internet) were less happy, less satisfied with their life and had lower self-esteem, particularly among 8th and 10th graders (Twenge & Martin, 2018). In addition, those who spent more time completing non-screen activities, such as sports, exercise, working, in-person activity, were found to have greater psychosocial well-being, including increased happiness and greater self-esteem (Twenge & Martin, 2018). Interestingly, the negative correlation between increased social media/screen time and psychosocial well-being was generally weaker in 12th graders, suggesting that as adolescents near adulthood, the link between time spent on electronics and well-being was not as strongly connected as it is for younger participants (Twenge & Martin, 2018).

In 2015, the European School Survey Project on Alcohol and Other Drugs (ESPAD) surveyed a nationally representative Hungarian sample of 5,961 adolescents aged 15-22 (mean age 16.62 years; SD = 0.96) to determine problematic social media use. In order to assess problematic social media use, the Bergen Social Media Addiction Scale (BSMAS), which was adopted from the previously validated Bergen Facebook Addiction Scale, was used to measure social media use in the last 12 months (Banyai et al., 2016). The components of salience, mood modification, tolerance, withdrawal symptoms, conflict and relapse were measured on a five-point Likert scale ("never" to "always") in order to determine of the participant had no risk, low risk or at risk for problematic social media use. Feelings of self-worth and self-acceptance were measured by the Hungarian version of the Rosenberg's Self-Esteem Scale (RSES), which assessed 10 items on a four-point scale of "strongly agree" to "strongly disagree." Scores ranged from 10-40, with the higher the score correlating to the higher the self-esteem. Those found to be "at risk" for problematic social media use (experiencing withdrawal and tolerance) were more likely to be female, use the internet and social media for more than 30 hours a week, experience

higher level of depressive symptoms and have lower self-esteem than those who had either no risk and low risk of problematic use (Banyai et al., 2016). Banyai et al. concluded that social media use should be assessed in order to determine who is at risk for problematic use and in return, lower self-esteem (2016).

A 2015 study of 244 Icelandic tenth graders (mean age 15.8 including 47% males and 53% females) was conducted to evaluate the association between physical activity, daily screen time and mental health. Self-reported daily screen time (computer games, TV/DVD watching, internet browsing, social media, email) was measured on a seven-point Likert scale ranging from 1=none to 7= more than 5 hours daily. Self-esteem was again measured using the RSES; with a score ≥ 15 points indicated a greater level of self-esteem. Physical activity was calculated using a small, lightweight activity monitor that was worn 24 hours a day on the participants non-dominant wrist. Median screen time of the 244 participants was 5.3 hours daily (Hrafnkelsdottir et al., 2018). Participants engaging in less than the median daily hours of screen time compared to more than 5.3 hours had a reduced risk of negative mental health symptoms including increased depression and anxiety and decreased self-esteem (Hrafnkelsdottir et al., 2018). This article also highlights the significance of increased physical activity to increased mental well-being.

Three hundred and sixty-five Chinese middle school participants (mean age of nearly 16 years) completed a survey measuring social networking site addiction, depression and self-esteem (Wang et al., 2018). The RSES was used to measure self-esteem on a 4-point Likert scale, with higher scores correlating with higher self-esteem. Social media addiction was measured using the Facebook Intrusion Questionnaire, established by Elphinston & Noller, 2011(Wang et al., 2018). Eight statements were rated on a 7-point Likert scale with higher answers signifying

greater social media addiction (Wang et al., 2018). Results indicated that those with higher levels of social media addiction had lower levels of self-esteem which led to increased depression (Wang et al., 2018).

A 2012 Australian study by Bloomfield Neria & Barber (2013) aimed to investigate if there was a correlation between adolescents use of social networking sites (SNSs) and social self-concept, self-esteem and depressive symptoms. Of the 1,819 Australian students in 9th and 11th grade (age range 13-17) who participated in the Youth Activity Participation Study of Western Australia, 55% were female (Bloomfield Neira & Barber, 2013).. SNS frequency was measured on a 7-point Likert scale with 0=never and 6=several times daily. Rating the statements of "social media has become a part of my daily routine" and "I feel out of touch when I haven't logged into social media" on a 5-point Likert scale was used to measure the level of investment participants had in social networking sites. Self-esteem in this study was not measured utilizing the RSES, instead asking "how often do you" followed by "feel good about yourself?", "feel satisfied with who you are?", and "feel sure about yourself?" on a 6-point Likert scale (1=never, 6=daily). Bloomfield Neria & Barber's research revealed that there was no significant difference in self-esteem between males with and without a social media profile, but that females who had a profile had significantly lower self-esteem compared to those who did not have a social media profile (2013). Ultimately, this large-scale study by Bloomfield Neira & Barber (2013) determined that the more investment a participant had in social networking indicated a substantially negative predictor of self-esteem.

