Winter 12-2020

Social Media Use and Empathy in Late Adolescents

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SOCIAL MEDIA USE AND EMPATHY IN LATE ADOLESCENTS

by

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A Thesis Submitted in Partial Fulfillment
of the Requirements for a Degree with Honors
(Psychology)

The Honors College

University of Maine

May 2021

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ABSTRACT

Social media use has been linked to a wide variety of both positive effects, such as improved ability to share and understand the feelings of others and involvement in philanthropic activities, but it has also been associated with negative effects, including cyberbullying and low self-esteem. Today's adolescents have grown up as digital natives and have deemed social media as an essential way to connect with peers and develop relationships. These relationships can play a critical role in adolescents' development of important prosocial skills, such as empathy. The purpose of this study was to investigate the relationship between social media use and empathy in late adolescents. Seventy-six late adolescents, ages 18 to 19, completed an online survey assessing their social media use, cyberbullying and cyber victimization history, and empathy levels. Results indicated that the frequency of social media use is positively correlated with increased personal distress during interpersonal conflict, a factor of empathy. Findings also revealed that active use of social media was positively correlated with personal distress, though this was true only for males. Results showed that that being an active user of social media and the fantasy subscale (the ability to transpose oneself into the feelings of fictitious characters) of empathy were negatively correlated for females only. Overall, results suggested that the use of social media is particularly associated with feelings of personal distress. These feelings, in turn, may promote empathic behavior in late adolescents.

ACKNOWLEDGMENTS

Over the past four years of my college career at the University of Maine, countless people have made it possible for me to be where I am today, and I am eternally grateful for all their support. Through my experience at the University of Maine, I realized the importance of seeking support and advice from professors and peers. The honors endeavor has been a defining aspect of my time at the University of Maine. My honors preceptors and professors have helped to learn how thinking critically and articulate my thoughts. I am so grateful for the opportunity they have given me to grow over these past four years.

I would especially like to thank my thesis advisor Dr. Cynthia Erdley. Dr. Erdley has been helping me through the honors process for over a year now, and I would not have been able to do it without her help. She has provided wonderful advice, motivation, and guidance through a tough and confusing process. I am so grateful for all the time she has sacrificed to meet with me, read through countless drafts, and provide insight into the thesis process. Thank you, Cindy, I would have not been able to do this without your continuous help.

To my committee members, Julie DellaMattera, Shannon McCoy, Mollie Ruben, and Emily Scarpulla, thank you so much for the time you have put into my thesis project. Over this past year, the members of my thesis committee have provided suggestions, resources, and support for this project. Your support has been invaluable, and I am so grateful for your willingness to help me in this process.

To my parents, my sisters, my significant other, and friends, I would have never been able to do this without you. Mom and Dad, you have consistently supported me in

all my endeavors, pointed me towards God, and loved me no matter my triumph or failure. Thank you for answering the phone at midnight when I am stressed and overwhelmed, for talking through my struggles with me, and for always being there. To my sisters and friends, you have encouraged me, helped me to proofread and have prayed for and with me, thank you! To Joshua, you have been my rock this past year, and I do not know how I would have done this without you. You have shared in my joys, mourned in my sadness, and loved me through all of it, thank you. To everyone who has helped me and encouraged me through this process thank you; I could not have done it without you.

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Technology has worked its way into everyday life in the United States, from online schooling, to ordering clothes, to making plans with friends. The way humans interact with one another has been revolutionized by technology. With the development of social media people create, post, share, comment, and like content. In the past few decades, technology has been ever evolving and changing. The growing presence of social media begs the question of its influence on how all people, especially adolescents who have grown up as digital natives, think and act.

Adolescence is a crucial time in a person's life to develop a sense of self and learn how to interact with others in society. The relationships adolescents form with peers are critical for them to gain important prosocial skills like empathy (Laible, Carlo, & Roesch, 2004). The development of empathy allows adolescents to become better socially adjusted (Van der Graaff, Carlo, Crocetti, Koot, & Branje, 2018). Given that adolescents currently spend an average of seven hours a day on their phone and with a larger portion of that time on social media it has become an essential extension of in-person interactions to help connect with and develop peer relationships (Davis, 2012; Jacob, 2017). This study seeks to answer the research question of how social media usage relates to late adolescents' level of empathy.

<u>Social Media</u>

Social media has quickly evolved since its creation at the turn of the 21st century. Platforms like Myspace (which began in 2003) and instant messaging paved the way for

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today's social media giants like Facebook, YouTube, and Instagram. Today's social media platforms allow users to create content, live stream, comment, post, share, fundraise, and so much more. The average amount of screen time per day has doubled for adolescents in America between 2006 and 2016 (Twenge, Martin, & Spitzberg, 2019). In a 2018 study, researchers found that adolescents ages 12-15 years spend an average of 20 hours a week on social media and the internet (Anderson & Jiang, 2018). As of 2018, 95% of teenagers in the United States reported having access to a smart device, and 45% of teenagers reported that they are almost constantly on social media (Anderson & Jiang, 2018). The amount of time spent by teens on social media is likely to rise, as access to smart devices and online platforms continues to increase (Anderson & Jiang, 2018). An interesting aspect of technology usage is looking at the differences between active and passive users. Active users of social media post, share, and interact with content more frequently, whereas passive users tend to aimlessly scroll through media and do not directly interact with other users.

The adolescent years in a person's life are a crucial time for the development of interpersonal relationships and self-identity (Adams & Marshall, 1996). An adolescent's peer group is an important factor in this development (Davis, 2013). Friends in an adolescent's peer group help them to further recognize and establish their identity through intimate conversations (Davis, 2013). With the introduction of technology and social media, the development of interpersonal relationships and self-identity has been able to occur through new avenues not previously available.

Positive Aspects of Social Media

      With teenagers spending, on average, just about one-third of their day on their phones, and a large portion of that on time social media, it is bound to affect them in both positive and negative ways (Jacob, 2019). In one study, it was found that adolescents who use social media more often have an improved ability to share and understand the feelings of others (Vossen & Valkenburg, 2016). The ways for adolescents to connect on social media are endless. Today's digital media is allowing adolescents to express themselves in unique new ways (Davis, 2013). They are able to create and maintain romantic relationships, communicate with friends and family, as well as receive help through prevention networks.

      The digital world has provided a new way for people who struggle with face-to-face interactions to form a connection with others and find a community (Allen, Ryan, Gray, McInerney, & Waters, 2014). Adolescents that identified as being lonely also reported that they used the internet and social media as a way to connect with peers and create social connections (Allen et al., 2014). Habits that adolescents learn online regarding social interactions tend to help influence, shape, and reinforce the relationships they have offline (Uhls, Ellison, & Subrahmanyam, 2017). If someone is lacking social skills or feeling lonely and starts using social media for a sense of community, this has the potential to help them build needed skills to maintain relationships offline. Social media also has the benefit of being available at any time of day and in any location; users of social media are able to reach out to peers at any time if they need help, want to chat, or desire to be connected (Davis, 2012).

