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Facebook, Parent-child Relationships, and Emotion Regulation in an Adolescent Sample

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Walden University
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Abstract

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by

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MS, William Carey University, 2010

BS, University of South Alabama, 2007

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Health Psychology

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Abstract

Social networking has become an integral part of daily communication and information sharing. Although researchers continue to explore the fields of social networking and emotion regulation separately, there is a lack of research bridging these areas of interest, particularly in the adolescent population. The purpose of this study was to examine the predictive relationship between the environmental and social variables of Facebook use, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation. Fogel's social process theory of emotion provided the framework for this study and allowed for examination of the social networking environment. Research questions addressed independent variables of Facebook use, online social connectedness, and quality of parent-child relationship as well as interactions. Hypotheses were directed at different facets of emotion regulation including emotional control, emotional self-awareness, and situational responsiveness. A sample of 80 adolescents 13- to 18-years old was gathered through snowball sampling of Facebook groups and pages targeting parents of adolescents. Individual multiple regressions were used to examine prediction and interaction among variables. Results showed greater Facebook use predicted decreased emotional self-awareness and greater quality of parent-child relationship predicted improved emotional control in adolescents. The findings of this study promote positive social change by implicating the role of social networking use in predicting maladaptive adolescent emotional development and well-being. Future research will benefit from a larger sample size and include various social networking platforms along with gender and age-specific data.

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Dedication

I dedicate this research to my grandparents who showed unconditional love and support in everything I set out to achieve. Whether it was academics or athletics, your belief in my abilities and talents allowed me to persevere. You showed me how to be sympathetic and understanding of others which has led to success in my professional career while the selflessness you instilled has served me as a wife, mother, and friend. Your efforts will forever be remembered, and, with this achievement, I hope I have made you proud. Please continue to protect and guide us. I love and miss you both.

"I am because you were"

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A loving thank you is extended to my parents who have always shown support in any goal I have set and never doubted my ability to succeed.

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Chapter 1: Introduction to the Study

Introduction

Emotion regulation is a crucial aspect of adolescence that can be disrupted by numerous psychosocial elements, such as peer and parental relationships (Kullik & Petermann, 2013). The goal of emotion regulation is evaluation of emotion, modulation of emotional reactions, and stress reduction (Larsen et al., 2013). Adaptive emotion regulation is particularly important during adolescence due to the heightened emotional reactivity experienced, along with an increased occurrence of depression, compared to other developmental periods (Thapar, Collishaw, Pine, & Thapar, 2012; Viner et al., 2012). The ability to adequately recognize, control, and express emotions influences the adolescent's quality of life, social functioning, and parental attachment (Compare, Zarbo, Shonin, Van Gordon, & Marconi, 2014; Kullik & Petermann, 2013). Maladaptive emotion regulation has been related to adolescent depression and anxiety, personality and mood pathology, substance abuse, eating disorders, tobacco use, and poor peer relationships (American Psychiatric Association, 2013; Kullik & Petermann, 2013; McLaughlin, Haztzenbuehler, Mennin, & Nolen-Hoeksema, 2011; Siener & Kerns, 2012).

Researchers have increasingly explored the variables contributing to the development of emotion regulation. However, researchers have not yet investigated the effects of social networking on adolescent emotion regulation, leading to an important gap in the literature. Social media websites such as Facebook have become increasingly popular in teens and young adults with 71% of teens reporting daily use of social media

outlets compared to other populations (Lenhart & Pew Research Center, 2015). Adolescent social networking use has been associated with declines in mental health, such as depression, poor self-esteem, and risky behaviors (Forest & Wood, 2012; Steers, Wickham, & Acitelli, 2014).

In my study, the relationship among social networking, parent-child relationship, and emotion regulation were investigated. The predictor variables are social networking use, online social connectedness, and quality of parent-child relationship. The criterion variables are different facets of emotion regulation including emotional control, emotional self-awareness, and situational responsiveness. With knowledge of contributors leading to poor emotion regulation, successful intervention and implementation of adaptive emotion regulation strategies can be achieved.

Chapter 1 provides a summary of recent research in the areas of emotion regulation, social networking use, and parental relationships. The lack of research exploring contributions to adolescent emotion regulation will become apparent. Recent research is discussed that supports a plausible relationship between social networking use, parental relationships, and emotion regulation as well as the importance of maintaining adaptive emotion regulation strategies. Research questions and corresponding hypotheses (*H*) are presented and a brief description of the theoretical framework and rationale for its application to the study are discussed.

Background

The socioemotional development of children has been explored for decades (see Bowlby, 1969, 1973; see Erikson, 1950, 1968; see Maslow, 1943, 1968). In recent years,

the field of emotion regulation has grown substantially. Researchers have focused on applying theory and frameworks to explore emotion regulatory processes and development throughout the lifespan (Gross, 2013; Larsen et al., 2013). Scholars have offered numerous conceptualizations of emotion regulation, but argument remains on a single precise definition and understanding of variables influencing emotion (Gross, 2013).

Emotion regulation continues to develop as one progresses through life (Gresham & Gullone, 2012; Zimmer-Gembeck & Skinner, 2011). Studies have shown that higher levels of maladaptive emotion regulation are significantly related to higher levels of depression and anxiety (Compare et al., 2014; Siener & Kerns, 2012) and declines in physical health and quality of life (DeSteno, Gross, & Kubzansky, 2013). Adaptive emotion regulation and healthy social behaviors are significantly related and continue to influence each other through the lifespan (Cole, 2014; English & John, 2013; Kappas, 2013). One common form of social behavior is the use of social networking websites, such as Facebook, which is popular among adolescents.

Researchers have explored social networking use and its correlation with increased depression, anxiety, risky behaviors, and decreased quality of life in adolescents. Social networking use was correlated with increased incidents of alcohol abuse, unhealthy eating, and tobacco use in adolescents (Loss, Lindacher, & Curbach, 2014). Time spent on Facebook had a positive correlation with depression symptoms in college students (Steers et al., 2014). A similar study by Moreno and colleagues showed 25% of the 200 Facebook profiles evaluated included at least one status update portraying

hopelessness, feelings of guilt, sleep disturbances, and loss of interest (Moreno et al., 2011). The relationship between social networking and depression is especially important due to the co-occurrence of increased depression and social networking use in adolescents (Thapar, et al., 2012).

Emotion regulation is directly influenced by attachment, parenting styles, and parent-child emotional connection (Kiel & Kalmoiris, 2015). For example, decreased attachment to parents and peers, such as less trust and communication and more separation, predicted increased depression in adolescents and was mediated by dysfunctional emotion regulation including self-harm and verbal aggression (Kullik & Petermann, 2013). Maternal overprotective behaviors predicted social withdrawal and anxiety through a child's inability to appropriately regulate fear in low versus high threat situations (Buss et al., 2013; Kiel & Buss, 2014). The co-occurrence of maladaptive emotion regulation strategies and insecure parent-child attachment negatively correlated with increased anxiety and poor social functioning in children (Kerns & Brumariu, 2014).

Despite the growing interest in areas of social networking and emotion regulation, there is no found research bridging these areas of interest. Specifically, a gap in the literature is created by a lack of research into the effects of environmental and social variables of social networking, online social connectedness, and quality of parent-child relationship with emotion regulation. This study addresses the gap by examining the relationship among Facebook use, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation. By exploring variables of social networking use, contributors to adaptive and maladaptive emotion regulation can be

identified. Furthermore, the knowledge of variables impacting adolescents' ability to recognize, control, and express emotions in a healthy way can lead to a better understanding of the increased prevalence of adolescent depression.

Problem Statement

Researchers have focused on traditional means of human interaction, that is, face-to-face communication and the relationship with adolescent emotional health and development. However, face to-face interaction is no longer the preferred form of interaction; 77% of adolescents preferred technology-based interaction (Lenhart, Ling, Campbell, & Purcell, 2010). In 2015, nearly 71% of teens were using Facebook while 71% also reported use of multiple social networking sites (Lenhart & Pew Research Center, 2015). A recent study showed adolescents aged 13 to 18 reported an average of 9 hours daily spent using some form of online media including social networking websites (Common Sense Media, Inc., 2015). Daily use of social media was reported by 45% of teenagers with over an hour every day being spent on social networking websites, such as Facebook, Instagram, and Twitter (Common Sense Median, Inc., 2015).

The reliance on social media has led researchers to focus on effects of social media on adolescent well-being (Best, Manktelow, & Taylor, 2014). For example, adolescents who reported greater use of social media also reported increased depression, frequent engagement in risky behaviors, and more parent-child discord compared to less frequent users (D'Amato et al., 2012; Siener & Kerns, 2012). In contrast, frequency of self-disclosure, such as actively revealing one's location, feelings, or activity via Facebook status updates, predicted adolescent's reported feelings of connectedness and

sense of belonging (Köbler et al., 2010). Although the areas of adolescent depression, social behavior, and parent-child relationship are expanding, the need for further understanding of the role of social media is needed.

Research addressing the influence of social networking use has grown substantially over recent years. Scholars continue to focus on general outcomes resulting from social networking use such as well-being, depression, and anxiety (see Loss et al., 2014; Marmorstein, Iacono, & Legrand, 2014; National Institute of Mental Health, 2014; Steers et al., 2014). There is no found research relating social networking use to emotion regulation abilities. Furthermore, the majority of research in the area of social networking uses behavioral measurements, such as frequency, duration, and motivators of social networking use, and does not target adolescents. This study addressed the problem of increased adolescent social networking use and the negative impact on well-being. Specifically, variables of social networking use, online social connectedness, and quality of parent-child relationship were examined for their relationship with an adolescent's ability to recognize, control, and express emotions.

Purpose of the Study

The purpose of this study was to examine the relationship between the environmental and social variables of social networking, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation. This study used a multiple regression analysis to examine prediction of independent variables of social networking use, online social connectedness, and the quality of parent-child relationship for their ability to on the outcome of scores of emotional control, emotional self-

awareness, and situational responsiveness of emotion in adolescents. Due to its popularity with the teenage population (Lenhart & Pew Research Center, 2015), Facebook was the social networking web site targeted. In addition to online social connectedness, the variable of social networking was assessed through a combined score of two subscales measuring the investment into Facebook and integration of Facebook into social routines. The dependent variables are subscales that measure emotion regulation including emotional control, emotional self-awareness, and situational responsiveness. Additionally, the interaction among social networking use, online social connectedness, and quality of parent-child relationship on criterion variables was investigated. Multiple regression was used to examine the continuous nature of variables and use of multiple subscales. Details regarding statistics and explanation for the data analysis approach are given in Chapter 3.