A correlation study conducted in 2013 in the Department of Psychology, University of Sargodha, Punjab, Pakistan, included 200 undergraduate subjects (50% male, 50% female) with a goal of investigating the relationship between Facebook addiction, narcissism and self-esteem

as well as to whether gender played a role in the relationships between the three variables (Malik & Khan, 2015). The Bergen Facebook Addiction Scale (BFAS) was used to measure Facebook use on a 5-point Likert scale ranging from very rarely to very often. Self-esteem was evaluated applying the RSES. This small study determined that Facebook addiction had a negative effect on self-esteem and that gender was not of significance in regard to Facebook addiction, narcissism and self-esteem (Malik & Khan, 2015). This article also explores the possibility that Facebook addiction and increased time on this social networking site correlated to lower self-esteem and conceivably involuntarily increased narcissistic behavior.

In 2020, a research study by Wang et al. (2021), examined the relationship between interparental conflict, problematic social media use and the mediating effects on self-esteem. Six hundred eighty-eight Chinese adolescents, ranging in ages of 11-16 (mean age 13.44; SD 0.99) all of whom had active social networking profile, participated in this anonymous questionnaire. Self-esteem was assessed with a 10 question RSES, each measured on a 4-point Likert scale ranging from 1=never to 4=always. Higher scores represented higher self-esteem. Problematic social media use was calculated utilizing the Facebook Intrusion Questionnaire, replacing the word Facebook with social networking sites. A 7-point Likert scale was used to rate how participants viewed social networking use with statements such as "I feel connected to others when I use social networking sites" (Wang et al., 2021). This study found that perceived interpersonal conflict increased problematic social media use which then negatively correlated with self-esteem.

Woods & Scott (2016) studied 467 Scottish students, aged 11-17 years, who completed questionnaires to determine the correlation between social media use and sleep quality, self-esteem and mental health. RSES was used to assess self-esteem, rating 8 statements on a 4-point

Likert scale (Woods & Scott, 2016). Higher scores correlated to higher levels of self-esteem. Emotional investment into social media as well as overall and nighttime specific social media use was also measured with a 6-point Likert scale, with higher results indicating higher levels of social media use (Woods & Scott, 2016). Results indicated a negative relationship between self-esteem and social media with lower levels of self-esteem being reported with higher levels over overall social media use, emotional investment in social media and nighttime specific social media use (Woods & Scott, 2016). A strong emotional investment in social media (answering strongly agree to the question "I get upset with I can't log on to social media") was most strongly associated with decreased self-esteem and increased depression and anxiety.

A correlation study by Vogel et al. (2014), was completed featuring 145 undergraduate students to evaluate whether participants who have a greater exposure to social networking sites have lower self-esteem. Median age of subjects was 18, with over 70% of participants being female. Social media use, specifically Facebook, was measured based on self-reported answers to the open-ended question -approximately how many hours per week do you spend on Facebook?" as well as on a 7-point Likert scale questions regarding Facebook use, status updating and commenting on other's profiles (Vogel at al., 2014). Self-esteem was assessed with a RSES, which included 10 statements that were answered using a 7-point Likert scale of 1=not at all true to 7=very true. Findings indicated that high Facebook use was associated with lower self-esteem, which is mediated by the exposure to social comparisons (Vogel et al., 2014).