In one study, researchers found a positive correlation between online peer relations and friendship quality (Davis, 2013). Social media platforms, like Facebook, have been found to help people with a shared interest and mutual friends to connect in new ways (Ellison, Steinfield, & Lampe, 2011). Facebook has many different avenues of use, one of them being the idea of social information seeking (Ellison et al., 2011). Ellison et al. (2011) found that college students often report using Facebook for social information, oftentimes "checking out" a classmate's, peer's, or dorm mate's profile to learn more about them. This idea of "lurking," spending time visiting other peers' personal pages without posting or adding to the content, has been found to be common for teens to see what their peers are participating in and what they are like (Suzuki & Calzo, 2004). With up to 81% of teenagers with internet access being on Facebook, most adolescents have the opportunity of connecting and researching peers on this social media platform (Allen et al., 2014).

Adolescence is an important time in a person's life to develop their self-identity, to create intimate relationships with peers, and explore who they want to be. Social media has been created to help aid in and create new social interactions for users (Pempek, Yermolayeve, & Celvert, 2009). College-aged adolescents often use social media as a way to keep in touch with people that they went to high school with or to keep up with people that they do not see on a regular basis (Pempek et al., 2009). Facebook has provided a new avenue for people to learn about peers they are considering being friends with and to interact with new people and stay connected/reconnect with old friends.

Social media not only is used for entertainment and connecting with friends but also has created an avenue for philanthropic activities. Celebrities have led charges for

social justice and change, as have everyday people striving to make the world a better place. Lady Gaga is one example of a celebrity who has led a philanthropic movement on social media. Lady Gaga uses her influencer status on social media platforms to connect with followers on a personal level to help ignite change (Bennett, 2014). In 2009, Gaga engaged with her fans over social media promising that in exchange for volunteering eight or more hours at a homeless shelter, she would provide them with a free ticket to her upcoming tour (Bennet, 2014). At the same time, Gaga publicly announced that she would be matching donations to this cause up to $25,000 (Bennet, 2014).

Celebrities are not the only ones encouraging philanthropic activities through social media. The website GoFundMe, a website where people can raise funds for any cause through public and anonymous donations, has raised over 9 billion dollars since 2010 for over 120 million fundraisers (GoFundMe, 2020). A recent fundraiser raised over $50,000 for the supplies needed to clean up the streets of Minneapolis after the Black Lives Matters protests in the spring of 2020 (GoFundMe, 2020). People are using their voices on social media to share fundraisers, sign petitions, and spark change.

Negative Aspects of Social Media

Although there are many positive ways in which adolescents express themselves on social media, there is also the potential for negative interactions and expression. One such concern is cyberbullying. Cyberbullying is characterized as the act of repetitive aggression, with the intention of creating harm and distress through an online platform. According to a study conducted by Ang and Gog (2010), middle school students reported

that in the past two months, eleven percent were victims of cyberbullying, four percent were cyberbullying, and seven percent were both a cyberbully and a cyber victim.

Social media often can provide a feeling of anonymity that may make it easier for adolescents to be involved in cyberbullying activities (Strom & Strom, 2006). Due to this cloak of anonymity provided through the internet, it may be hard for a cyberbully to see the weight of their actions, making it unlikely that they will have feelings of regret, sympathy, or compassion towards their victim (Schneier, 2003). Cyberbullying has the potential to carry more of a harmful impact on its victim compared to typical bullying (Strom & Strom, 2006). The reason for this is that the internet is vastly different than in-person interactions. The internet provides a public platform that allows for anyone to like, comment, share, post, and edit any content they wish. The internet is available 24/7, allowing for content to travel far and wide any time of day (Strom & Strom, 2006). Unlike traditional bullying, adolescents that experience cyberbullying are not able to escape the bullying when they reach the comfort of their home, and the bullying is no longer just contained to the people they interact with face-to-face (Strom & Strom, 2006).

While the sense of connectedness and community found on social media has positives, there is a downside as well. Adolescence is a crucial time for self-discovery and autonomy, so the preoccupation of social media may hinder and/or influence the development of self (Davis, 2012). An adolescent's online identity expression and exploration have been found to be negatively associated with the clarity of their self-concept (Davis, 2013). Social media users have the ability to tailor what the world sees about them on social media. The idea of creating a perfect social media presence can

often lead people to compare themselves to the "perfect" and unattainable lives they see on social media (Sponcil & Gitimu, 2013).

Use of Facebook has been linked to lower self-esteem in its users caused by upward social comparison (Woods & Scott, 2016). Specifically, people often post the most positive and exciting aspects of their life, causing teens to compare their own lives to "perfect" lives of their peers, leading to them look down on their life (Woods & Scott, 2016). Social media users will oftentimes add as many friends as possible on social media to achieve a sense of popularity (Sponcil & Gitimu, 2013). For adolescents who are in the process of trying to discover who they are, social media can serve as a distraction from the process of self-discovery.

With regard to other aspects of negative socioemotional adjustment related to social media use, one study found that adolescents who are emotionally invested in social media experienced poorer sleep-quality, lower self-esteem, higher levels of anxiety, and greater depression (Woods & Scott, 2016). Lower self-esteem has been linked with higher levels of aggression and lower levels of prosocial behaviors in adolescents (Laible et al., 2004).

In recent years, rates of teens suffering from mental illness have increased significantly (Twenge, Joiner, Rogers, & Martin, 2019). Researchers are not able to pinpoint what is causing more teens to suffer from mental health issues. In the Twenge et al. (2019) study, they talked about how previous researchers have looked at factors such as academic pressure, a shift in family structure, and rising obesity rates in the United States to try to explain the increase in mental health cases in adolescents.

However, in their study, Twenge and colleagues (2019) focused on the possible role of screen time and found that the level of teens' screen time was positively correlated with suicide-related outcomes. Twenge et al. also found a negative correlation between going to in-person activities and social gatherings and depressive symptoms. They suggested that an increase in screen time is both indirectly and directly related to the increase of suicidal ideation and depressive symptoms in adolescents in the United States (Twenge et al., 2019).

Some of the possible explanations for the link between social media use and poor mental health in adolescents relate to findings that those who are emotionally invested in their social media platforms tend to have poor sleep quality as well lower self-esteem (Woods & Scott, 2016). Social media also creates a platform for someone to constantly compare their life to the seemingly perfect and curated life of their peers and influencers on social media, and they may experience depressed feelings when they see that their life does not measure up to others.

It is important to note that the finding that social media and screen time are negatively correlated shows a significant gender difference (Twenge & Farley, 2020). Adolescent females have been found to have stronger correlations between levels of screen time and mental health issues (Twenge & Farley, 2020). Notably, females who were heavy users of the internet were 166% more likely to have clinically relevant depressive symptoms than lower users, compared to only 75% more likely among males in the same cohort. Females are more likely to be concerned about social relationships and base more of their self-worth on the quality of their relationship experiences (Rose & Smith, 2018). Based on the results of many recent studies (e.g., Twenge & Farly, 2020;

Twenge et al., 2019), it appears that the increasing rate of mental illness among

adolescents in the United States is related to their increased internet usage.

Overall, research on adolescents' social media use and their adjustment has

indicated that their use can put them at risk for a variety of negative outcomes, including

low self-esteem, depression, and even suicidality (Liable et al., 2004; Wood & Scott,

2006). On the other hand, there are a variety of potential positive outcomes, including

increased friendship quality, meeting and connecting with new people, and participating

in philanthropic activities (Davis, 2013; Ellison et al., 2011). In addition, through their

use of social media, teens can become more aware of and sensitive to others' feelings and

experiences, which can be important in promoting empathy.