Research Questions and Hypotheses

The general research question addressed the relationship among social networking use and emotion regulation in adolescents. The independent variables are social networking use, online social connectedness, and quality of parent-child relationship. Social networking use was assessed through a combined score of the emotional investment into Facebook and integration of Facebook into social routines subscales. The dependent variables are different facets of emotion regulation measured by three subscales: emotional control, emotional self-awareness, and situational responsiveness. The association being studied is whether the independent variables predict scores of dependent variables. The interactions among independent variables were also assessed.

The independent and dependent variables were measured using survey instruments. These instruments are the Social Media Use Integration Scale to measure social networking use, the Facebook Connectedness Scale to measure online social connectedness, the Quality of Parent Child Relationship Index to measure the quality of parent-child relationships, and the Emotion Regulation Index for Children and Adolescents to measure emotion regulation. The following research questions were addressed using the social process theory of emotion as the theoretical framework.

Research Question 1: Does *social networking use* through Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$1): Social networking use through Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a1): Social networking use through Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$2): Social networking use through Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a2): Social networking use through Facebook predicts scores of emotional self- awareness in a sample of adolescents.

Null Hypothesis ($H_0$3): Social networking use through Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a3): Social networking use through Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 2: Does *online social connectedness* to Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$4): The online social connectedness to Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a4): The online social connectedness to Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$5): The online social connectedness to Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a5): The online social connectedness to Facebook predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$6): The online social connectedness to Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a6): The online social connectedness to Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 3: Does *quality of parent-child relationship* predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$7): The quality of parent-child relationship does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a7): The quality of parent-child relationship predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$8): The quality of parent-child relationship does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a8): The quality of parent-child relationship predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0 9$): The quality of parent-child relationship does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a9): The quality of parent-child relationship predicts scores of situational responsiveness in a sample of adolescents.

Research Question 4: Is there an interaction among *social networking use*, *online social connectedness* to Facebook, and *quality of parent-child relationship* when predicting scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0 10$): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a10): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0 11$): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a11): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$12): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a12): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Theoretical Framework

The theoretical framework for this this study was the social process theory of emotion, which uses the dynamic approach to emotion regulation. The dynamic approach originated from an attempt to understand emotion and its development as a multicomponent self-organizing system (Witherington & Crichton, 2007). Through a dynamic approach, emotion is viewed as a continuous process emerging in real-time situations (Fogel et al., 1992; Witherington & Crichton, 2007). Emotions result from interactions among subsystems (e.g., appraisal, goal, action) and adapt to internal and external demands (Fogel et al., 1992; Witherington & Crichton, 2007). The dynamic approach has been suggested for application to social, political, and educational cases so that contributors to undesirable change can be indicated (Fogel, 2006). The complex nature of the dynamic view of emotion allows for an individual's social behaviors and interactions to be viewed as influential on emotion.

The major tenant of social process theory is the influence of one's environment and social context on emotional states and changes (Fogel et al., 1992). Fogel's (1992) social process theory does not depend solely on internal states or systems (Marinetti,

Moore, Lucas, & Parkinson, 2011). Instead, emotions can result from one's interactions with other individuals and the environment (Marinetti et al., 2011). Emotion arises, in part, due to an individual's responses during a social exchange leading to a constant adaptation of emotional expression between individuals (Fogel et al., 1992; Marinetti et al., 2011). According to Fogel, emotion cannot be defined as static (Fogel et al., 1992). Instead, emotion is conceptualized as a dynamic process without discrete boundaries or limitations (Fogel et al., 1992; Marinetti et al., 2011). A more detailed explanation of the dynamic approach and social process theory is provided in Chapter 2.

Previous researchers have proposed theories attempting to explain emotional variations among individuals. Structuralists attribute biological and cognitive processes to emotional development and do not incorporate the environment as influential on emotional changes (Witherington & Crichton, 2007). The structuralist approach is defined by internal functions controlled by the central nervous system and does not account for external factors when explaining emotional processes and development (Witherington & Crichton, 2007). Like the dynamic view of emotion, functionalists proposed a theory which focuses on emotional variations through the relationship between individual and environment (Witherington & Crichton, 2007). The functionalist approach is defined as goal-oriented and dependent on the action of the individual within the environment (Witherington & Crichton, 2007). Unlike the structuralist and functionalist approaches, the dynamic approach views emotion as a complex and continuous process influenced by internal and external events (Fogel et al., 1992; Witherington & Crichton, 2007).

The dynamic approach to emotion and its development emerged as an attempt to explain the variability of infant emotion and emotional development (Camras & Witherington, 2005). Previous theories lacked explanation for the variance in the development and expression of emotion among infants (Camras & Witherington, 2005). Theorists argued against the belief of genetics or a central control agent (see structuralist approach) as being responsible for development of emotional components (Camras & Witherington, 2005). The dynamical systems approach was considered a complex view of emotion focusing on self-organization of emotional components (Camras & Witherington, 2007; Fogel et al., 1992). The dynamic approach, specifically the social process theory of emotion, considers the individuals social context as influential on emotional states and expression (Fogel et al., 1992; Camras & Witherington, 2007; Witherington & Crichton, 2007)

Social networking websites provide a unique environment of social interaction and exchange. Use of social process theory allowed the online environment of social networking websites to be included as a potential influence on emotional states. In this study, the incorporation of one's social environment included measurements of social networking, online social connectedness, and the quality of parent-child relationship as predictors of emotion regulation. Facebook was examined for its relationship with adolescent emotion regulation while including the quality of parent-child relationship as part of the social context.

Nature of the Study

This study was a quantitative nonexperimental design that examined the relationship among social networking use, online social connectedness, quality of parent-child relationship, and emotion regulation. This study was quantitative rather than qualitative because data were collected in a numerical format and analyzed using statics to determine relationships among variables along with replication and generalization of findings. This study was nonexperimental as no manipulation of variables, randomization, or use of control and experimental groups were not used. Use of a quantitative approach allowed for generalization of findings to the adolescent population.

The purpose of this study was not to establish cause and effect relationships. Self-report measures were used to examine the predictive relationship among variables. Multiple regression analysis was used to investigate the relationship among social networking, online social connectedness, and the quality of parent-child relationship for their predictive ability on adolescent emotion regulation measured by subscales of emotional control, emotional self-awareness, and situational responsiveness. The multiple regression analysis addressed the continuous distribution of multiple predictor and outcome variables as well as simultaneously analyzing summed scores of the dependent variables. The independent variable of social networking use was defined by two subscales assessing investment into Facebook and integration of Facebook into social behaviors. The dependent variables of emotion regulation are comprised of three subscales defined as emotional control, emotional self-awareness, and situational

responsiveness of emotion. Details regarding the statistics and data analysis approach are provided in Chapter 3.

Snowball sampling was used to gather participants from a population of 13- to 18-year-old adolescents. The social media website Facebook was used to gain access to public groups and pages targeting parents. These groups and pages include areas of interest such as parenting, emotion regulation, and effects of social media. An announcement was posted in these groups along with a link to the surveys. The announcement included information including the voluntary nature of the study, confidentiality, freedom to withdraw, and details summarizing the purpose and significance of the study. Parents had the necessary information so that an informed decision could be made regarding the participation of their child(s) in the study.

Multiple regression was used in this nonexperimental quantitative design to determine the predictive relationship among multiple independent and dependent variables. The data gathered was analyzed using SPSS 21 software to examine the predictive nature of social networking, online social connectedness, and quality of parent-child relationship on the emotional regulation of an adolescent sample measured by subscales of emotional control, emotional self-awareness, and situational responsiveness. All variables are continuous and regression analysis was run for each outcome variable. The regression examined interactions among predictor variables for influence on adolescent emotion regulation.

Definitions

Dynamic systems approach: A complex theory of emotion focusing on development and variability of emotion among individuals (Witherington & Crichton, 2007). According to the dynamic systems approach, emotion is defined as a multicomponent self-organizing process viewed as malleable and vulnerable to both internal and external influences (Fogel et al., 1992).

Emotional investment into social media: A measurement of social networking use assessed by the Social Integration and Emotional Connection subscale of the Social Media Use and Integration Scale (Jenkins-Guarnieri, Wright, & Johnson, 2013b). Emotional investment into social media is defined as one's emotional connection to Facebook through use of the site and views of social relationships, such as reported feelings during nonuse of Facebook and the importance of Facebook in social relationships (Jenkins-Guarnieri et al., 2013b).

Emotion regulation: The adolescent's ability to exhibit proper emotional maintenance during times of stress or negative life events (MacDermott, Gullone, Allen, King, & Tonge, 2010b). This includes the measurement of emotional control, or mood and affect; emotional self-awareness, or recognition of emotional state; and situational responsiveness, or expression of emotion (MacDermott et al., 2010b).

Facebook: A social media website founded in early 2004 and initially termed 'theFacebook.com', Facebook is the fastest growing and largest social networking website (Newsroom.fb.com, 2014). Users of Facebook create private to semiprivate profiles, which personal information can be viewed by others including name, age,

birthdate, gender, employer, school, and interests (Newsroom.fb.com, 2014). Users can browse a real-time newsfeed posted by friends, read trending topics, and send private messages to other users as well as post and respond to pictures, comments, links, and videos made by users, and browse others' profiles (Newsroom.fb.com, 2014). With 936 million users logging on daily, Facebook can be accessed worldwide by smartphone, tablet, computer, or any device with the ability to connect to the Internet (Newsroom.fb.com, 2014).

Functionalist approach: A theoretical approach to explain emotion and its development (Witherington & Crichton, 2007). The main premise behind the functionalist view of emotion is defining emotions based on the functions they serve, not on cognitive and developmental processes like that of the structuralist approach (Witherington & Crichton, 2007).

Integration of social media: A measurement of social networking assessed by the Integration into Social Routines subscale of the Social Media Use and Integration Scale (Jenkins-Guarnieri et al., 2013b). Integration of social media is defined as the adolescent's integration of Facebook into daily social behaviors and routines assessed by the degree of engagement and incorporation of Facebook (Jenkins-Guarnieri et al., 2013b).

Online social connectedness: An independent variable measuring feelings resulting from the reported connection to Facebook including emotions about relationships, togetherness, acceptance, and level of involvement (Grieve, Indian, Witteveen, Tolan, & Marrington, 2013a).

Social capital: The resources resulting from the relationships among people (Burke, Kraut, & Marlow, 2011). Facebook users can build and maintain social capital through several elements of Facebook's interface including chat, wall posts, private messages, and status updates (Yoder & Stutzman, 2011).