Twenty-four in-depth interviews were conducted throughout January to March 2015 by Chua & Chang, (2015) to examine teenage females' self-esteem and peer comparison behaviors on social media. Participants were females aged 12-16 from Singapore who used Instagram to post 'selfies.' Subjects had an average of 375 followers and followed 466 others on the social

networking site Instagram (Chua & Chang, 2015). A theme of needing to edit photos due to insecurity and low self-esteem appeared in nearly all of the interviews (Chua & Change, 2015). A subject reported "I was really insecure, that's why I wear makeup. It's to cover up my flaws, which kind of signifies lower self-confidence, I guess." (Chua & Chang, 2015, p. 195). Another interviewer quoted "I want people to see me as a beautiful girl, because people always say I'm ugly." (Chua & Chang, 2015, p. 194). When evaluating 'likes' and followers on the social networking site, a subject stated "it makes me happy, it makes me realize oh, I'm not ugly because people like my Instagram photos" (Chua & Chang, 2015, p. 196) Participants felt the need to receive more 'likes' when posting 'selfies' and if that expectation was not met, subjects reported failure in peer comparison with statements such as "I have to meet that level, if not, I feel really low and I feel self-conscience and all of that" (Chua & Chang, 2015, p. 195).

Steinbekk et al. (2020) conducted a three-wave community study of children born between 2003 and 2004 in Norway interviewing youth ages, 10, 12 and 14 years regarding their social media use. A total of 725 subjects participated; both male and female genders were equally represented. This study examined self-oriented social media use (actively posting updates or 'selfies') compared to other-oriented social media use (youth who mostly view and respond to others) (Steinbekk et al., 2020). The authors hypothesized that youth who are self-oriented users receive positive feedback and appearance confirmation which increases self-esteem compared to those who utilize social media to comment on other's posts rather than update themselves. This leads to a lack of feedback and idealized views of others which may result in decreased self-esteem. Social media use was measured by self-reports of how often subjects access social media, how often they post photographs, how often users 'like' other's posts/photographs and how often users commented on other's status using a 6-point Likert scale ranging from

rare/never to several times a day (Steinbekk et al., 2020). Physical appearance self-esteem was measured utilizing the Self-Description Questionnaire (SDQ-1) with questions such as "I am happy with the way I look" being answered on a 5-point Likert scale (Steinbekk et al, 2020). This research study determined that not only that girls had lower appearance self-esteem in comparison to boys, but that other-oriented social media use was associated with decreased appearance self-esteem (Steinsbekk, et al., 2020). Contrary to the hypothesis posed by authors, findings also indicated that self-oriented social media use had no correlation to appearance self-esteem.

The concurrent and longitudinal relationships between social networking sites and social media use was evaluated during a three-wave panel survey of 516 families in the Netherlands between 2012 and 2014 (Valkenburg, et al., 2017). Genders were equally represented and a total of 852 adolescents participated in wave 1, 783 adolescents participated in wave 2 and 750 adolescents participated in wave 3 (Valkenburg et al., 2017). Authors measured social self-esteem on a 5-point Likert scale of completely not true to completely true (Valkenburg et al., 2017). Sample questions included "I find it easy to make friends" and "I am popular among my friends" (Valkenburg et al., 2017). Social media activity was measured on self-reports of how often subjects change their profile picture, post 'selfies,' post on other's social media pages and update their status. Higher scores signaled more frequent social media use. Findings indicated that 1) being female was negatively related to social self-esteem and 2) females had higher social media use (Valkenburg et al., 2017). Findings between the relationship of social self-esteem and social networking use was not consistently established throughout the longitudinal analysis (Valkenburg et al., 2017). Results indicate that feedback from social media may affect social self-esteem in the short term but does not appear to have long term impact (Valkenburg et al., 2017).

Discussion

The period of adolescence is associated with increased vulnerability to low self-esteem as well as the onset of anxiety and depression (McLaughlin & King, 2015). During adolescence, youth are experiencing the process of identity development, and self-esteem is an important part of this development. During this developmental phase, adolescents' self-esteem is likely to be affected by the feedback they receive online through social media sites (Burrows, 2017). Since the beginning of social networking in early 2000, that started with MySpace, more and more users are added each month, with a large population of those under the age of 18. As the minds and bodies of youth develop, it's crucial we have an understanding of how outside forces influence overall well-being. This review gave detailed insight to just how fragile the self-esteem of our youth is. This systematic review determined that overall social media use made teenage females more vulnerable to social comparison and negative feedback, resulting in lower levels of self-esteem which in turn, may lead to depression and anxiety.