<u>Empathy</u>

Empathy has been described in many different ways. A very broad definition of

empathy defines it as a "reaction of one individual to the observed experiences of

another" (Davis, 1983, p. 113). Others have defined empathy as the essence of being

human, that it is about valuing other people and their perspectives, as well as showing

others compassion (Weissbourd & Jones, 2017). Empathy is not an emotion but a

reaction to other people's emotions (Powell & Roberts, 2017).

There are three primary types of empathy - cognitive, affective, and

compassionate (Powell & Roberts, 2017). Cognitive empathy deals with the recognition

and identification of other people's emotions (Powel & Roberts, 2017). Affective

empathy is when a person is able to mirror the feelings of those around them (Hatfield,

Bensman, Thornton, & Rapson, 2014). Compassionate empathy is the combination of

cognitive and affective empathy; having the ability to understand and respond to other people's emotional states with sympathy and compassion (Goetz, Keltner, & Simon-Thomas, 2010 as cited in Powel & Roberts, 2017). In a practical sense, empathy is offering kind words to an upset classmate after they fail an exam, deciding to sit with a coworker who is sitting all alone, or making a meal for a neighbor when they are going through a hard time.

<u>The Development of Empathy</u>

Children will begin to develop the skills needed to show empathetic concern and be empathetic people very early on in life (McDonald & Messenger, 2011). Studies have found that newborn babies will start to show signs of distress when they hear other babies cry within the first 24 hours of their life (Martin & Clark, 1982). Babies will demonstrate more distress in response to hearing other infants crying compared to other loud noises, suggesting that their reaction is not simply an aversive reaction to a loud noise (Martin & Clark, 1982). While this is not direct empathy, it is thought that the infant's reaction is a precursor to empathetic concern later in life (McDonald & Messenger, 2011). By preschool, children are able to interpret other people's emotions and respond through helping behaviors and their facial expressions (McDonald & Messenger, 2011). As children learn and grow, their linguistic abilities will increase, allowing for growth in their ability to cognitively understand other people's feelings (McDonald & Messenger, 2011).

Through childhood, parents will lay the groundwork for their future adolescents to become warm and empathetic people (Laible et al., 2004). There are many ways that

parents help to encourage and teach their children empathy. One way that children and adolescents learn empathy is through modeling (Weissbourd & Jones, 2017). It is important for parents to model empathy by responding with sensitivity and compassion to their children's emotional experiences, as well as to the experiences of other people. By observing their parents' empathic responses, empathy is cultivated in children (Weissbourd & Jones, 2017). Adolescents and children also learn empathy through their parents giving them opportunities to be empathetic (Weissbourd & Jones, 2017). For example, parents can encourage empathy when their children are in conflict with peers or when they see others in their community struggling.

Communication is another way a parent can help their children regulate and understand their emotions (Clark, 1984). One way that parents do this is through their response in moments when their children hurt someone either physically or emotionally (Zahn-Waxler, Radke-Yarrow, & King, 1979, as cited in Cotton, 1992). These teaching moments can allow for parents to discuss how their child's actions negatively impacted someone else. In these situations, parents can communicate why what the child did was wrong and hurtful and how they can respond next time to help them learn to empathize with other people (Zahn-Waxler et al., 1979 as cited in Cotton, 1992). Parents can use these conversations as a way to help children identify and understand their own feelings, as well as the feelings of others (Clark, 1984). When parents encourage their children to discuss their feelings and think about the feelings of others, this is positively correlated with the development of empathy (Clark, 1984). Parents can use many different techniques to help their children understand feelings and become more empathetic people.

During adolescence, youth become increasingly reliant on their peer groups during moments of stress and when seeking advice, while becoming less reliant on their parents for these needs (Hazan & Zeifman, 1999, as cited in Laible et al., 2004). The relationships adolescents form with peers are critical for them to gain important prosocial skills like empathy (Laible et al., 2004). Supportive peer relationships allow adolescents to improve their perspective-taking and empathy skills (Laible et al., 2004). Friendships provide the opportunity to learn how to receive and give empathy to others. A hallmark of peer relationships during adolescence is the development of intimate relationships (Brown & Larson, 2009). The intimacy within peer relationships allows adolescents to share and discuss their feelings.

Moreover, the cognitive advances adolescents experience, enables them to have a better ability to understand someone else's perspective (Choudhury, Blakemore, & Charman, 2006). This allows for a greater chance to show empathy when sharing with friends (Choudhury et al., 2006). Engaging in prosocial behaviors, such as empathic responses, is an effective strategy for making new friends and maintaining high quality friendships (Barry & Wentzel, 2006). Notably, the development of empathy in a person's adolescent years influences their social competence in adulthood (Allemand et al., 2015).

Oftentimes, homophily (i.e., choosing friends that have similar interests, values, and backgrounds) is an important aspect of peer relationships (Brown & Larson, 2009). If friends start to drift in different directions, the strength of their friendship is likely to diminish (Brown & Larson, 2009). People wish to be friends with people that are like them. For example, it is unlikely that an empathetic person is going to have a strong friendship or seek out a friendship with someone who is aggressive and non-

empathetic. Adolescents are likely to select friends who are similar to them in empathy, and over time they reinforce and socialize empathy in one another.

Interestingly, research has indicated that people are more likely to exhibit helping behaviors when they believe they are being watched (Van Rompay et al., 2009). For example, Van Rompay and colleagues found that people were more likely to help if they knew there were cameras watching them. Notably, a Dutch study revealed that adolescents had an improved understanding of empathy (cognitive empathy) and how to express empathy (affective empathy) when they were using social media, a platform where there is often a large audience (Vossen & Valkenburg, 2016). This same study found that adolescents who used social media more often improved their ability to share and understand the feelings of others than their peers not using social media (Vossen & Volkenburg, 2016).

Social media allows for adolescents to self-disclose information to their friends through private messaging and groups (Schouten, Valkenburg, & Peter, 2007). Adolescents have reported that they disclose personal information through social media because it gives them a better sense of control and comfort in these situations (Schouten et al., 2007). Adolescents are now able to use social media as an extension of in-person interactions, and it has become an essential way to connect with and develop peer relationships (Davis, 2012). This connection allows them to see a window into the lives of their peers that they may previously have never seen, enabling them to potentially be more empathetic and compassionate people.

Self-esteem is an important part of developing prosocial and empathetic behaviors. Self-esteem and empathy have been shown to be linked to the expressions of

prosocial behaviors in adolescents (Laible et al., 2004). Adolescents that have higher self-esteem are more likely to feel confident and competent at exhibiting helping behaviors when others around them are in need (Eisenberg & Fabes, 1998). Some ways that self-esteem is cultivated are through warm parent-child relationships and positive peer relationships (Laible et al., 2004). Social media is one tool that adolescents can use to aid in the development of peer relationships and the expression of empathy (Ellison et al., 2011).

Gender Differences

Past studies have found that there are gender differences in levels of empathy. Specifically, females have been shown to be more likely to score higher in levels of empathy when compared to males (Allemand, Steiger, & Fend, 2015; Bordy, 1999; Toccaceli, Fagnani, Eisenberg, Alessandri, Vitale, & Stazi, 2018). Allemand et al. (2015) conducted a 23-year longitudinal study following empathy development from early adolescence into adulthood. Within this study, they found that while male and female children may be raised in a similar environment, females score significantly higher in levels of empathy (Allemand et al., 2015). The levels of empathy that males and females showed in adolescence were stable into adulthood (Allemand et al., 2015).