Social connectedness: One of the basic motivating principles of social behavior, social connectedness is described as a feeling of belongingness (Köbler et al., 2010). Social connectedness is essential to building and maintaining relationships (Köbler et al., 2010; Grieve, Indian, Witteveen, Tolan, & Marrington, 2013b).

Social media: Web-based interactive platforms that allows individuals to engage in various forms of computer-mediated communication for sharing information with others users (Kietzmann, Hermkens, McCarthy, & Silvestre, 2011). Social media was introduced in the mid to late 1990s through the establishment of websites structured for the purposes of sharing information and interacting with other users (Kietzmann et al., 2011).

Social networking use: The online sharing, connecting, and viewing of other user's information with the ability to create one's own profile for others to view (Kietzmann et al., 2011; Newsroom.fb.com, 2014). Popular social networking sites include Facebook, MySpace, Linkedin, and Twitter (Kietzmann et al., 2011). Social networking is an independent variable assessed through the emotional connection to Facebook and integration of Facebook into social routines.

Social process theory: A dynamic approach to emotion suggesting emotion emerges, in part, as a result of socialization and the context of behavior (Fogel et al.,

1992). The main premise of social process theory is the influence of the environment and social processes on the variability of emotion among individuals (Fogel et al., 1992).

Structuralist approach: A biological approach explaining emotion and emotional development (Witherington & Crichton, 2007). According to the structuralist approach, emotion is a result of cognitive processes controlled by central nervous system functions (Witherington & Crichton, 2007).

Quality of parent-child relationship: An adolescent's closeness, trust, and fulfillment in regards to the relationship between parent and child (Boney-McCoy & Finkelhor, 1995a).

Assumptions

Participants were assumed to provide accurate and truthful responses without researcher influence. It was assumed that participants would complete their own surveys and respond without bias due to the confidential nature of the study. The sample was assumed to be representative of the population, and results are assumed to be generalizable. Participants were assumed to be English-speaking, computer literate, and have access to the Internet and e-mail.

Scope and Delimitations

Measurements of social networking use were limited to emotional investment into, integration of, and online social connectedness to Facebook. Results may not be generalizable to other measurements of social media use. Measurement of attachment and interaction between parent and child was limited to parent-child relationship quality and may not be generalizable to other characteristics of the parent-child relationship. The

scope was limited to 13- to 18-year-old adolescents who have a Facebook account. Results may not be generalizable to use of other types of social media such as Twitter, MySpace, or Instagram. Data gathered was limited to one social networking website, Facebook, and may not be generalizable to other social networking websites.

The sample was gathered through postings to public Facebook groups targeting parents of teenagers. Only those adolescents whose parents sent the survey link as well as those meeting the age requirement were eligible for participation. Self-disclosure was limited to brief demographic information only including age and gender. Further responses were limited to those measured by Likert-type scale.

Limitations

The study was limited to prediction among variables, so cause-effect conclusions were not be made. The relationship examined was limited to the predictor and criterion variables in this study and did not account for confounding variables. Although the use of Facebook allows for targeting of a large audience, information was gathered from a sample of 13- to 18-year old adolescents whose parents provided implied consent by actively sending the survey link to their child for completion. A common limitation in behavioral research is the use of self-report measures, which can be biased and compromise validity (Jex & Britt, 2014). Anonymity was emphasized in all postings as well as the child assent information at the beginning of the surveys to reduce this problem. Use of online surveys allowed participants to remove themselves from the study without warning, which can prevent achieving the target sample size (D'Auria, 2011). Due to the size and availability of Facebook, use of public groups greatly

increases access to the target population (Kosinski, Wang, Lakkaraju, & Leskovec, 2016). Participants can misinterpret survey material resulting in invalid data (Jex & Britt, 2014). To reduce this problem, surveys used in this study were suitable for the adolescent population through age-appropriate content and readability.

Significance

The ability to adequately regulate emotion including one's mood, awareness, and expression of emotional states is essential to proper development (Compare et al., 2014: Viner et al., 2012). Emotion dysregulation can lead to significant psychiatric dysfunction including an increased occurrence of substance use, depression, and suicidality (Bradley et al., 2010). Healthy emotion regulation is particularly important during adolescence due to the prevalence of depression during this developmental period (Viner et al., 2012). Adolescent functional emotion regulation was positively correlated with adaptive social functioning, well-being, and successful transition into adulthood. (Compare et al., 2014; Compas et al., 2013; Kullik & Petermann, 2013). Healthy emotional development and increased quality of life were increased by adaptive emotion regulation during adolescence (Berking & Wupperman, 2012; Siener & Kerns, 2012; Viner et al., 2012; Song et al., 2014). Emotion regulation versus dysregulation is essential to various treatment strategies including emotion regulation therapy, cognitive-behavioral therapy, and mindfulness-based methods (Berking, Ebert, Cuijpers, & Hofmann, 2013).

According to the social process theory of emotion, the influential properties of emotion are complex and extend to one's environment, relationships, and social behaviors (Compare et al., 2014; Fogel et al., 1992; Kullik & Petermann, 2013). By

expanding the scope to include the online environment, the relationship between social networking use and emotion regulation was investigated. The significance of the study is the focus on emotional and social aspects of social networking use to predict the ability of adolescents to control, recognize, and express emotions. Promotion of social change is achieved by further understanding contributors to adaptive versus maladaptive emotion regulation. Such knowledge can lead to prevention of poor emotion regulation implementation of healthy regulatory strategies.

Summary

The rapid increase in social networking use by adolescents prompts exploration into its effects on emotional development. Adolescence is a developmental period characterized by heightened emotional reactivity and mood lability along with greater use of social networking outlets compared to other populations (Lenhart & Pew Research Center, 2015; Viner et al., 2012; Vink et al., 2014). By examining the relationship among social networking, online connectedness, parental relationships, and emotion regulation, a deeper understanding of underlying mechanisms contributing to functional and dysfunctional emotion regulation can be achieved.

Debate continues regarding the consequences of online socialization on emotional and social development of adolescents. Social networking use has been suggested to increase depression, risky behaviors, and poor parent-child relationship quality in adolescents (D'Amato et al., 2012; Siener & Kerns, 2012). At the same time, use of social networking sites increased social connectedness and the opportunity for bridging social capital, or connecting common social groups, in adults (Ellison et al., 2014).

Furthermore, some scholars have described online socialization as having negative consequences on well-being, such as decreased socialization and increased loneliness, when compared to face-to-face interaction (Turkle, 2011). Other researchers have suggested the online environment fosters sociability and connectivity among users while increasing face-to-face interactions (Brandtzæg, 2012; Reich, Subrahmanyam, & Espinoza, 2012). Despite growth of research focusing on the effects of social networking, there continues to be a need for exploration into the role of social networking use on emotion regulation in the adolescent population.

In Chapter 2, results from a literature review are presented. The topics reviewed are the areas of adolescent emotion regulation, social networking and connectedness, parental relationships and the effects on mental well-being. The focus of the literature review is on the effects of social networking use, parental relationships, and emotion regulation on mental well-being including the relationship with depression, risky behaviors, and quality of life. The literature review focuses on social networking and emotion regulation in the adolescent population. This study expands the area of emotion regulation by exploring the role of Facebook use on adolescents' abilities to control, recognize, and express emotions.

Chapter 2: Literature Review

Introduction

Due to rapid growth in social networking use, the potential impact on social and emotional development has become a concern (Brandtzæg, 2012). Social networking use has been explored for effects on social connectedness, risky behaviors, depression, self-esteem, and anxiety in adolescents as well as conflict and attachment in parent-child relationships. Over recent years, researchers have continued to expand the area of emotion regulation and its impact on mental well-being including depression, anxiety, and substance abuse. Currently, no research was found exploring the effects of social networking on emotion regulation in adolescents. Social networking websites have become increasingly popular with 52% of adults and 71% of teens reporting use of online social media sites (Lenhart & Pew Research Center, 2015). Adolescents spend nearly 9 hours daily using some form of social media with one hour spent on websites such as Facebook (Common Sense Media, Inc., 2015). With the growth in popularity and known negative effects on well-being, social networking use should be considered when studying the emotional development of adolescents.

In this chapter, the development of emotion regulation beginning in infancy and into adolescence is summarized. A comprehensive review of research of emotion regulation and its influence on health and well-being is highlighted. Current research focusing on outcomes of social networking use on adolescent depression, self-esteem, social connectedness, and risky behaviors is presented. This chapter includes search strategies for literature and a review of the theoretical foundation. The literature review

is presented for variables of emotion regulation, Facebook use, online social connectedness, and parent-child relationship individually.

Literature Search Strategy

The search engines Google and Google Scholar were initially used. Keywords were *emotion regulation*, *emotion regulation in adolescence*, *emotion regulation and mental health, emotion regulation and coping*, and *emotion regulation and physical health.* A search resulting from the phrase *emotion regulation in adolescence* yielded nearly 164,000 articles on the Google Scholar database. To achieve a more precise search, specifiers were used in addition to the phrase *adolescent emotion regulation* including *depression*, *lifespan*, *development*, *adulthood, health,* and *stress*. When using these specifiers, results ranged from 30,900 to 210,000 articles on the Google Scholar database. Articles were limited to publication within the last 5 years narrowing the number of articles to a range of 16,000 to 17,900. Other terms synonymous with or relating to emotion regulation were used including *emotional intelligence*, *emotion dysregulation*, and *emotional adjustment*. PsycINFO, PsycARTICLES, PsycEXTRA, ERIC, and Academic Search Complete provided current peer-reviewed literature.

Similar searches were completed for the remaining variables using keywords *parent-child relationship and emotion regulation*, *parent-child connectedness and emotion regulation*, and *emotion regulation of parents* to search quality of parent-child relationship; *online social connectedness*, *introversion/extraversion and social media*, and *belongingness and social media* to search online social connectedness; and *Facebook and adolescents, effects of social media on teens, effects of social media on emotion*,

Facebook and depression in teens, social media and substance abuse, negative/positive effects of social media and adolescents, *social media and psychopathology*, and *social media and health/well-being.* Focus was placed on research published within the last 5 years to ensure the most recent research in areas of interest. As I found no literature exploring effects of social networking use on emotion regulation, my research is presented on each variable separately focusing on effects on mental well-being in the adolescent population.

Theoretical Foundation

Emotion is a developing system that achieves stability through change influenced by internal and external factors (Fogel et al., 1992). I used the dynamic approach to apply social process theory of emotion to the online environment of social media. The dynamic approach is defined as a multicomponent system in which emotion is viewed as an emergent continuous process influenced by internal and external demands (Fogel et al., 1992; Witherington & Crichton, 2007). By using the dynamic approach to apply social process theory of emotion, external variables like the online social environment and parent-child relationship are examined for the impact on emotion regulation.