Study Limitations

While four of the articles reviewed had more than 1,000 participants, the majority of articles had a small participant size (ranging from 24-688) and only two articles had exclusively female adolescent participants. While many articles determined that female's self-esteem was affected by social media more so than their male counterparts, further research concentrating on exclusively female adolescents is needed to gain additional perspective on the extent of daily social media use and how it impacts self-esteem.

 There were several different rating scales for social media use, including the Bergen Facebook Addiction Scale, but no standardized tool for measuring social media usage exists. All of the articles relied on self-reporting to measure social media/screen time use, which may lead

to memory recall bias (difficulty remember exact past events/times) (Twenge & Marin, 2018). In the future, utilizing smart phone settings that automatically measure daily screen time would offer a comprehensive analysis of time spent on electronics.

The subjects included within this review of literature included participants from Scotland, the Netherlands, China, the United States, Singapore, Hungary, Iceland, Pakistan, Norway and Australia. Further analysis of the racial makeup is unclear and undocumented within the majority of the articles. Socioeconomic status was also not addressed within any of the research studies under review.

Many of the articles measured overall screen time rather than focusing solely on social media use. As stated previously, utilizing the 'week in review' setting in smart phones would provide more information concerning comprehensive use of screen time, including a breakdown of specific social media networks.

How the participants spent their time on social media (browsing friends, browsing celebrities, posting 'selfies,' changing profile pictures etc.) was not adequately measured. Further research related to how teenagers are utilizing their time on social networking sites and how that effects self-esteem can deliver additional information.

Future Considerations

Recommendations for Future Research

Recommendations for future research include objective measures of time spent on social networking sites, such as the use of smartphone's "week in review" setting, which breaks down screen time down to total hours spent as well as how much time is spent on specific applications, such as Instagram, Snapchat, Facebook, Twitter and TikTok. Many opportunities for future research exist that were identified through this review of the literature. Focusing on exact time

spent on electronic devices, through the "week in review" analysis, as well as further exploration of socioeconomical and racial factors related to this topic are in need. As more research is conducted and more data is available on the relationship between self-esteem and social media use time, a greater understanding of the risks can be gained.

Recommendations for Practice

As part of well child appointments, assessment of screen time is completed with anticipatory guidance of limiting tv/video/electronics and supervising internet use (American Academy of Pediatrics, 2020). Advanced Practice Providers have the ability to further analyze media use by asking youth to describe time spent on social networking sites and how that they feel when they access social media. Evidence suggests that further assessing self-esteem is warranted at annual visits as well. Completing the Rosenberg Self-Esteem Scale (RSES) annually would allow providers to offer patient-centered inventions for those identified at risk for low self-esteem or suffering with low self-esteem.

Primary care providers, health educators and support staff need to be aware of the risks of problematic social media use in adolescents and how it impacts mental health, including depression, anxiety and self-esteem. This understanding can be used in the development of primary, secondary and tertiary prevention such as preventative counseling, therapeutic interventions and parent education. Counseling and education should be provided to all youth and their care takers regarding the negative effects of spending excessive time on social media. Recommending to both parents and adolescents to activate the time limit option in their electronic device could assist in decreasing the amount of time adolescents are spending on social networking sites.

Recommendations for Policy

This systematic review of literature has made it apparent that changes are needed in order to protect the self-esteem of the adolescent population. Presenting to the local school board a "no social network use" or "no cellular device" policy within the education system would be effective in decreasing the amount of time adolescents are utilizing social media. Presenting current evidence, as well as future research, to city officials, state senators and local congress could lead to real change in the way government oversees social media use. Collaborating with cellular device companies, such as AT&T, Sprint & Verizon, to effectively monitor and limit the social networking access adolescents possess would also lead to a decrease in social media use and therefor an increase in self-esteem. Bringing this evidence forward to social networking moguls, such as Mark Zuckerberg, and fighting for age and time restrictions of social networking use will also assist in ensuring our youth are not negatively affected by social media use.

Conclusion

In summary, the review of current literature reveals that social media activity, including Facebook, TikTok, Snapchat and Instagram, is linked to lower self-esteem in teenager females. Furthermore, the more hours an adolescent female logs on to social media results in lower self-esteem compared to following previous recommendations by the AAP of two or less hours of screen time daily. Spending less time on social networking sites results in higher levels of self-esteem as well as lower levels of depression and anxiety.