Researchers believe the differences seen in levels of empathy can be partially explained based on the socialization of males and females in Western culture (Allemand et al., 2015; Brody, 1999). Parents typically desire to raise their children in a way that allows their children to be socially accepted in society. Females are expected to be more caring and nurturing, consistent with societal expectations that females are caregivers

(Brody, 1999). Therefore, females are encouraged to be concerned about others' feelings and to respond to others in emotionally supportive ways. In contrast, males are more encouraged to stand up for themselves and to be less emotional. These societal-accepted gendered traits are taught by family members, popular media, peers, teachers, and marketing (Brody, 1999).

Benefits of Being Empathetic

People who display a high level of empathy have been found to have better social adjustment in many different areas of their lives (Van der Graaff et al., 2018). Higher levels of prosocial behavior and empathy are linked to a person having higher self-esteem, academic success, and quality of friendships (Van der Graaff et al., 2018). In addition, those with a high level of empathy are less likely to be the victims of relational bullying (Castillo, Salguero, Fernández-Berrocal, & Balluerka, 2013). Empathy can help to buffer against aggression from other peers (Castillo et al., 2013). Adolescents who score lower in empathy are shown to be more likely to participate in bullying activities, especially within the male population (Gini, Albiero, Benelli, & Altoe, 2007). In contrast, adolescents who score higher in empathy engage in higher levels of helping behaviors (Gini et al., 2007). Empathy is thought to provide the motivations for a person to engage in helping behaviors (Van der Graaff et al., 2018).

Empathetic behavior has also been shown to provide help and change on a larger scale. A recent study examined how empathy can affect participation in a real-world charity where people were asked to give personal time, not monetary currency (Farrelly & Bennett, 2018). This study used the site freerice.com, where for every question a

participant answered correctly, 10 grains of rice were given to the United Nations World Food Program. Farrelly and Bennett found that the empathetic feelings that were created while using this charitable site led to altruistic behaviors, as well as longer-lasting prosocial behavior (Farrelly & Bennett, 2018).

In sum, the development of empathy is important for the development of a well-rounded adolescent. People who display high levels of empathy are better socially adjusted, more likely to feel competent to help out in moments of distress, and more apt to be involved in volunteering their time in order to help others (Eisenberg & Fabes, 1998; Farrelly & Bennett, 2018; Van der Graaff, et al., 2018). Although adolescents' increasing perspective-taking abilities allow them to better understand others' feelings, enabling them to react in appropriately supportive ways, it is also true that increased perspective-taking abilities can result in negative behaviors. For example, teens might be more aware of what issues (e.g., sensitivity about one's physical appearance, worries about relationship status) are of greatest importance and concern to a peer and may use that information to try to harm that peer's sense of self and belonging through cyberbullying.

Cyberbullying

In the past decade or so, the topic of bullying has seen a significant increase in attention, both in research and in the popular press. Schools have anti-bullying workshops, television programs focus on how to stand up to bullies and bullying frequently makes its way into newspaper articles and news reports. As previously stated in this paper, cyberbullying is a more recent development as the internet and social media

have grown to be an integral part of life for adolescents in the United States. Cyberbullying is characterized as the act of repetitive aggression, with the intention of creating harm and distress through an online platform.

According to a study conducted by Ang and Gog (2010), middle school students reported that in the past two months, eleven percent of the students were victims of cyberbullying, four percent had participated in cyberbullying, and seven percent were both a cyberbully and a cyber victim. Other studies have found that the prevalence of adolescents that experience cyberbullying is between 10% and 60% (Pettalia, Levin, & Dickinson, 2013; Whittaker & Kowalski, 2015).

In a 2011 investigation, researchers in Luxembourg studied whether or not cyberbullies were less empathetic than their peers (Steffgen, König, Pfetsch, Gini, & Albiero Melzer, 2011). Within this study, researchers found that the adolescents that participated in cyberbullying activities showed less empathetic concern for victims of cyberbullying (Steffgen et al., 2011). Conversely, it has been found that victims of cyberbullying score higher on cognitive and affective empathy when compared to cyberbullies (Pettalia et al., 2013). It is believed that cyber victims score higher on empathy scales due to a better understanding of perspective-taking based on their own experiences with cyber victimization and a greater concern for those who share their plight (Pettalia et al., 2013).

Social media often can provide a feeling of anonymity that may make it easier for adolescents to be involved in cyberbullying activities (Strom & Strom, 2006). Due to the cloak of anonymity provided through the internet, people participating in cyberbullying activities may have a difficult time seeing the weight of their actions, making it unlikely

that they will have feelings of regret, sympathy, or compassion towards their victim (Schneier, 2003). One of the most common ways that cyber victims experience cyberbullying is through being made fun of and insulted through online forums (Brewer & Kerslake, 2015). Another common way that they experience cyberbullying is in the form of private messages and pictures being shared without their permission or knowledge (Brewer & Kerslake, 2015). Adolescents perceive cyberbullying as eliciting more harm to the victim than providing consequences for the perpetrator (Pettalia et al., 2013).

Cyberbullying has the potential to carry more of a harmful impact on its victims compared to typical bullying (Strom & Strom, 2006). The internet is a public platform allowing anyone to access information/content and connect with others at any time (Strom & Strom, 2006). News of interest on the internet travels at a rapid pace as people are able to share, like, and comment any time of day since the internet never shuts off (Strom & Strom, 2006). Unlike traditional bullying, adolescents that experience cyberbullying are not able to escape the bullying when they reach the comfort of their own home due the constant connection to the internet (Strom & Strom, 2006). Given the wide breath of the internet, bullying is no longer contained just to the people they interact with face-to-face but widened to anyone with access to the internet (Strom & Strom, 2006).

The effects of cyberbullying, like traditional bullying, have lasting impacts on the victims. In July of 2014 the tragic story of Conrad Roy and his girlfriend Michelle Carter was shared on every major news platform in the United States and shed light on the serious and tragic impacts of cyberbullying. Conrad Roy was an 18-year-old who

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struggled with depression and suicidal ideation, and Michelle Carter was his 17-year-old girlfriend who was battling depression herself (Durkin Richer, 2019). In 2014, Roy reached out to his girlfriend sharing that he was struggling with depression and suicidal ideations (Levenson, Henderson, & Sgueglia, 2020). The "support" he received from his girlfriend was in the form of encouraging him to fulfill his suicidal ideations; helping him plan how, where, and when to commit suicide; and repeatedly chastising him for his indecision (Levenson et al., 2020). After receiving numerous messages from his girlfriend that criticized him and emphasized that his life was not worth living, Roy committed suicide (Durkin Richer, 2019). Michelle Carter was sentenced to 15 months in prison and charged with involuntary manslaughter based on her texts berating Roy and encouraging him to commit suicide (Levenson et al., 2020). Cyberbullying has real world, irreversible consequences for both the victim and the perpetrator.