The dynamic view of emotion resulted from an attempt to move away from prior approaches to understanding emotional development (see functionalist and structuralist approaches) and explain the complexity of emotion and emotional changes (Fogel, 2006). The dynamic approach originated from research on emotion regulation in infants and has been suggested for assessing effects of peer and parent interaction on emotional development (Camras & Witherington, 2005).

Previous theorists have explained emotional processes using various approaches. According to the structuralist approach, emotion is viewed through a biological lens focusing on internal states (Witherington & Crichton, 2007). Changes in emotion are due to cognitive processes which are controlled by central nervous system functions (Witherington & Crichton, 2007). Structuralists do not account for external variables, such as the environment or social context, as influential on emotional development (Witherington & Crichton, 2007). Another view of emotion is the functionalist approach, which defines emotion as function-specific and more complex than the structuralist view (Witherington & Crichton, 2007). The functionalist approach does not rely on cognitive processes as being responsible for changes in emotion processes (Witherington & Crichton, 2007). Instead, functionalists define emotion as complex and resulting from the relationship between organism and environment (Witherington & Crichton, 2007). According to the functionalist approach, emotion results from the action by the organism and the goal being sought (Witherington & Crichton, 2007). Compared to structuralist and functionalist approaches, the dynamic view of emotion focuses on the content of behavior in context of the environment (Witherington & Crichton, 2007).

The underlying assumption of the present study was based on the influence of social and environmental contexts on emotional processes including emotion regulation development. A theory incorporating the societal context should be applied to address the risks of the social environment associated with adolescent emotional health. Fogel and colleagues (1992) used the dynamic view of emotion to propose a theory that considered the social context when explaining the variability of emotion, termed the

social process theory of emotion. The intent of the social process theory is to provide understanding for the emergence of a particular emotional act by considering the individual's social and environmental contexts (Fogel et al., 1992).

The social process theory was developed to explain the variability of emotion among individuals through influence of social interaction (Fogel et al., 1992). According to social process theory of emotion, changes in emotion occur as a continuous process without discrete boundaries or limitations where influence on emotion varies according to social context (Fogel et al., 1992; Marinetti et al., 2011). Alterations in emotion are due, in part, to an individual's course of action within the social context (Fogel et al, 1992). During a social exchange, one individual modifies their emotion and reactions in response to another individual's emotion creating a continuous reciprocal relationship of information developing in a social context (Marinetti et al., 2011). Furthermore, an individual's emotional response can vary depending on the environment, existing emotional state, and situational appropriateness of the emotion (Marinetti et al., 2011). The social process theory of emotion maintains the complex view of emotional response put forth by the dynamic approach.

Social process theory of emotion has been applied mainly to infant emotional development (Fogel, 1992). For example, in a study assessing infant emotion resulting from mother-infant games (i.e., tickle and peek-a-boo), Fogel (1992) showed variations in positive infant emotional responses (e.g., smiling) were influenced by the dynamics of the social exchange between mother and infant (Fogel, Nelson-Goens, Hsu, & Shapiro, 2000). Fogel's theory has been used to explain the variation of specific emotions through

the individual's relationship with the social context (Fogel et al., 2012). For example, a particular emotion (e.g., laughter) that is appropriate in one social context may not be appropriate in another (Marinetti et al., 2011). Dynamic systems approach has been applied in exploring the brain functions of infants to understand infant emotional development (Lewis, 2005). Self-organization of the dynamic approach has been applied to emotional behaviors and responses of individuals including marital and parent-child relationships (Granic, 2000; Lewis & Granic, 2000).

The social environment contributes to emotion as a self-organizing process of components that interact, influence, and inhibit each other resulting in a complex understanding of emotional development (Camras & Witherington, 2005; Fogel et al., 1992; Marinetti et al., 2011). The unique social environment provided by Facebook allows for application of social process theory of emotion in which emotional processes result from social and environmental contexts. A need for research focusing on a relationship between environmental factors, such as negative parenting, with emotional development could be assessed through the social process theory of emotion (Camras & Witherington, 2005). The framework of social process theory allowed for broad exploration of factors contributing to emotional behaviors including environmental, situational, and social influences (Camras & Witherington, 2005).

Literature Review

There is a need for research exploring the impact of social networking use and the ability to control, recognize, and express emotions in adolescents. Due to the gap in literature defined by lack of research in the fields of social networking use and emotion

regulation, the literature review is organized by each variable separately. Recent research in emotion regulation including lifespan development and its relationship with general health outcomes is presented. The role of social networking, connectedness, and parent-child relationship on well-being is summarized. Although research using an adolescent sample is limited, the focus of the literature review is on the adolescent population.

Emotion Regulation

Because of its dynamic nature, several definitions have been offered to gain a clear understanding of emotion regulation. Gross (1998) defined emotion regulation as the process by which the individual influences the type of emotions experienced, when and how they experience emotions, and how emotions are expressed. Gross explained emotion regulatory processes as being either automatic or controlled and affecting emotional processes at any point or time. Other definitions include emotion regulation defined as both regulating and regulated processes eliciting systematic adaptations in response to activated emotional states (Cole, Martin, & Dennis, 2004) and both internal and external processes aimed at managing emotional responses to accomplish a specified goal (Thompson, 1994). A more recent definition of emotion regulation is the ability to modify emotional states through selection, attention, and appraisal of stimuli resulting in adaptive, goal-oriented behaviors (Shaw, Stringaris, Nigg, & Leibenluft, 2014). Each conceptualization of emotion regulation emphasizes main aspects of the emotion regulation process including controllability, influences, and goal-directed nature. Emotion regulation is defined as a process that is either controlled or automatic, internally and externally influenced, allowing the individual to emotionally adapt to a

stimulus to reach a specified goal or accomplish a task (Thompson, 1994; Gross, 1998; Cole et al., 2004; Shaw et al., 2014).

Consensus on a single concise definition of emotion regulation does not exist (de Veld, Riksen-Walraven, & de Weerth, 2012). For this study, the process of emotion regulation is defined as "processes used to manage and change if, when, and how (e.g., how intensely) one experiences emotions and emotion-related motivational and physiological states, as well as how emotions are expressed behaviorally" (Eisenberg, Hofer, & Vaughan, p. 288, 2007). Furthermore, emotion regulation is processes used to alter, prevent, or adapt emotional states, responses, and behaviors used to achieve one's goals in both biological and social contexts (Eisenberg et al., 2007).

Emotion and coping. Researchers have suggested common ground between processes of emotion regulation and coping including their conceptualization and functionality (Compas et al., 2013; Zimmer-Gembeck & Skinner, 2011). Coping is viewed as a subprocess of emotion regulation occurring as a result of ongoing emotion regulatory processes (Compas et al., 2013; Eisenberg, Spinrad, & Eggum, 2010). One of the more widely accepted definitions of coping comes from landmark research by Folkman and Lazarus (1984), in which the individual attempts to manage demanding internal and external stressors through constant cognitive and behavioral processes (as cited in Compas et al., 2013). Scholars have offered further definitions of coping as "fundamental and pervasive aspects of development" emerging distinctively over the periods of childhood, adolescence, and young adulthood (Compas et al., 2013, p. 1). Certain elements remain consistent in the conceptualization of coping including the

importance of environmental and social influences on development of coping strategies (Compas et al., 2013; Fogel et al., 1992).

Both emotion regulation and coping include external and internal processes, are influenced by social factors, can occur before and after a stressful event, and are categorized as adaptive or maladaptive (Compas et al., 2013; Zimmer-Gembeck & Skinner, 2011). Each is classified as regulatory processes with the goal of modulating behavior and emotion through conscious and unconscious responses (Compas et al., 2013; Gross, 2013). Emotion regulation and coping result in controlled and deliberate action focusing on the resolution of conflict between person and environment (Compas et al., 2013; Gross, 2013). Both emotion regulation and coping are conceptualized as developmental processes with the capacity to emerge and adapt over time (Compas et al., 2013). Each is defined as adaptive fundamental constructs of development through which maladaptive processes can have negative outcomes (Compas et al., 2013). Researchers have focused on the relationship between emotion regulation and coping to explore development across the lifespan as well as individual, gender, and age differences in the use of emotion regulation and coping strategies (Zimmer & Gembeck & Skinner, 2011).

Age effects. Relationships and interpersonal interactions play an important role in each developmental period and influence significant changes in areas of cognitive, emotional, and social development (Zimmer-Gembeck & Skinner, 2011). During infancy, emotion regulation primarily results from social referencing, or the use of others' emotional expressions, to adapt responses (Shore, 2016). As the child advances into

toddlerhood, situation and environment-specific emotional behaviors emerge as the child is able to differentiate home and family context from other environments (Shore, 2016). Self-conscious emotions are formed (e.g., shame and guilt) along with acquisition of language skills allowing the toddler to engage in self-talk and express themselves when faced with a stressful situation (Shore, 2016).

Adults and caregivers influence emotion regulation capacities through socialization of emotional displays, such as soothing the child during a time of frustration and modeling of parental emotional displays (Shore, 2016; Zimmer-Gembeck & Skinner, 2011). Social context becomes increasingly important during preschool years as children continue to display emotion differentiation and use of language (Zimmer-Gembeck & Skinner, 2011). During this time, understanding of separation between emotional states and the expression of those emotions becomes sophisticated (see display rules of emotion). Emotional expression becomes more socially and environmentally specific with direct support-seeking from adults continuing to increase (Kappas, 2013; Shore, 2016).

Middle childhood marks complexity in the understanding of intra and interpersonal emotional experiences including the ability to express specific emotions determined by the presence of either peer, parent, or adult figure (Chaplin & Aldao, 2013). Children begin to branch away from parental figures and out to peers and teachers for support (Zimmer-Gembeck & Skinner, 2011). The ability to learn from experiences of others and gather information from those thought to be knowledgeable in the area begins to emerge (Zimmer-Gembeck & Skinner, 2011). During this period, use of

reappraisal as an emotion regulating strategy is common, while use of suppression declines (Gullone, Hughes, King, & Tonge, 2010).

Emotion regulation continues to mature as adolescents become aware of consequences of emotional behaviors (Zimmer-Gembeck & Skinner., 2011). During adolescence, the ability to selectively express emotions to peers, parents, and adults as a function of the observer's expected response becomes sophisticated (Gresham & Gullone, 2012). As the child begins to progress through adolescence, their repertoire of emotion regulation strategies is extensive with a propensity toward cognitive and behavioral strategies focusing on problem-solving and planning (Zimmer-Gembeck & Skinner, 2011). When compared to younger children, adolescents have an increased ability to engage in purposeful emotion regulation and self-reliance due to increased use of cognitive strategies (Zimmer-Gembeck & Skinner, 2011).