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Table 1

Database Search Description

Database (or Search Engine)	Restrictions Added to Search	Dates Included in Database	General Subjects Covered by Database
1. CINAHL	English Language; Peer Reviewed	2010 to 2020	Literature covers a wide range of topics including nursing, biomedicine, health sciences librarianship, alternative/complementary medicine, consumer health and 17 allied health disciplines
2. PubMed	English Language, Full text, Peer Reviewed	2010 to 2020	Includes the biomedicine and health fields, and related disciplines such as life sciences, behavioral sciences, chemical sciences, and bioengineering
3. MEDLINE	English language; Peer Reviewed;	2010 to 2020	Literature covers biomedicine and health; Life sciences, behavioral sciences, chemical sciences, chemical sciences, and bioengineering for health care professionals
4. Academic Search Premier	English Language; Peer Reviewed	2010 to 2020	Broad range of academic topics, including nursing
5. APA PsychInfo	English Language, Peer Reviewed, Full Text	2010 to 2021	Includes articles and books about psychology and disciplines related to psychology such as psychiatry, education, medicine, and nursing

Table 2

Data Abstraction Process

Date of Search	Key Words	Results in CINAHL	Results in PubMed	Results in Academic Search Premier	Results in MEDLINE	Results in APA PsychInfo
10.26.20	Teenagers AND social media	113	17,089	2,654	143	238
10.26.20	Adolescents AND social media	1508	17,672	4,222	501	2,355
10.26.20	Youth AND self esteem	742	17,525	4,544	224	1,096
10.26.20	Social media AND self esteem	301	950	1,052	49	735
10.26.20	Social media AND self-esteem AND adolescents	77	466	215	**5**	68
10.26.20	Teenagers AND self-esteem AND social media	**4**	454	133	**16**	**8**
01.13.21	Female adolescence AND self-esteem AND social media use	**29**	428	**9**	**8**	**77**

Table 3

Characteristics of Literature Included and Excluded

Reference	Included or Excluded and Document	Rationale
Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive behaviors, 64,* 287-293.	Excluded	Investigates the association between addictive use of social media, narcissism, and self-esteem; study includes adolescents, however median age 35.8 years old
Barthorpe, A., Winstone, L., Mars, B., & Moran, P. (2020). Is social media screen time really associated with poor adolescent mental health? A Time Use Diary Study. *Journal of Affective Disorders.*	Included	Analysis of cross-sectional data from the millennium cohort study to explore associations between social media screen time as recorded in time in use diaries with mental health outcomes including self-harm in the last year, depressive symptoms and self-esteem
Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., & Demetrovics, Z. (2016). Problematic social media use: Results from a large-scale nationally representative adolescent sample. *PLoS ONE, 12*(1), 13.	Included	Survey of 5,961 adolescents measuring social media addiction, depression and self-esteem, utilies Rosenberg's Self Esteem Scale, mean age 16.62 years, 50.94%
Blomfield Neira, C. J., & Barber, B. L. (2014). Social networking site use: Linked to adolescents' social self-concept, self-esteem, and depressed mood. *Australian Journal of Psychology*, 66(1), 56-64.	Included	1,819 youth (9th and 11th graders), 55% female measuring social network site use and link to social self-concept, self-esteem and depressed mood
Braig, S., Genuneit, J., Walter, V., Brandt, S., Wabitsch, M., Goldbeck, L., & Rothenbacher, D. (2018). Screen time, physical activity and self-esteem in children: the Ulm birth cohort study. *International journal of environmental research and public health, 15(6)*, 1275.	Excluded	Cohort study which investigates relationship between screen time, physical activity and self – esteem between 11-13-year-old male and females
Burrow, A. L., & Rainone, N. (2017). How many likes did I get?: Purpose moderates links between positive social media feedback and self-esteem. *Journal of Experimental Social Psychology*, 69, 232-236.	Excluded	Utilized experimental manipulation to inform 94 participants that received low, average or high number of 'likes' on self-photographs prior to measuring self-esteem with a 10 item Rosenberg Self Esteem Scale; ages varied from 18-31 with a mean age of 20.14
Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior*, 55, 190-197.	Included	24 in depth interviews with teenage girls exploring the relationship between "likes" and "followers" and self-esteem and insecurity, direct quotes on how social media effects self-esteem
Herman, K. M., Hopman, W. M., & Sabiston, C. M. (2015). Physical activity, screen time and self-rated health and mental health in Canadian adolescents. *Preventive Medicine*, 73, 112-116.	Excluded	Cross sectional data analysis of 7725 participants aged 12-17; measures self-rated mental health; does not specifically measure self esteem
Hrafnkelsdottir, S. M., Brychta, R. J., Rognvaldsdottir, V., Gestsdottir, S., Chen, K. Y., Johannsson, E., & Arngrimsson, S. A. (2018). Less screen time and more frequent vigorous physical activity is associated with lower risk of reporting negative mental health symptoms among Icelandic adolescents. *PloS one, 13*(4), e0196286.	Included	10th grade students, mean age 15.8, focuses on physical activity and daily hours of screen time and mental health status, Likert scale for measuring screen time in hours per day, utilizes Rosenberg Self-Esteem scale to assess self-esteem
Kelly, Y., Zilanawala, A., Booker, C., & Sacker, A. (2018). Social media use and adolescent mental health: Findings from the UK Millennium Cohort Study. *EClinicalMedicine*, 6, 59-68.	Excluded	Reviews findings from 10,904 participants aged 14 from the UK Millennium Cohort Study, mostly measures depressive symptoms via SMFQ form showing a greater daily hour use of social media