Overall, cyberbullying is a concerning issue that users of social media may experience. With the cloak anonymity that is provided on the internet, cyberbullies are able to wreak havoc in the lives of others. Cyberbullying has real world consequences like suicidal ideation and potential criminal charges. Adolescents who participate in cyberbullying activities show less empathetic concern for victims of cyberbullying, whereas victims of cyberbullying score higher on empathy (Pettalia et al., 2013; Steffgen et al., 2011). Cyberbullying, social media usage, and empathy are likely to have a relationship with one another in adolescents.

<u>Present Study</u>

Over the past few decades, technology has been ever evolving and advancing and finding new avenues to be implemented into everyday life. People are now able to instant message their friends, vlog about their day, receive advice from online forums, and create content for others to react to. The growing presence of social media begs the question of its influence on how all people, especially adolescents, think and act. Today's teenagers, on average, spend seven hours on their phone each day (Jacobo, 2019). Ninety percent of teenagers have at least one social media platform, and over half of their time spent on their phones is on social media (Woods & Scott, 2016). With today's teenagers spending an average of one-third of their day on their phones, this is likely to impact their thoughts, decisions, and behaviors.

Today's adolescents are digital natives. They have grown up surrounded by technology and have learned how to make technology serve their own needs and wants. Unlike any other generation, today's adolescents have had access to technology through some of their most transformative years. During an individual's adolescent years, their peer group is an important and influential part of their development and self-discovery (Adams & Marshal, 1996). Social media has provided adolescents with another avenue to explore their identity and form relationships.

Social media has given a space for adolescents who struggle with in-person, face-to-face interactions a platform to make new friends (Allen et al., 2014). Social media has the benefit of being available at any time of day and in any location. Due to this, users of social media are able to reach out to peers at any time if they are in need of help, want to chat, or desire to be connected to their peers (Davis, 2012). The ability to be connected

and plugged into online groups may be a positive for people desiring social connectedness and who are experiencing positive interactions. However, it may act as a hindrance to those who are victims of cyberbullying, given that unlike traditional bullying, when people experience cyberbullying, they are unable to find refuge once they return home (Strom & Strom, 2006). Bullying is no longer limited to in-person interactions. People are now able to experience bullying any time of day and from anyone with access to the internet (Strom & Strom, 2006).

Peer relationships during the adolescent years are an important factor in learning prosocial skills, such as empathy (Laible et al., 2004). Adolescents learn empathy through supportive and intimate peer relationships, learning to see someone else's perspective, and developing their own self-esteem (Brown & Larson, 2009; Choudhury et al., 2006; Laible et al., 2004). Adolescents who are active users on social media tend to have more advanced abilities to share and understand feelings compared to their peers not using social media (Vossen & Volkenburg, 2016). Social media allows people to share information with their friends through private messaging and groups, which allow for deeper friendships to form/develop (Schouten et al., 2007). Social media now has the ability to be used as an extension of in-person interactions and for adolescents, it has become an essential part of forming relationships (Davis, 2012). Social media allows people to see a new curated perspective of their peers' lives. This new perspective may help one to be more empathetic and compassionate toward peers.

The purpose of this present study is to examine whether social media use and empathy are correlated during the late adolescent period. College students, ages 18 to 19 years, were selected for this study, given that they are likely to have had many years of

experience with social media, are digital natives, and are in a key phase in their life for self-discovery and growth. They responded to an online survey that assessed their social media use, experiences with cyberbullying/cybervictimization, and empathy levels in four different areas (perspective-taking, fantasy, empathic concern, and personal distress). Given the findings of previous research, it is hypothesized that:

H1: Empathy is positively correlated with the frequency of checking social media

H2: Active use of social media is positively correlated to higher levels of empathy

H3: Participating in cyberbullying activities is negatively correlated with empathy

H4: Reporting cyber victimization is positively correlated with empathy

METHODS

Participants

In total, 100 people participated in this study. Of these 100 people, 76 met the age requirements of this investigation (ages 18 to 19) and were included in the data set. The sample was 63.2% (n=48) female and 36.8% (n=28) male. In the sample, 93.4% (n=71) identified as white, 1.3% (n=1) identified as Asian/Pacific Islander, 2.6% (n=2) identified as White and Asian/Pacific Islander, 1.3% (n=1) identified as White and American Indian/Alaskan Native and 1.3% (n=1) identified as White and Hispanic. The participants in this study were undergraduate students at the University of Maine. Participants were awarded one research credit through the online platform SONA upon submission of the questionnaire. This credit could be used as a research credit in the participants' psychology course.

Procedure

This study used multiple self-report measures to collect information from participants. The participants gained access to the consent form (see Appendix A) and questionnaires using the University of Maine's research platform SONA. Then, on Qualtrics, they completed measures assessing empathy, media use, demographic characteristics, and involvement in cyberbullying and cybervictimization.

Measures

Empathy

To measure empathy, this study used the Interpersonal Reactivity Index (IRI; Appendix B). The IRI was developed in 1983 by researcher Mark H. Davis. This scale has 28 questions and uses a multidimensional approach to examine empathy (Davis, 1983). The four subscales are perspective taking (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective."), fantasy (e.g., "I really get involved with the feelings of the characters in a novel."), empathic concern (e.g., "I often have tender, concerned feelings for people less fortunate than me."), and personal distress (e.g., "Being in a tense emotional situation scares me") (Davis, 1983). Participants rated each item on a 1 (*describes me extremely well*) to 5 (*does not describe me*) scale.

Social Media Use

To examine adolescents' social media use, participants filled out a seven-item questionnaire designed by the author, with some items adapted from Ruben, Stosic, Correale, Blanch-Hartigan, (in press) measure (Appendix C). This questionnaire was used to assess whether the participant is active on social media, how frequently they use social media, what type of social media platform they use, and if they are more of a passive or active user.

Demographic information

Information on participants' age, race and gender were self-reported (Appendix D).

<u>Cyberbullying experience</u>

        Participants were asked six questions about cyberbullying within their life. They were asked if they had experienced cyberbullying within the past two weeks, six months, and one year. They were also asked if they had been a cyberbully within the past two weeks, six months, and one year (Appendix E).

RESULTS

A major focus of this study was the construct of empathy. Using the Interpersonal Reactivity Index (IRI), empathy was examined using four subscales. These included the fantasy (the tendency to transpose oneself imaginatively into the feelings or actions of fictitious characters), empathetic concern (assessment of other-oriented feelings of sympathy and concern for others), perspective taking (the tendency to spontaneously adopt the psychological point of view of others), and personal distress (the tendency to have personal anxiety/unease in tense interpersonal settings) subscales.

Correlational analyses indicated that several of these subscales were significantly associated. When analyses were conducted using the entire sample, it was found that fantasy was significantly and positively correlated with empathic concern ($r = .402, p < .001$) (see Table 1). These two variables were also positively correlated when analyses were done separately for males ($r = .399, p < .05$) and females ($r = .346, p < .05$) (see Table 2). Regarding the entire sample, it was also found that empathic concern was positively correlated with perspective-taking ($r = .432, p < .001$) and personal distress ($r = .281, p < .05$). Examining these associations as a function of gender, results revealed that for males, perspective-taking was negatively correlated with personal distress ($r = -.398, p < .05$). For females, perspective-taking was positively correlated with empathic concern ($r = .513, p < .001$).