Gender differences. Researchers have focused on gender roles in the adult population with a growing knowledge of gender differences during childhood and adolescence. In a study focusing on emotion dysregulation in children and adolescents, females experienced more difficulty in regulating negative emotion than males (Bender, Reinholdt-Dunne, Esbjorn, & Pons, 2012). Notably, inability to regulate negative emotions significantly predicted the occurrence of anxiety in females compared to males (Bender et al., 2012). Women are shown to actively engage in emotion regulation more and maintain a larger repertoire of emotion regulation strategies, such as rumination, reappraisal, problem-solving, acceptance, and seeking social support, compared to men (Nolen-Hoeksema & Aldao, 2011; see review by Nolen-Hoeksema, 2012). Consistent

with previous research, use of suppression during childhood and adolescence was more prominent in males (Gullone et al., 2010), while women were more likely to engage in rumination during adulthood with use of suppression and acceptance increasing with age (Nolen-Hoeksema, 2012).

Social effects. Emotion regulation continues to develop as one progresses through life stages (Cole, 2014). Social functioning is correlated with emotion regulation at all ages (Cole, 2014) and, in turn, is affected by emotion regulatory processes (English & John, 2013; Kappas, 2013). For example, low relationship satisfaction was associated with repeated use of suppression and less expression of positive emotion in adults (English & John, 2013). In a study assessing long-term effects of emotion regulation on social development, reappraisal was associated with increased social connectedness while suppression correlated with weak social connections in college students (English, John, Srivastava, & Gross, 2012). Dysfunctional emotion regulation, such as internalizing behaviors, mediated the relationship between peer attachment and depression in a sample of adolescent boys (Kullik & Petermann, 2013).

The relationship among social factors and emotion regulation is crucial to the socio-emotional development of adolescents (Bariola, Gullone, & Hughes, 2011). Although adolescents strive for autonomy and independence, the importance of peer relationships and interactions remain influential aspects of emotion regulation (Bariola et al., 2011; Bariola et al., 2012). Maladaptive social functioning is associated with a wide range of psychological impairments, such as depression and anxiety, in which emotion dysregulation plays a vital role (McLaughlin, Haztzenbuehler, Mennin, & Nolen-

Hoeksema., 2011). By identifying components influencing adolescent social behaviors and emotion regulation, adaptive social behaviors and healthy emotional development can be implicated.

Emotion regulation and health. Inadequate emotion regulation has been shown to increase the occurrence of poor mental and physical well-being (Compare et al., 2014). A wealth of research has linked stress to decreased well-being. On the other hand, not all individuals that undergo stress develop symptomology (Compare et al., 2014). Poor emotion regulation was explored as a possible mediator of the negative effects of stress including depression, anxiety, and decreased quality of life (Compare et al., 2014; Siener & Kerns, 2012). Advances over the last decade in the field of emotion have led to exploration of the "affect-health relationship" including direct and indirect effects of emotion regulation on health (DeSteno et al., 2013).

Depression and anxiety. Adolescence is defined by a higher prevalence of depression, stressful events, and emotional instability compared to other developmental periods (Oldehinkel & Bouma, 2011; Siener & Kerns, 2012; Thapar et al., 2012; Vink et al., 2014). Given the developmental nature of adolescence, it is important to explore mechanisms contributing to the prevalence of depression during this period. Specifically, researchers have begun to associate emotion regulation with depression and anxiety. For example, rumination after a negative life event mediates anxiety in adolescents and depression in adults (Michl, McLaughlin, Shepherd, & Nolen-Hoeksema, 2013). Preadolescents that reported depressive symptoms also reported poor emotional awareness and more negative affect (Siener & Kerns, 2012). Furthermore, maladaptive

emotional understanding and emotional expression along with use of rumination correlated with increased anxiety, aggression, and abnormal eating behaviors in adolescents (McLaughlin, et al., 2011).

Substance abuse, eating pathology, and other symptomology. In addition to the association between emotion regulation, depression, and anxiety, a relationship with risky behaviors has been determined. Along with depression, female adolescents that engaged in negative regulation of emotions through rumination exhibited increased prevalence of bulimic behaviors and substance abuse (McLaughlin et al., 2011). Emotion dysregulation is included as criterion for many diagnoses in the DSM-5. For example, borderline personality disorder is defined as marked affect instability, frequent inability to control anger, and significant mood lability (American Psychiatric Association, 2013; Cailhol, Gicquel, & Raynaud, 2015). Emotion dysregulation has been linked to children with autism spectrum disorder illustrated by heighted emotional response, displays of impulsivity, and poor emotional control (Mazefsky et al., 2013). Maladaptive emotion regulation is found in a diagnosis of disruptive mood dysregulation disorder in children, as proposed by the DSM-5, defined by severe impairments in emotional and behavioral control (Copeland, Angold, Costello, & Egger, 2013) and as core component of ADHD in children and adults (Shaw et al., 2014). In summary, emotion dysregulation is considered to be a "hallmark of psychopathology" (Beauchaine, Gatzke-Kopp, & Mead, p. 174, 2006) and should be recognized when implementing child and adolescent-based interventions.

Quality of life. Researchers have continued to show the relationship between emotion regulation and overall general health. Emotion regulation has been associated with increases in physical, mental, and psychosocial functioning indicating the possibility of a causal relationship between emotion regulation and general health outcomes (DeSteno et al., 2013). Use of the specific emotion regulation strategies reappraisal and suppression predicted more positive quality of life in adults with intellectual disabilities (Meule et al., 2013). The emotional responses of catastrophizing, rumination, and self-blame had a negative impact on the quality of life in newly diagnosed adult women with breast cancer (Li et al., 2015). In addition, engaging in emotion regulation strategies focused on reducing worry and emotional reactivity supported decreases in symptomology of life threatening and chronic diseases such as HIV/AIDS, cancer, and cardiovascular disease (Carlson, 2012).

Role of emotion regulation. Emotion regulation plays a vital role in emotional development throughout the lifespan. Beginning in infancy, children use facial expressions and mirror the expressions of others as part of emotion processes. As a child progresses through toddler and middle childhood, emotion regulation abilities become distinct and situation-specific with adolescence marking a high degree of maturity and purpose. Gender influences emotion regulation as females are more likely to express emotion and actively seek support from others during times of stress. Maladaptive emotion regulation is linked to decreased social support, competency, and adjustment as well as increased depression, substance abuse, and anxiety in children and adolescents.

Healthy development of emotion regulation promotes increased quality of life, particularly in individuals suffering from chronic illness.

Facebook and its Users

Facebook allows users to interact with other users in various ways including sharing of status updates, news, video, and photos. Users can view friends' social networks, profiles, and timelines as well as respond to content of other users through comments and reactions. Entertainment, including games, music, news, and trending topics, is available with information reaching millions of people almost instantaneously. Founded in 2004, Facebook was initially available only for students attending Harvard University. Over the years, Facebook eventually became available to other colleges and universities, high schools, international institutions, and work networks. By September of 2006, Facebook and all of its services became available to everyone (Newsroom.fb.com, 2018). Today, Facebook is accessed by 936 million users worldwide through computer, phone, tablet and any electronic device capable of an Internet connection (Newroom.fb.com, 2018). Although Facebook initially targeted college-aged students, users logging on to this popular social media site are becoming more diverse. In a recent study by the Pew Research Center, nearly 71% of participants aged 13 to 17 reported use of Facebook compared to other social media platforms (Lenhart & Pew Research Center, 2015).

Risky behaviors. In a study assessing the impact of social networking on risky behaviors in adolescents, Facebook posts including pictures, comments, and profile text was examined on profiles of 30 Facebook users. Twenty-seven profiles depicted risky

behavior including alcohol use, unhealthy eating, and tobacco use (Loss et al., 2014). Alcohol abuse was depicted most frequently compared to other risky behaviors (Loss et al., 2014). An important caveat of the study by Loss et al. is the risky behavior portrayed on users' profiles was always depicted for reasons of sociability, accomplishment, fun, or reward promoting unhealthy behaviors as attractive and minimizing negatives effects (2014).

Depression and self-esteem. Influence of social media on adolescent mental well-being continues to be implicated. Time spent on Facebook was correlated with depressive symptomology in male and female college students (Steers et al., 2014). Specifically, more time spent on Facebook resulted in more acts of social comparison, defined as comparing oneself to another, mediating the relationship between Facebook use and depression (Steers et al., 2014). Evaluation of 200 Facebook profiles belonging to college students revealed 25% included one or more status updates meeting criteria for depressive symptoms, such as feelings of hopelessness and guilt, or a major depressive episode, defined by sleep difficulties and a general loss of interest persisting over a two-week period (Moreno et al., 2011). Depressive symptoms were exacerbated by more friend responses to a depression reference and increased Facebook use by user (Moreno et al., 2011). Additionally, increased Facebook use predicted declines in daily mood and overall life satisfaction in young adults (Kross et al., 2013).

The role of social media on individual self-esteem continues to be debated. Researchers support Facebook's role in enhancing self-esteem. For instance, Facebook use and self-esteem were positively correlated by social acceptance and environmental

acculturation in a sample of college students (Yu, Vogel, & Kwok, 2010). The positive effect on self-esteem was suggested to occur only in those that focused on close friends when browsing their social network (Wilcox & Stephen, 2012) and is likely due to the selective self-presentation of information offered by social networking sites (Gonzales & Hancock, 2010). Researchers argue social networking sites can highlight an individual's shortcomings and weaknesses leading to a decreased sense of self-esteem (O'Keeffe, Clarke-Pearson, & Council on Communications and Media, 2011). In a study assessing effects of Facebook on self-esteem, participants reporting low self-esteem spent more time on Facebook and expressed increased negativity in their status updates compared to those with high self-esteem (Forest & Wood, 2012).

The effects of social networking on depression are important because of the increased prevalence of depression during adolescence compared to other developmental periods (Thapar et al., 2012). In 2013, an estimated 10.7% of adolescents aged 12-17 suffered at least one major depressive episode (see Diagnostic Statistical Manual of Mental Disorders-IV for inclusion criteria) with over three times as many females than males experiencing depression (National Institute of Mental Health, 2014). Adolescent depression often co-occurs with obesity, non-suicidal self- injury, suicidal ideation, poor academic competency, and school drop-out (Marmorstein et al., 2014; Marshall, Tilton-Weaver, & Stattin, 2013; Quiroga, Janosz, Bisset, & Morin, 2013).