Reference	Included or Excluded and Document	Rationale
		corresponded with an increase in depressive symptoms, not specifically measuring self esteem
Kircaburun, K., Demetrovics, Z., & Tosuntaş, Ş. B. (2019). Analyzing the links between problematic social media use, dark triad traits, and self-esteem. *International Journal of Mental Health and Addiction*, *17*(6), 1496-1507.	Excluded	Examines association of problematic social media use and psychopathy, narcissism, self-esteem and Machiavellianism, mean age 22.11
Malik, S., & Khan, M. (2015). Impact of Facebook addiction on narcissistic behavior and self-esteem among students. *Journal of Pakistan Medical Association, 65*(3), 260-263.	Included	Investigates the relationship of Facebook addictions, narcissism and self-esteem, examines if gender plays a role in the equation, equal amount of male and female participants, however, only refers to participants as 'students' never gives ages
Martinez-Pecino, R., & Garcia-Gavilán, M. (2019). Likes and problematic Instagram use: The moderating role of self-esteem. *Cyberpsychology, Behavior and Social Networking, 22*(6), 412-416.	Excluded	Regression analysis of the impact of 'likes' on Instagram and the moderating role of self-esteem; does not include screen time as a measure
Twenge, J. M., Martin, G. N., & Campbell, W. K. (2018). Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. *Emotion, 18(6),* 765.	Included	Extensive national representative yearly survey in the United States of 8th, 10th & 12th graders from 1991-2016 measuring self-esteem, life satisfaction and happiness, incorporating social media and electronic communication as a factor for the decrease in psychological well being
Wang, X. (2021). Perceived interparental conflict and problematic social media use among Chinese adolescents: The mediating roles of self-esteem and maladaptive cognition toward social network sites. *Addictive Behaviors*, *112*, 106601–106601. https://doi.org/10.1016/j.addbeh.2020.106601	Included	688 middle school participants, mean age 13.44, 56% female, utilizes the Rosenberg Self-esteem scale, measures problematic social media use with a SNS Intrusion Questionnaire, however does not measure social media use in hours
Woods, H. C., & Scott, H. (2016). # Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, *100*(51), 41-49.	Included	Examines the relationship between overall social media and night-time specific social media use influences sleep quality, mental health, self-esteem; ages – 11-17
Valkenburg, P. M., Koutamanis, M., & Vossen, H. (2017). The concurrent and longitudinal relationships between adolescents' use of social network sites and their social self-esteem. *Computers in Human Behavior, 76*, 35–41.	Excluded	Investigates the concurrent and longitudinal relationships between adolescents' use of social network sites (SNSs) and their social self-esteem; ages 10-15; measures total times social media is accessed; does not use overall social media time spent as a measure
Yang, H., Wang, J. J., Tng, G. Y., & Yang, S. (2020). Effects of social media and smartphone use on body esteem in female adolescents: Testing a cognitive and affective model. *Children*, *7*(9), 148.	Included	Includes all female participants aged 13-18, measures social media use on a 5-point Likert scale from 0=almost no use to 5=more than 3 hours a day, measures body esteem
Younes, F., Halawi, G., Jabbour, H., El Osta, N., Karam, L., Hajj, A., & Rabbaa Khabbaz, L. (2016). Internet addiction and relationships with insomnia, anxiety, depression, stress and self-esteem in university students: A cross-sectional designed study. *PloS one*, *11*(9), e0161126.	Excluded	Age ranged between 18 and 28 years with a mean of 20.36 ± 1.83 years; measures internet addiction; does not specifically measure social media; does specifically measure self-esteem with the Rosenberg Self Esteem Scale (RSES)