Another major focus of this study was social media. The social media measure assessed the frequency of social media use as well as active versus passive use. When analyses were conducted using the entire sample, it was found that the frequency of checking social media was positively correlated with active social media use ($r = .242, p$

<.05). When examining these associations as a function of gender, results revealed that for females only, the frequency of social media use positively correlated with active social media use ($r = .297, p < .05$).

<u>H1: Empathy is positively correlated with the frequency of checking social media</u>

As mentioned above, four aspects of empathy (fantasy, empathetic concern, perspective-taking, and personal distress) were examined in the present study. As presented in Table 1, a significant positive correlation was found between the frequency of social media use and the personal distress subscale ($r = . 242, p < .001$). This suggests that the more frequently someone checks their social media, the more likely they are to feel levels of personal distress in moments of interpersonal conflict. The correlations between the frequency of social media use and the other subscales of empathy (i.e., fantasy, perspective-taking, and empathetic concern) were not significant.

<u>H2: Active use of social media is positively correlated with higher levels of empathy</u>

Active use of social media was not significantly correlated with any of the subscales of empathy when analyzing the entire sample. However, as shown in Table 2, there were two significant correlations between social media use and aspects of empathy when correlational analyses were conducted as a function of gender. For males, a significant, positive correlation was found between active user of social media and the personal distress subscale ($r = .562, p < .05$). For females, a significant negative correlation was found between active use of social media and the fantasy subscale ($r = -$

.316, $p < .05$). This suggests that females who are more active users of social media are less likely to experience the emotions of fictitious characters in movies, books, or plays.

H3: Participating in cyberbullying activities is negatively correlated with empathy

No participants reported participating in cyberbullying activities within the past two weeks or six months, and one participant reported participating in cyberbullying activities within the past year. Due to the lack of endorsement of participating in cyberbullying activities, its relationship to empathy could not be analyzed.

H4: Reporting cyber victimization is positively correlated with empathy

Due to only a small proportion of the participants (3% in the past two weeks, 8% in the past six months, and 17% in the past year) reporting being a victim of cyberbullying, it was not possible to examine the relationship between cyber victimization and empathy.

DISCUSSION

The adolescent years in a person's life are a transformative period focused on self-discovery, autonomy, and the creation of intimate friendships with peers. Late adolescence, ages 18-19, is often characterized by one becoming more independent. Whether that independence is gained through going to college, moving away from home, or gaining financial independence, adolescents must learn how to think and act for themselves. Social media has become an essential part of life for adolescents and may be a useful tool as they strive to achieve greater independence. Social media allows people to stay up to date and receive insight on the lives of the people they follow. Social media users are also able to curate content to post and interact with the content of others.

Past studies have not specifically investigated the relationship between social media use and levels of empathy within late adolescents. Given that late adolescence is an important time for the development of empathy and many adolescents rely on social media for social interactions, this study sought to examine the relationship between social media use and empathy. Specifically, social media use (frequency and degree of active use) was investigated in relation to four aspects of empathy: (1) fantasy (the tendency to transpose oneself imaginatively into the feelings or actions of fictitious characters), (2) empathetic concern (other-oriented feelings of sympathy and concern for others), (3) perspective taking (the tendency to spontaneously adopt the psychological point of view of others), and (4) personal distress (the tendency to have personal anxiety/unease in tense interpersonal settings).

Social Media Use and Empathy

The results of this study partially support the hypothesis that the frequency of checking social media is positively correlated with levels of empathy. The results found that people who have a higher frequency of checking social media during the day also tend to score higher on the personal distress subscale. The personal distress subscale of the IRI looks at the self-oriented feelings of personal distress and anxiety in moments of interpersonal distress and unease (Davis, 1983). People that oftentimes score high in the personal distress category tend to be more socially anxious, introverted, and shy (Davis, 1983). This lines up with previous research that showed that adolescents who are lonely or struggle with face-to-face interactions turn to the internet and social media as a way to connect with peers and create social connections (Allen et al., 2014). There were no significant correlations to support the prediction that the frequency of checking social media would be related to the three other empathy subscales: fantasy, perspective-taking, and empathetic concern.

When looking at the entire sample, active use on social media was not correlated with higher levels of empathy, but when the sample was broken down as a function of gender, significant correlations between active social media use and empathy were found. Specifically, males that reported more active use of social media also endorsed higher levels of personal distress. This suggests that men who spend more time directly interacting with others and sharing information about their lives online also experience greater personal distress during interpersonal conflict.

When examining the relationship of active social media use to empathy, it was found that females who reported being more active uses were less empathetic in the

fantasy subscale. This finding was surprising, as it suggests that females who more actively use social media are less likely to transpose themselves into the feelings of fictitious characters. This finding contradicts previous research that showed females are socialized to be more caring and nurturing towards others and tend to show higher levels of empathy when compared to males (Allemand et al., 2015; Brody, 1999).

Previous research has also found that females who are heavy consumers of social media are more likely to experience negative side effects such as clinically relevant depressive symptoms and lower self-esteem (Twenge & Farley, 2020; Woods & Scott, 2016). Lower self-esteem has been linked to showing less prosocial behavior (Woods & Scott, 2016). Social media has also created a platform where people are able to compare their lives to the seemingly perfect lives of others, and they may experience depressed feelings when they see that their life does not measure up to others. Adolescents, particularly females, may be less likely to try to empathize with fictitious characters because they have learned that within social media they see only the surface level, and it is best not to compare their lives to the perfect content that is posted. It is important to see if this finding is replicated in future studies.

<u>Cyberbullying, Cybervictimization, and Empathy</u>

Due to very few participants endorsing involvement in cyberbullying or cyber victimization, the relationship between empathy and participation in cyberbullying activities, and empathy and cyber victimization were not able to be analyzed. Only one person in this study reported participating in cyberbullying activities. This does not match what other studies have previously found regarding the number of people that

participate in cyberbullying activities. Past investigations have indicated that somewhere between 11% and 22.5% of adolescents have engaged in cyberbullying activities (Ang & Gog, 2010; Dilmac, 2009). Based on data from previous research, it seems unlikely that only one participant in this study participated in cyberbullying activities. Despite the fact that responses were anonymous, participants may still have been subject to pressures to provide socially desirable answers. It is also possible that participants may not have thought that the label "cyberbully" applied to them, even if they have engaged in specific activities that are considered to be cyberbullying, such as leaving a mean comment on a stranger's video.

There were not enough participants who endorsed being cyber victims to analyze the relationship between empathy and cyber victimization. Only 3% of the participants reported being victims of cyberbullying within the past two weeks, 8% in the past six months, and 17% in the past year. While of course the ideal would be that participants in this study have been experiencing cyberbullying at extremely low percentages, previous research has indicated that between 10% and 60% of adolescents have experienced cyber victimization (Pettalia, et al., 2013; Whittaker & Kowalski, 2015). There is a chance that participants may have under-reported cyber victimization. Participants may have not felt comfortable self-disclosing that they have been victims of cyberbullying, or they may have forgotten about or were not able to identify a particular behavior as cyberbullying. Given that previous research (e.g., Pettalia et al., 2013) has found a relationship between cybervictimization and empathy, it seems likely that this association would be found in larger samples involving more participants who report being a cyber victim.