Adolescents with a history of depression are shown to experience difficulty transitioning into adulthood including decreased social support, reoccurring depressive episodes, and self-reported poor health (Naicker, Galambos, Zeng, Senthilselvan, &

Colman, 2013) and are at increased risk for adult onset alcohol use disorder (Briere, Rohde, Seeley, Klein, & Lewinsohn, 2014). Social networking sites have been shown to affect numerous developmental areas of behavior and growth, therefore, it is likely emotion regulation is influenced by use of social networking and may be a significant factor in the relationship between social networking and further pathology.

Social Connectedness

Social connectedness is defined as an individual's interpersonal closeness with the social environment and a necessity for adaptive emotional development and mental well-being (Lee, Draper, & Lee, 2001; Seppala, Rossomando, & Doty, 2013). The need for social interactions and feelings of belongingness is necessary to healthy development during adolescence. The drive for social connectedness has been suggested as the reason for the popularity of social networking websites in youth providing an ideal environment for social interaction (Köbler et al., 2010). For example, adolescents that reported use of online methods of interaction, such as social networking and texting, reported a greater sense of belongingness (Davis, 2012). In comparison, children reported more feelings of social success, normalcy, and positive feelings toward others, such as trust, safety, closeness, and acceptance, during face-to-face interaction than online communication (Pea et al., 2012). Despite debate on positive and negative outcomes of social media use, researchers suggest online communication can foster a supportive environment for self-disclosure especially among stigmatized populations (Pea et al., 2012).

Parent-child Relationship

The parent-child relationship is shown to affect the emotional stability and emotion regulation of children (Kiel & Kalomiris, 2015). Children view parents as models for emotional behavior despite the adaptability of the behavior (Aunola, Tolvanen, Viljaranta, & Nurmi, 2013). Knowledge of the influence of the parent-child relationship on child behaviors and emotion has been recognized for decades (see Bowlby 1969, 1973). Emotion regulation is affected by quality of parent-child relationship through modeling and referencing by the parent and emotional attachment between parent and child (Bariola et al., 2011). Successful modeling of emotional behavior is achieved through the parent's emotional reaction to events, expression of emotion, emotion coping, and consistent exposure to a supportive environment (Kiel & Kalomiris, 2015).

Researchers have suggested a secure parent-child attachment allows for a safe environment to openly express emotion and is a positive influence when engaging in conflict resolution (Moed et al., 2014). For example, negative emotion displayed by parent prohibited conflict resolution in the parent-child relationship (Moed et al., 2014). Recent scholars have suggested emotion as a marker of the parent-child relationship in which both mother and father roles are influential (Kiel & Kalomiris, 2015). During low father-child connectedness and high mother-child connectedness, child internalizing behaviors decreased showing the importance of parent-child connectedness by the present parent when the other is absent (Day & Padilla-Walker, 2009).

Social Determinants of Health

Adolescence is a particularly important developmental period defined by social determinants of health (Viner et al., 2012). Social determinants include the family, school, community, peer, economic, and religious contexts in which one lives (Viner et al., 2012). Interpersonal relationships with peers and parents play a crucial role in the health and well-being of adolescents. The family context is considered the primary influence on childhood development and a determinant of overall health (Viner et al., 2012). Peer relations become more important as adolescents begin to establish their independence and autonomy from parental figures and begin the transition into adulthood (Sawyer et al., 2012). An adolescent's relationship with peers including increased connectedness and social norm conformity predicted positive physical health quality in adulthood (Allen, Uchino, Hafen, 2015). Online media including social networking continue to provide opportunities for social factors to impact adolescent health (Strasburger, Jordan, & Donnerstein, 2010). As social networking use becomes increasingly popular among adolescents, it is important to address potential risks of the online social environment affecting adolescent health and well-being.

Summary and Conclusions

Emotion regulation is a fundamental component of emotional development. Adolescent emotion regulation is influenced by age and gender, peer support and connectedness, parental emotion displays, and the parent-child relationship. Researchers have broadened exploration of emotion regulation and its role in emotional development to include its relationship with adolescent depression and well-being. For example,

depression, aggression, eating pathology, anxiety, tobacco use, and mood and personality disorders in adolescents were increased by poor emotion regulation (Caihol et al., 2015; McLaughlin et al., 2011; Siener & Kerns, 2012). In contrast, healthy emotion regulation was associated with healthy relationships, adaptive daily functioning, and improved physical and mental well-being (Compare et al., 2014). Despite growth in the effects of social networking use, the majority of current literature uses college students and adults as the target population. Although researchers have broadened the fields of social networking use and emotion regulation, effects of social networking on emotion regulation in the adolescent population remains unexplored.

Emotion has been defined in past research as a dynamic self-organizing process in order to explain variability of emotion in individuals. The dynamic approach has been applied to contradict prior belief that emotional expression resulted from a central control agent and can only be defined through the functions it serves. Proponents of the dynamic view conceptualize emotion as a complex process that is influenced by internal and external demands. Fogel and colleagues (1992) used a dynamic lens to apply a multicomponent view of emotion responses, termed the social process theory of emotion, that focused on the influence of social interactions. The social process theory of emotion allowed for exploration of social behaviors associated with emotion regulation and dysregulation.

In order to refine the understanding of emotion regulation and its contribution to a healthy lifestyle, exploration of variables fostering adaptive regulation of emotion self-awareness, responsiveness, and control is needed. Promotion of social change is

achieved through implementation of future prevention and intervention efforts for adolescents implementing healthy emotion regulation. Use of multiple regression analysis to examine the predictive relationship among social networking, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation is discussed in Chapter 3.

Chapter 3: Research Method

Introduction

Social networking use is associated with negative health outcomes including depression, negative affect, poor self-esteem, and substance abuse (Coviello et al., 2014; Loss et al., 2014; Moreno et al., 2011; O'Keefe et al., 2011; Steers et al., 2014). Positive effects include enhanced user affect and well-being, increased social connectedness, and, in some instances, increased self-esteem (Coveiello et al., 2014; Davis, 2012; Köbler et al., 2010; Ross et al., 2009). Further research is needed to fill a gap in literature regarding the risks of increased online social networking use and emotion regulation abilities among adolescents.

The purpose of this study was to examine the relationship between the environmental and social variables of social networking, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation. This was achieved by assessing the predictive relationship among the independent variables social networking use, online social connectedness, and the quality of parent-child relationship on the dependent variables emotional control, recognition, and expression. In addition, the interaction between social media, online social connectedness, and quality of parent-child relationship was assessed. In this chapter, the research design and rationale, including explanation for sampling, instrumentation, and ethical procedures, are presented.

Research Design and Rationale

As the purpose of this study was to examine predictive capabilities of independent variables on scores of dependent variables, the quantitative approach was the appropriate choice of research design. This study was nonexperimental and did not include manipulation of variables, randomization, or assessment of cause and effect relationships. Convenience sampling was used and there was no assignment to groups. A qualitative approach would not have allowed for numerical data to be gathered or findings to be generalized. The quantitative approach allowed for examination of the predictive relationship among social media use, online social connectedness, and quality of parent-child relationship with adolescent emotion regulation through measurements using Likert-type scale responses. Currently, there is no found research assessing prediction of social networking on emotion regulation of adolescents.

The dependent variable is emotion regulation and is defined as the alteration, prevention, and adaption of emotional states and behaviors so that the individual can conform to biological and social demands (Eisenberg et al., 2007). Emotion regulation was assessed by subscales of the Emotion Regulation Index for Children and Adolescents (ERICA) and included three variables: emotional control, emotional self-awareness, and situational responsiveness. These variables measured distinct elements of emotion regulation including one's mood and affect, ability to recognize emotion, and expression of emotion. Higher scores on the ERICA indicated more adaptive emotion regulation (see Appendix A).

The independent variable of social networking use was defined as the emotional connection to and integration of Facebook into daily routines. Social networking use was assessed using combined scores of the Social Integration and Emotional Connection and the Integration into Social Routines subscales of the Social Media Use Integration Scale (SMUIS). Emotional investment was defined as the emotional response resulting from Facebook use and was measured using the Social Integration and Emotional Connection subscale of the SMUIS. Higher scores on the Social Integration and Emotional Connection subscale indicated an increased emotional connection to Facebook. Integration of social media was defined as adolescents' incorporation of Facebook into daily routines, satisfaction resulting from Facebook use, and the extent of response to Facebook content. Integration of social media was measured by the Integration into Social Routines subscale of the SMUIS. Higher scores on the Integration into Social Routines subscale indicated greater integration of social media into daily routines (see Appendix B).

The independent variable of online social connectedness was defined as one's attitude regarding belongingness and closeness to friends when using Facebook. This predictor was measured by the Facebook Social Connectedness Scale. Higher scores on the Facebook Social Connectedness Scale indicated greater connection and sense of belongingness to Facebook (see Appendix C).

The independent variable of quality of parent-child relationship was defined as the condition of the relationship between adolescent and parent. This predictor was assessed by the Quality of Parent-Child Relationship Index. Higher scores on the Quality

of Parent-Child Relationship Index indicated a greater quality relationship between parent and child (see Appendix D).

To examine the predictive relationship among variables of social networking use, online social connectedness, parent-child relationship, with adolescent emotion regulation, the following research questions and corresponding hypotheses were identified:

Research Question 1: Does *social networking use* through Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$1): Social networking use through Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a1): Social networking use through Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$2): Social networking use through Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a2): Social networking use through Facebook predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$3): Social networking use through Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a3): Social networking use through Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 2: Does *online social connectedness* to Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$4): The online social connectedness to Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a4): The online social connectedness to Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$5): The online social connectedness to Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a5): The online social connectedness to Facebook predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$6): The online social connectedness to Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a6): The online social connectedness to Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 3: Does *quality of parent-child relationship* predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$7): The quality of parent-child relationship does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a7): The quality of parent-child relationship predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$8): The quality of parent-child relationship does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a8): The quality of parent-child relationship predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$9): The quality of parent-child relationship does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a9): The quality of parent-child relationship predicts scores of situational responsiveness in a sample of adolescents.

Research Question 4: Is there an interaction among *social networking use*, *online social connectedness* to Facebook, and *quality of parent-child relationship* when predicting scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$10): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a10): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$11): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a11): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$12): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a12): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Methodology

Population

This study was aimed at the adolescent population 13- to 18-year old. Adolescence is a period of heightened emotional reactivity and regulation as well an increased occurrence of depression compared to other developmental periods (Silvers et al., 2012; Thapar et al., 2012). With knowledge of the developmental processes occurring during adolescence and over 70% of teens reporting Facebook use, the adolescent population is an appropriate choice (Lenhart & Pew Research Center, 2015).