Table 4

Literature Review Table of All Studies Included

Citation (Include the citation of all studies that met inclusion criteria from Table 3 above)	Study Purpose	Pop (N)/ Sample Size (n) /Setting (s)	Variables/ Instruments	Intervention	Findings	Implications
Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., & Demetrovics, Z. (2016). Problematic social media use: Results from a large-scale nationally representative adolescent sample. *PLoS ONE,* *12*(1), 13.	Explore and assess the characteristics and prevalence of problematic social media use and the effects on self-esteem and depression	5,961 participants aged 15-22, mean age 16.62	Bergen Social Media Addiction Scale (BSMAS), Rosenberg Self-Esteem Scale, Center of Epidemiological Studies Depression Scale	NA	Significant difference in social media use between males and females, those with the most time spent on the internet and media had the lowest self-esteem and highest level of depressive symptoms	The more time spent on social media in both male and female adolescents' results in increased low self-esteem and depressive symptoms
Barthorpe, A., Winstone, L., Mars, B., & Moran, P. (2020). Is social media screen time really associated with poor adolescent mental health? A time use diary study. *Journal of Affective Disorders*.	Utilize time use diaries (TUD) to explore the associations between social media screen time and key mental health outcomes – self harm in the past year, depressive symptoms and self esteem	4,032 participants Age 13 = 25.4% Age 14 = 73.5% Age 15 = 1.1%	PHQ2 Short Mood and Feelings Questionnaire (SMFQ) Shortened 5 item Rosenberg Self Esteem Scale	NA	Males reports higher overall levels of self-esteem. For females, increasing time spent on social media was associated with increased risk for poor self-esteem. There was little evidence for an association between time spent on social media and self-esteem in males.	Spending less time on social media decreases the risk of self-harm as well as low self-esteem

Blomfield Neira, C. J., & Barber, B. L. (2014). Social networking site use: Linked to adolescents' social self-concept, self-esteem, and depressed mood. *Australian Journal of Psychology*, 66(1), 56-64.	Aimed to investigate whether there was a relationship between adolescent's use of social network sites and their social self-concept, self – esteem and depressed mood	1,819 participants, age range of 13-17 with a mean age of 14.6.	Social Network Site (SNS) use/frequency/investment scales, self-esteem 6-point Likert scale, social self-concept 6-point Likert scale, Depressed mood 6-point Likert scale	NA	Females who had a social media site profile had significantly lower self-esteem compared to females who did not have a SNS profile. There was no significant difference in the self-esteem between males without and with a SNS profile	Not having a social media site profile (Facebook, Instagram) increases self-esteem
Chua, T. H. H., & Chang, L. (2016). Follow me and like my beautiful selfies: Singapore teenage girls' engagement in self-presentation and peer comparison on social media. *Computers in Human Behavior*, 55, 190-197.	Examines how teenage girls narrate their engagement in self-presentation through posting selfies on social media	24 adolescent females, mean age 14.5	Twenty-four 1:1 interviews lasting 45-60 minutes	NA	Students beliefs in the need to edit their "selfies" resulted in two root factors that underpinned the edited "selfies": insecurity and low self esteem	Adolescent females measure their self-worth and beauty based on 'likes' and 'followers' on social media sites
Hrafnkelsdottir, S. M., Brychta, R. J., Rognvaldsdottir, V., Gestsdottir, S., Chen, K. Y., Johannsson, E., & Arngrimsson, S. A. (2018)	Studies the interrelated associations of screen time and physical activity with mental health (depression, anxiety, self-esteem and life satisfaction	411 10th graders (age 15-16, 47% boys and 53% girls)	Self-reported physical activity, 7-point Likert scale on self-reported screen time, Rosenberg Self-Esteem Scale	NA	Participants who engaged in less than the median screen time of 5.3 hours/day is associated with significantly lower risk of reporting symptoms of depression, low self-esteem and anxiety compared to those with screen times greater than 5.3 hours/day	The more time spent participating in screen-based leisure activities links to poorer mental health, including psychological distress, decreased self-worth perceptions, lower quality of life and self-esteem