Relations Among Aspects of Empathy

Results revealed that people who scored higher in fantasy were also more likely to show empathetic concern. When the data were split by gender, it was found that for both males and females higher levels of fantasy related to higher levels of empathetic concern. The fantasy subscale looks at the ability to put oneself into the feelings and emotions of fictitious characters in movies, books, and plays. It would make sense that if someone often feels what fictitious characters are going through, then they are more likely to empathize with people in their day-to-day life.

In addition, findings indicated that people who expressed more empathetic concern showed better perspective-taking abilities and reported greater personal distress. People who are better perspective takers are better able to understand the feelings of others, and empathetic concern focuses on other-oriented feelings of concern. Previous research has shown when someone has a greater understanding of the feelings and position of another, they experience more concern and are better equipped to show empathy (Clark, 1984).

Of note, when the data were examined as a function of gender, it was found that the positive correlation between empathetic concern and perspective-taking was significant only for females. This result is consistent with the finding that females are socialized to care more about others (Rose & Smith, 2018). Interestingly, for males, higher levels of perspective-taking were related to lower levels of personal distress. These results align with previous research on the IRI. Compared to females, males traditionally are socialized to be more concerned about their own well-being, which may help to explain that while they are able to understand the plight of others, they experience

less distress (Allemand et al., 2015). Males are also generally socialized to not express or show emotion, which may be an explaining factor as to why they do not report feeling distress when in a tense interpersonal conflict (Allemand et al., 2015). Males may also be experiencing less distress because they do not care as much about relationships when compared to females (Rose & Smith, 2018).

<center>Limitations/Future Studies</center>

Within this study, there were many different limitations that in future research should be addressed. One of these limitations was a lack of diversity within the participants. In this study 93.4% of the sample were white. Due to a lack of racial diversity within this study, the results of this study are not representative of people of color. Another limitation of this study is that all participants in this study were enrolled in psychology classes at the University of Maine. Due to this, the sample of this study was not representative of participants across a broader scope of life experiences. A third limitation of this study was the lack of equal representation in gender identity. Within this study, 63.2% (n=48) were female and 36.8% (n=28) identified as male. Significantly more females participated in this study and within this sample, no participants identified as non-binary. Due to this, results of the study are not able to be generalized to adolescents that identify as non-binary.

In future research, a change that would be needed to be implemented is revising the cyberbullying measure used in this study. In this investigation, the cyberbullying measure simply asked if the participant had engaged in cyberbullying activities or had been a victim of cyberbullying within the past two weeks, six months, and one year. Only

<center>34</center>

one participant reported partaking in cyberbullying activities within the past year and no participants reported participation in cyberbullying activities within the past six months or two weeks. These findings do not match up with other studies. Previous studies have found that approximately eleven percent of adolescents engaged in cyberbullying activities (Ang & Gog, 2010). The lack of reporting participation in cyberbullying activities may have been the result of social desirability pressures or of not recognizing one's past behaviors as fitting the label of cyberbullying.

In the future, it would be best to ask questions directly about participants' online use such as "have you left mean or insulting comments on a person's (peer, celebrity, or stranger) post in the past two weeks, six months, or year," "have you shared private message or pictures of someone without their permission or knowledge in the past two weeks, six months, or year," and "have you spread rumors about your peers through social media in the past two weeks, six months, or year." Since these questions ask direct questions about online behaviors, they may result in more variance in the results, allowing for correlations to be examined

It is also important that the cyber victimization items be rewritten in any future study. While the cyber victimization questions did receive more endorsement when compared to the questions on participation in cyberbullying activities, it still did not provide enough variance to run correlations on. Just like with the cyberbullying questionnaire, in a future study it may be beneficial to ask specific questions about a person's cyber victimization, for example, specifically asking if they have had private photographs or messages shared without their permission or knowledge or have rumors

been spread about them through social media platforms in the past two weeks, six months, or year.

In future studies examining the relationship between social media use and empathy, a longitudinal study, starting in early adolescence, looking at how the relationship between social media use and empathy levels across adolescence would change and develop would be an interesting next step. Most social media platforms allow adolescents to create their own profile starting at age 13 years. Adolescence is a crucial time for self-discovery, the creation of intimate peer relationships, and autonomy (Davis, 2012). As children enter into adolescence and continue to discover themselves and create relationships with others, they may expand their social world by gaining access to social media platforms. Also with adolescence being a key time for the development of empathy and peer relationships, it would be interesting to see how levels of empathy change in relation to social media use over time and whether these patterns vary as a function of gender or other demographic characteristics, such as ethnicity or socioeconomic status.

Conclusion

Although this study was not without limitations, the findings of this investigation do show that there is a relationship between social media use and some aspects of empathy in late adolescence. Further research will need to be conducted in order to understand the relationship between social media and empathy further. In addition, this study found that adolescents who frequented social media more often were more likely to be active users of social media. While this study was not able to analyze the relationship

between social media usage and cyberbullying and cyber victimization, this is an

important topic that future studies should investigate.

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APPENDICES

APPENDIX A

INFORMED CONSENT

You are invited to participate in a research project being conducted by Rachel Feenstra, a fourth year undergraduate student in the College of Liberal Arts and Sciences at the University of Maine. Cynthia Erdley, a Professor in the Department of Psychology at the University of Maine, is the Faculty sponsor of this study.   The purpose of this study is to investigate the relation between social media use and empathy in late adolescents. You must be between the ages of 18-19 to participate.

What Will You Be Asked to Do?
   If you decide to participate, you will be asked to take an anonymous survey online. You will be asked about your demographic, social media use, experiences with cyberbullying, empathy, and demographics. It should take you approximately 20 minutes to complete.

Risks:
          Except for your time and inconvenience, there are no risks to you from participating in this study.

Benefits
          While this study will have no direct benefit to you, this research may help us increase our understanding of whether social media use is related to empathy in older adolescents.

 Compensation:
           You will receive one research credit for participating in this study.

 Confidentiality

           This study is anonymous. You are asked to not write your name on the survey, and there will be no records linking you to the data. Data will be kept on a password-protected computer until December 15, 2021 and then deleted.
Information for the research credit is not connected to survey responses.

Voluntary

          Participation is voluntary. If you choose to take part in this study, you may stop at any time. You may skip any questions you do not wish to answer.

Submission of the survey implies consent to participate.

Contact Information

   If you have any questions about this study, please contact me at
rachel.feenstra@maine.edu. You may also reach the faculty advisor on this study at
erdely@maine.edu. If you have any questions about your rights as a research participant,
please contact the Office of Research Compliance, University of Maine, 207/581-2657
(or e-mail umric@maine.edu).

INTERPERSONAL REACTIVITY INDEX QUESTIONARIES

The following statements inquire about your thoughts and feelings in a variety of situations. The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate response. When you have decided on your answer, fill in the bubble next to the description. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

1- Describes me extremely well

2 - Describes me very well

3 - Describes me moderately well

4 - Describes me slightly well

5 - Does not describe me

1. I daydream and fantasize, with some regularity, about things that might happen to me.

2. I often have tender, concerned feelings for people less fortunate than me.

3. I sometimes find it difficult to see things from the "other guy's" point of view.

4. Sometimes I don't feel very sorry for other people when they are having problems.

5. I really get involved with the feelings of the characters in a novel.

6. In emergency situations, I feel apprehensive and ill-at-ease.

7. I am usually objective when I watch a movie or play, and I don't often get completely

caught up in it.