Sample

Initially, convenience sampling targeting adolescents through a local high school was proposed. Instead, snowball sampling was used to recruit adolescents 13- to 18-years old through postings to parental groups and pages on Facebook (see Recruitment and Data Collection). Snowball sampling is used when individuals refer other individuals for participation in a research study, especially when the target sample is difficult to reach through other sampling methods (Kosinski, Matz, Gosling, Popov, & Stillwell., 2015). Snowball sampling commonly occurs when using social media to recruit potential participants as users recruit other users to participate in a study creating a snowball effect (Kosinski et al., 2015).

Reliable data are especially important to quantitative research as repeatability is a necessary condition to quality research (Delice, 2010). Unlike qualitative research, quantitative research can be generalized to the broader population (Polit & Beck, 2010). Obtaining an adequate sample size contributes to reliability and generalizability of data, thus increasing the significance of study results and representativeness of the sample (Polit & Beck, 2010). According to G* Power 3.1.9, a sample size of 77 participants was needed based on a priori for multiple regression with a power of 80%, effect size of .15, and three predictors (Faul, Erdfelder, Lang, & Buchner, 2007).

Recruitment and Data Collection

The proposed recruitment method was convenience sampling through flyers at a local high school targeting adolescents 13- to 18-years old. Due to the study being unrelated to the school setting, the Institutional Review Board (IRB) did not approve this method. The IRB approved recruitment of adolescents through Facebook pages and groups targeting parents of adolescents through snowball sampling. Snowball sampling is a technique commonly used in the social media environment because it allows for ease of use, low cost, and access to large sample sizes (Kosinski et al., 2015). For this study, I gained access to various groups and pages focusing on parents of teenagers. This was accomplished by the administrator of the group approving membership into the group or page. Key terms and phrases such as *parenting, parenting a teenager*, *effects of social media*, *effects of social media on teens/adolescents*, *emotion regulation*, and *emotion regulation in teenagers* were input into Facebook's search bar yielding various groups

and pages. These areas of interest were chosen for their relevance to the study and target population as well as to increase exposure for parents of teenagers.

Once access was gained, an announcement was posted to the various pages and groups. Members of the group had the opportunity to view the announcement which contained all necessary information detailing the nature of the study including purpose and significance, voluntary participation, anonymity and privacy, inclusion/exclusion criteria, participant rights, benefits and risks, and freedom to withdraw. Parents who were agreeable to their child's participation in the study could send the survey link to the child for completion. To ensure anonymity, it was recommended for the parent to copy and paste the link into an e-mail or type the link directly into their internet browser. By sending the link to the adolescent, parents provided understanding of the nature of the study and implied consent for their child's participation.

After clicking the survey link, the adolescent was directed to the informed assent page which included necessary information regarding voluntary participation, confidentiality, freedom to withdraw, participant's rights, inclusion/exclusion criteria and details explaining the purpose of the study. At this time, the adolescent was prompted to either exit the study or proceed to answering surveys. By proceeding to the surveys, the adolescent agreed to participate in the study, thus, the survey portion began. Researcher and school contact information were made available on the announcement and child assent form so that parents and potential participants could inquire further about any aspect of the study. A complete record of groups and pages used for the advertising of the study were maintained for debriefing purposes.

SurveyMonkey® was the online host used to gather data. To ensure safe and secure transmission of data over the Internet (Henderson, Law, Palermo, & Eccleston, 2012), SurveyMonkey® uses a secure socket layer (SSL). In addition, the SurveyMonkey® host site offers further measures addressing the collection of data through online means as well as ethical concerns of participants (Henderson et al., 2012). For example, participants were able to give a nonresponse to questions and exit the survey at any time. Additionally, toggling the multiple response option off did not allow for multiple responses per device. Participants were not required to disclose any identifying information and survey answers were submitted directly to the online host site. Use of online surveys is beneficial because of increased availability of participants, low cost, and ease of administration (Ye, 2007). Challenges remain regarding response rates, consent, and use of the online environment for data collection (Nulty, 2008; Ye, 2007). Each of these issues were addressed through strategies focusing on increasing and maintaining response rate, proper consent procedure, and secure data collection.

I input each instrument into the SurveyMonkey® editor. All instruments used a Likert-type scale rating system, so the matrix/rating scale option was used. Surveys were presented continuously with clear and concise instructions provided at the beginning of each survey. Disqualifying questions were asked initially regarding age and Facebook use. The first question asked the participant's age with multiple choice options of *13, 14, 15, 16, 17, 18* and *None of these*. The second asked whether the participant has a Facebook account with multiple choice answers of *Yes* and *No*. If the respondent answered *None of these* or *No* to either disqualifying question, they were redirected to a

disqualifying page advising of their exclusion from the study resulting in no further data being gathered. Using disqualifying questions ensured data was only gathered from those with a Facebook account meeting the age requirements. Questions appeared individually as to ensure each question is answered and eliminate the risk of missing data. Respondents had the option to change answers but only until they completed the survey. Once the survey was completed, an appreciation message appeared including contact information for researcher and university should the participant or parent have/had any questions regarding the study. The announcement was posted every 2-3 weeks as to increase participation.

Once the desired number of responses was received, the study was closed, and no further responses were obtained (n = 80). Data were downloaded into an SPSS file and actual assessment scores were input into the SPSS 21 software. Data were stored on a password protected USB storage device. The USB device containing data was stored in a safe free from risk of damage and accessible by only me. Data will be retained for 5 years after the study has ended and will not be used for any future research. As per the American Psychological Association Ethics Code on record keeping, data must be securely retained for validation and duplication purposes (2010).

A debriefing announcement was posted to the groups and pages initially used for recruitment once the study concluded and analysis was conducted. A summary of the study's purpose as well as participant rights were presented. The announcement included a summary of results, key findings, and researcher/university contact information should

the participant or parent have further concerns. At this time, parents and participants had the opportunity to provide feedback regarding the study.

Data Analysis

Once the surveys were closed, data were exported from the SurveyMonkey® host site. SurveyMonkey® allows all response data to be exported so that raw data can be viewed for statistical analysis. All variables were measured by summed scores of scales or subscales using Likert-scale. Initially, multivariate multiple regression was proposed to answer research questions and corresponding hypotheses regarding prediction and interaction among social networking, online social connectedness, and quality of parent-child relationships on scores of emotion regulation. The multiple regression model addressed the continuous distribution of multiple outcome variables (Alexopoulos, 2010). Variables were not considered dichotomous or nominal because scores have numerical value (Alexopoulos, 2010). The multivariate approach is used to examine the prediction of multiple outcome variables based on the value of multiple predictor variables (Lund Research Ltd, 2013). Individual regressions were not proposed because it was assumed the subscales of dependent variables were likely correlated, thus, individual regression would not be appropriate (Statsoft Inc, 2016). Independent variables were not significantly correlated with each other (see Correlation Among Dependent Variables).

Data were exported into an SPSS file and downloaded onto a password protected USB drive. Using the SPSS file, raw assessment scores were input into SPSS 21 for analysis. Variables were created for each predictor including Facebook use, online social connectedness, and parent-child relationship along with each outcome variable of

emotional control, emotional self-awareness, and situational responsiveness. Analysis used the SPSS Advanced Models module to be used to run a linear regression for each dependent variable (International Business Machines, 2010). Further details regarding findings and changes in the analysis are discussed in Chapter 4.

Instruments

Each instrument was found on Walden's Library website through the PsycTESTS database. The Social Media Use Integration Scale, Quality of Parent-Child Relationship Index, and the Emotion Regulation Index for Children and Adolescents were made available for use in research by the publisher without written consent. The author of the Facebook Social Connectedness Scale was contacted through e-mail regarding use of the instrument and permission has been given. As a professional courtesy, the researcher e-mailed authors of remaining instruments advising of use in this study.

Social Media Use Integration scale

The Social Media Use Integration scale was a self-report 10-item assessment of one's integration of Facebook into daily social routines and emotional connectedness derived from Facebook. This scale was developed in 2013 by Jenkins-Guarnieri and colleagues as an alternate form of social media measurement to existing instruments only assessing behavioral characteristics (Jenkins-Guarnieri, Wright, & Johnson, 2013a). The Social Media Use Integration scale employed two subscales: Social Integration and Emotional Connection subscale and the Integration into Social Routines subscale. The SMUIS was first to measure social media defined by its emotional connection and integration of use (Jenkins-Guarnieri et al., 2013a).

The SMUIS used a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree) with higher scores indicating greater integration and emotional connection to Facebook. The SMUIS showed great internal consistency with a Cronbach's alpha of .91 and strong test-retest reliability over a 3-week period (Jenkins-Guarnieri et al., 2013a). Adequate convergent validity was shown through a positive correlation with a similar instrument, the Facebook Use Intensity Scale. Convergent validity was demonstrated between mean scores of both SMUIS subscales and a Facebook Intensity Scale mean score of .009. The SMUIS can be adapted to other forms of online social media and is appropriate for adolescents and adults (Jenkins-Guarnieri et al., 2013a). High scores on the SMUIS indicated greater emotional connection to and integration of Facebook into daily routines.

Facebook Social Connectedness Scale

The Facebook Social Connectedness Scale was a self-report 20-item scale assessing positive and negative perception of one's social connectedness to Facebook. Derived from the Social Connectedness Scale originally developed by Lee and Robins (1995), the scale was revised by Lee and colleagues to eliminate response bias through positive wording and better explore social connectedness (Lee et al., 2001). Using the revised version, which included 10 positively worded items and 10 negatively worded items, the Social Connectedness Scale was adapted to assess online social connectedness by Grieve and colleagues in 2013 (Grieve et al., 2013b). The Facebook Social Connectedness Scale showed excellent reliability with a Cronbach's alpha of .92. This scale uses a 6-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly

agree). Items are summed and negative perception items are reverse scored. Higher scores on the Facebook Social Connectedness Scale indicated greater sense of social connectedness to Facebook. This scale is intended for adults but a Flesch-Kincaid score of fifth grade and lack of emotion-specific content yields appropriate use for adolescents.

Quality of Parent-Child Relationship Index

The Quality of Parent-Child Relationship Index was a self-report 7-item index assessing the quality of the child's relationship with their parent or caregiver. This scale used a 5-point Likert-type scale ranging from 1 (all the time) to 5 (never) and a 4-point Likert-type scale ranging from 1 (almost never) to 4 (always). The Quality of Parent-Child Relationship Index was published in 1995 by Boney-McCoy and colleagues as an assessment for risk factors in sexually abused children (Boney-McCoy & Finkelhor, 1995a; Boney-McCoy & Finkelhor, 1995b). Higher scores on the Quality of Parent-Child Relationship Index indicated a greater quality relationship between child and parent or caregiver. The Quality of Parent-Child Relationship Index yielded a Cronbach's alpha of .67 (Boney-McCoy & Finkelhor, 1995b). This scale is appropriate for young children, middle-aged children, and adolescents.