Malik, S., & Khan, M. (2015). Impact of Facebook addiction on narcissistic behavior and self-esteem among students. *Journal of Pakistan Medical Association, 65*(3), 260-263.	Aimed at investigating the serious impact of Facebook addiction on the self-esteem and narcissism of students	200 students, 50% female	Bergen Facebook Addiction Scale (BFAS), 10 item Self Esteem Scale (SES), Hypersensitive Narcissism Scale (HSNS)	NA	Facebook addiction had a positive correlation with narcissism and a negative correlation with self-esteem. Findings were insignificant between genders	Spending less time on Facebook increases self-esteem and decreases narcissistic behavior
Twenge, J. M., Martin, G. N., & Campbell, W. K. (2018)	Aim to document trends in adolescents' psychological well-being; including screen time spent on electronic communication such as social media, texting and internet use	1.1 million 8th graders = 437,293 10th graders = 398, 673 12th graders = 311,552	Internet hours per week The Rosenberg Self Esteem Scale (RSES)	NA	Adolescents who spent more time on electronic communication (social media, texting, electronic games, internet) were less happy, less satisfied with their lives and had lower self-esteem, especially among 8th and 10th graders	Among 8th and 10th graders, every nonscreen activity was correlated with increased happiness and every screen activity was correlated with less happiness
Wang, X. (2021). Perceived interparental conflict and problematic social media use among Chinese adolescents: The mediating roles of self-esteem and maladaptive cognition toward social network sites. *Addictive Behaviors, 112*, 106601–106601. https://doi.org/10.1016/j.addbeh.2020.106601	Examines the relationship between interparental conflict and problematic social media use among adolescents and its mediating effects on self esteem	688 middle school students Mean age 13.44, 56.1% female	Rosenberg Self-Esteem Scale, Facebook/SNS Intrusion Questionnaire, Children's Perception of Interpersonal Conflict Scale (CPIC)	NA	Perceived interpersonal conflict negatively correlated with self-esteem, self-esteem was negatively correlated with maladaptive cognition toward SNS but was not significantly related to problematic social media use	

Woods, H. C., & Scott, H. (2016). # Sleepyteens: Social media use in adolescence is associated with poor sleep quality, anxiety, depression and low self-esteem. *Journal of Adolescence*, *100*(51), 41-49.	Examine how social media use related to sleep quality, self –esteem, anxiety, and depression	467 Scottish adolescents	Hours spent on social media on a 6-point Likert Scale (less than 1 hour to 6+hours) The Rosenberg Self-Esteem Scale (RSES)	NA	The relationship between self-esteem and social media was found to be negative, such that lower self-esteem scores were associated with higher levels of overall social media use and increased night-time specific social media use	Spending less time on social media, especially night-time specific social media, increases self esteem
Yang, H., Wang, J. J., Tng, G. Y., & Yang, S. (2020). Effects of social media and smartphone use on body esteem in female adolescents: Testing a cognitive and affective model. *Children*, *7*(9), 148.	Examined the predictive relations of social media and smartphone use to body esteem in female adolescents utilizing the Cognitive and Affective Model	100 female teens aged 13 to 18, mean age 15.07	6- point Likert scale on smartphone screen time, Modified version of the Media and Technology Usage and Attitudes Scale, 21 item Body Esteem Scale for Adolescents and Adults, 10 item adapted Physical Appearance Comparison Scale-Revised	NA	Relative indirect effects of overall smartphone screen time on body esteem for participants whose daily smartphone usage was more than 4 hours compared to those who used less than 1 hour. Also, overall smartphone use dose not exert any effect when social media screen time is taken into consideration	Spending less time on social media directly increased body esteem