8. I try to look at everybody's side of a disagreement before I make a decision.

9. When I see someone being taken advantage of, I feel kind of protective towards them.

10. I sometimes feel helpless when I am in the middle of a very emotional situation.

11. I sometimes try to understand my friends better by imagining how things look from their perspective.

12. Becoming extremely involved in a good book or movie is somewhat rare for me.

13. When I see someone get hurt, I tend to remain calm.

14. Other people's misfortunes do not usually disturb me a great deal.

15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments.

16. After seeing a play or movie, I have felt as though I were one of the characters.

17. Being in a tense emotional situation scares me.

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them.

19. I am usually pretty effective in dealing with emergencies.

20. I am often quite touched by things that I see happen.

21. I believe that there are two sides to every question and try to look at them both.

22. I would describe myself as a pretty soft-hearted person.

23. When I watch a good movie, I can very easily put myself in the place of a leading character.

24. I tend to lose control during emergencies.

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while.

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

27. When I see someone who badly needs help in an emergency, I go to pieces.

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place.

SOCIAL MEDIA QUESTIONARIES

Social Media Research Scale

I am active on at least one social media platform
Yes   No

I check my social media many times throughout the day.
Does not describe me at all   Describes me very well
        0   1   2   3   4   5

In a typical day, what is the average percentage break down of time that you spend on each type of social media (please make sure these add up to 100%)
Instagram:
Twitter:
Facebook:
Youtube:
Tiktok:
Snapchat:
Other:
    Specify:

I tend to be an active user, posting at least once a day.
Does not describe me at all   Describes me very well
        0   1   2   3   4   5

I tend to be a passive user, scrolling through posts and photos.
Does not describe me at all   Describes me very well
        0   1   2   3   4   5

I live stream and/or post on my story at least once a week.
Does not describe me at all   Describes me very well
        0   1   2   3   4   5

I comment, post, or DM others regularly.
Does not describe me at all   Describes me very well
        0   1   2   3   4   5

APPENDIX D

DEMOGRAPHIC QUESTIONARIES

Demographic Information

Age: ____

Gender Identity: Male   Female   Non-Binary   Other: _____

Race: scroll down menu - options - White, Black, American Indian, and Asian/Pacific

Islander, Hispanic, other.

APPENDIX E

CYBERBULLYING QUESTIONARIES

Cyberbullying is the act of harming or threatening someone through online platforms. An example of this could be sending a mean text or starting a rumor about a peer online.

Have you been a victim of cyberbullying within the past two weeks?
Yes   No

Have you been a victim of cyberbullying within the past six months?
Yes   No

Have you been a victim of cyberbullying within the past year?
Yes   No

Have you participated in activities of cyberbully in the past two weeks?
Yes   No

Have you participated in activities of cyberbully in the past six months?
Yes   No

Have you participated in activities of cyberbully in the past year?
Yes   No

TABLE 1

Table 1. Correlations among Aspects of Empathy and Social Media Use

	Fantasy	Empathetic Concern	Perspective Taking	Personal Distress	Active Use	Frequency of Social Media Use
Fantasy	----					
Empathetic Concern	.402***	----				
Perspective Taking	.154	.432***	----			
Personal Distress	.177	.281*	.029	----		
Active Use	-.155	.065	-.019	.215	----	
Frequency of Social Media Use	-.012	.089	.084	.242*	.242*	----

Note. *n*=76
     *p<.05
     **p<.01
     ***p<.001

TABLE 2

Table 2. Correlations among Aspects of Empathy and Social Media Use as a Function of Gender

	Fantasy	Empathetic Concern	Perspective Taking	Personal Distress	Active Use	Frequency of Social Media Use
Fantasy	-------	.399*	-.013	.157	.105	-.147
Empathetic Concern	.346*	---------	.146	.367	.130	.080
Perspective Taking	.145	.513***	--------	-.398*	.011	.145
Personal Distress	.117	.142	.163	--------	.562*	.234
Active Use	-.316*	-.033	-.084	-.019	-------	.130
Frequency of Social Media Use	.002	.028	-.006	.204	.297*	---------
Male	M = 20.32 SD = 3.991	M = 15.46 SD = 4.004	M = 17.63 SD = 3.618	M = 23.64 SD = 4.778	M = 16.04 SD = 3.249	M = 1.75 SD = 1.076
Female	M = 17.33 SD = 5.479	M = 13.08 SD = 3.891	M = 15.56 SD = 4.505	M = 21.48 SD = 4.317	M = 14.87 SD = 3.751	M = 1.48 SD = 0.799

Note: Correlations for males ($n = 28$) are presented above the diagonal. Correlations for females ($n = 48$) are shown below the diagonal. Final two rows show the mean and standard deviation for each subset based on the function of gender

* p<.05
**p<.01
***p<.001

IRB APPROVAL

PRINCIPAL INVESTIGATOR: Rachel Feenstra **CO-INVESTIGATOR:**

CO-INVESTIGATOR:

FACULTY SPONSOR:

(Required if PI is a student): TITLE OF PROJECT:

X for an honors thesis/senior thesis/capstone? for a doctoral dissertation?

EMAIL: Rachel.feenstra@maine.edu EMAIL:

EMAIL:
EMAIL: erdley@maine.edu

Cynthia Erdley
Social Media Use and Empathy in Adolescents

PI DEPARTMENT: If PI is a student, is this research to be performed:

START DATE:
STATUS OF PI: FACULTY/STAFF/GRADUATE/UNDERGRADUATE

U (F,S,G,U)

for a master's thesis? for a course project?

other (specify)
Submitting the application indicates the principal investigator's agreement to abide by the responsibilities outlined

in Section I.E. of the Policies and Procedures for the Protection of Human Subjects.

Faculty Sponsors are responsible for oversight of research conducted by their students. The Faculty Sponsor ensures that he/she has read the application and that the conduct of such research will be in accordance with the University of Maine's Policies and Procedures for the Protection of Human Subjects of Research. REMINDER: if the principal investigator is an undergraduate student, the Faculty Sponsor MUST submit the application to the IRB.

Email this cover page and complete application to UMRIC@maine.edu

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************* FOR IRB USE ONLY Application # 2020-09-16 Review (F/E): E Expedited**

Category:
ACTION TAKEN:

Judged Exempt; category 2 Modifications required? Yes Accepted (date) 10/1/2020

Approved as submitted. Date of next review: by Degree of Risk:

Approved pending modifications. Date of next review: by Modifications accepted (date):
Not approved (see attached statement)
Judged not research with human subjects

Degree of Risk:

FINAL APPROVAL TO BEGIN

10/1/2020 Date

10/2018

AUTHOR'S BIOGRAPHY

Rachel Feenstra was born in Connecticut in 1999. She graduated from Ellington High School in 2017 and started at the University of Maine in the fall of the same year. She is double majoring in Psychology and Child Development and Family Relationships. Rachel is an undergraduate research assistant in the Parenting Relationships Research Lab run by Dr. Daniel Puhlman. She is also the current president of The Navigators, a Christian ministry, at the University of Maine. Upon graduation Rachel will continue on with her education and pursue a master's degree in school counseling. She is still undecided as to where she will be attending graduate school.