Emotion Regulation Index for Children and Adolescents

The ERICA was a self-report 16-item index assessing the emotion regulation abilities of children and adolescents. To include the population of children, the ERICA was revised from Biesecker and Easterbrooks' Emotion Regulation Checklist for Adolescents (ERICA) published in 2001 by MacDermott and colleagues (MacDermott, Gullone, Allen, King, & Tonge, 2010b). The purpose of the ERICA is to extend the

target age range to include children as young as nine. The index used a 3-factor design with different areas of emotion regulation scored by the Emotional Control subscale measuring inappropriate displays of emotion, Emotional Self-Awareness subscale measuring awareness and modulation of emotion, and Situational Responsiveness subscale measuring empathy and socially appropriate emotional displays.

The ERICA uses a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Some items are reverse scored with higher scores on the ERICA which indicated a greater ability to adaptively regulate emotion. The total factor scores for the Emotional Control (7 items), Emotional Self-Awareness (5 items), and Situational Responsiveness (5 items) yielded reliability coefficients ranging from .64 to .73 with a coefficient of .75 for the overall index (MacDermott et al, 2010a; MacDermott, et al., 2010b). The ERICA showed adequate reliability with test-retest coefficients ranging between .75 and .83 lending support for stability of emotion regulation components. The ERICA is appropriate for use in young children through adolescence.

The ERICA showed good construct and convergent validity with correlations being consistent with total scores. Higher scores on the ERICA indicated more healthy emotion regulation and were positively correlated with adaptive guilt, empathy, and parental relationships. ERICA total scores negatively correlated with feelings of shame, depression, and parental overprotection. Notably, the overall and sub-scale scores were most strongly correlated with depression. Items in each subscale were consistent with emotion regulation components shown to be influential in adolescent emotional development including those used to develop the ERICA (MacDermott et al., 2010b; see

Shields & Cicchetti, 1995). The Emotion Regulation Index for Children and Adolescents was shown to be sensitive to age and gender differences further supporting validity of the ERICA (MacDermott et al., 2010b).

Threats to Validity

Information was gathered from a sample of adolescents recruited by parental implied consent through Facebook groups and pages targeting parents of teenagers. Although confidentiality is ensured, use of self-report measures can compromise validity of data through inaccurate responses for reasons like social acceptance or desirability (Shaughnessy, Zechmeister, & Zechmeister, 2006). Data gathered was limited to a single social media website and may not be generalizable to other forms of social media. Only those children whose parents consented to research participation were included in this study. Participants of online research have the ability to remove themselves from the study without warning and misinterpret survey material (D'Auria, 2011; Fox, Morris, & Ramsey, 2007). To increase participation, respondents were informed of anonymity at numerous points during the study including the initial and reminder announcement, child assent, surveys, and debriefing announcement. All instruments used were appropriate for the adolescent population.

Ethical Procedures

The IRB approved this study on February 2nd, 2017 with approval number 02-23-17-0321732. Participants were adolescents ranging in age from 13 to 18 years. Use of minors in research requires parental consent as well as child assent as stated in §46.408 of the Code of Federal Regulations (U.S. Department of Health and Human Services, 2009).

Informed consent and assent documents included all necessary elements as required by §46.117 and §46.408 of the Code of Federal Regulations (U.S. Department of Health and Human Services, 2009). At several points during the research study, participants and parents were reminded of the voluntary nature of the study, anonymity, and freedom to withdraw. This includes the initial announcement, child assent, introduction of surveys, and debriefing announcement. Participants were recruited through parental implied consent. Consent was obtained by parents of various Facebook groups and pages who sent the survey link to their child for completion. To ensure privacy, the initial announcement included a recommendation that the link be sent or shared through personal e-mail or by typing the link directly into their internet browser. By following the survey link, the child was directed to the child assent information before beginning surveys. At this time, the child was presented with all the necessary information required for consent including the voluntary nature of the study, anonymity, freedom to withdraw, benefits and risks, purpose, significance, and their rights as a research participant. The child was prompted to either click 'Exit this survey' if they did not wish to participate or 'Next' to proceed to surveys.

At the start of each survey, concise instructions were provided along with a reminder of the study's voluntary nature and opportunity to exit the survey at any time without penalty. Use of disqualifying questions asking the participant's age and whether the participant had a Facebook account were the only identifying information asked of participants as survey responses were anonymous. Survey responses provided by participants were submitted directly to the host site and IP tracking did not occur ensuring

anonymity of data. Once the study ended, data was downloaded onto a password protected USB storage device and retained for five years.

Any form of human research requires proper debriefing of participants (Russell & Purcell, 2009). Debriefing allowed participants to provide feedback about the study and communicate any concerns resulting from participation in the study (Russell & Purcell, 2009). Researcher contact information and school resources were available at the end of the survey so any concerns by child or parent resulting from participation in the study could be addressed. A record of all the groups and pages used at the onset of the study were kept so that a debriefing announcement could be posted at the conclusion of the study. At this time, parents and participants could/can express feedback.

Dissemination of Findings

Dissemination of findings is the link between research and practice (Wandersman et al., 2008). Successful promotion of social change within the community and fields of interests occurs by bridging the gap between research and implementation of findings (Wandersman et al., 2008). Social change is achieved by providing a further understanding of adolescent emotional regulation through exploration of contributing variables including social media use, online connectedness, and parent-child relationship. Once the study concluded and analysis conducted, a debriefing announcement was posted to all of the groups and pages used at the onset of the study summarizing the results and key findings of the research. Location allows for opportunities to presents findings at local colleges, medical facilities, and mental health centers. Finally, I will submit the

research to an academic journal for publication with the goal of influencing future research in the area of adolescent emotional health.

Summary

In this chapter, definitions of variables and instrumentation as well as the target sample and population are given. Explanation detailing sampling and recruitment procedures are provided. A nonexperimental quantitative design was used in order to gather and analyze data so that research questions and accompanying hypotheses could be properly addressed. Ethical procedures regarding consent, protection of participants, instrumentation, IRB procedure, and the nature of the study were outlined. Implied parental consent and child assent was obtained by recruitment through various groups and pages targeting parents of teenagers. Assent was obtained once the child chose to proceed to survey completion rather than exiting the survey after clicking the survey link sent by their parents. Data was obtained through web-based instrumentation hosted by a secure server ensuring participant confidentiality. Multivariate multiple regression analysis was proposed to address each research question regarding prediction of social media, online social connectedness, and quality of parent-child relationship on scores of emotion regulation measured by subscales of emotional control, emotional self-awareness, and situational responsiveness. In addition, interaction effects among independent variables on scores of emotion regulation were examined. Findings from the research are presented in Chapter 4.

Chapter 4: Results

Introduction

Adolescence is a period of development including emotional growth and social exploration (Compare et al., 2014; Kullik & Petermann, 2013; Vink et al., 2014). The emotional and social development occurs through connections and relationships with peers (Bariola et al., 2011; Cole, 2014; Zimmer-Gembeck & Skinner, 2011). This study adds to the area of emotion regulation by examining the relationship among social networking use, online connectedness, and parent-child relationship on adolescent's ability to control, recognize, and express emotion. The purpose of this quantitative study was to examine whether Facebook use, online social connectedness, and the quality of parent-child relationship predict the emotional control, emotional self-awareness, and situational responsiveness in a sample of adolescents. In addition, the interaction effect among social media use, online social connectedness, and quality of parent-child relationship on emotion regulation was examined.

Three research questions addressed each independent variable while corresponding hypotheses addressed the different facets of emotion regulation including emotional control, emotional self-awareness, and situational responsiveness. The fourth research question addressed interaction effects among independent variables on emotion regulation.

Research Question 1: Does *social networking use* through Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$1): Social networking use through Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a1): Social networking use through Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$2): Social networking use through Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a2): Social networking use through Facebook predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$3): Social networking use through Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a3): Social networking use through Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 2: Does *online social connectedness* to Facebook predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$4): The online social connectedness to Facebook does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a4): The online social connectedness to Facebook predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$5): The online social connectedness to Facebook does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a5): The online social connectedness to Facebook predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$6): The online social connectedness to Facebook does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a6): The online social connectedness to Facebook predicts scores of situational responsiveness in a sample of adolescents.

Research Question 3: Does *quality of parent-child relationship* predict scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$7): The quality of parent-child relationship does not predict scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a7): The quality of parent-child relationship predicts scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$8): The quality of parent-child relationship does not predict scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a8): The quality of parent-child relationship predicts scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$9): The quality of parent-child relationship does not predict scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a9): The quality of parent-child relationship predicts scores of situational responsiveness in a sample of adolescents.

Research Question 4: Is there an interaction among *social networking use*, *online social connectedness* to Facebook, and *quality of parent-child relationship* when predicting scores of emotion regulation in a sample of adolescents?

Null Hypothesis ($H_0$10): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Alternative Hypothesis (H_a10): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents.

Null Hypothesis ($H_0$11): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Alternative Hypothesis (H_a11): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents.

Null Hypothesis ($H_0$12): There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Alternative Hypothesis (H_a12): There is an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents.

Specifics regarding data collection, statistical analysis, sampling details, and a comprehensive summary of findings are provided in this chapter. The timeframe for data collection, completion rate, and discrepancies in data collection/sampling are described. Evaluation of statistical assumptions, descriptive statistics, and answers to research

questions and corresponding hypotheses are presented in this chapter. Implications for social change are provided for the individual, organizational, and empirical levels. Limitations of the study are presented and recommendations for future research are proposed.

Data Collection

The original sampling method proposed soliciting a local middle school to gather data from adolescents through flyers and postings in the school to inform students about the study and the survey link. Due to this research being unrelated to a school setting, the proposed sampling method was not approved by the IRB. The IRB approved use of Facebook groups to target parents of adolescents directly.

Data were collected through postings in Facebook groups. Using the search tool, key words and phrases were used to find group pages targeting parents of teenagers. Phrases included *parenting teenagers/teen*s, *raising adolescents/teenagers/teens*, *parents of adolescents/teenagers/teens,* and *moms/dads of adolescents/teenagers/teens*. Other phrases targeted emotion regulation and included *emotion regulation in adolescents/teenagers/teens*, *emotional health in adolescents/teenagers/teens*, and *emotional well-being in adolescents/teenagers/teens*. Finally, phrases targeting the field of research were used including *PhD, researchers*, and *research studies*. I requested membership to the group pages yielded in these results starting with those with the highest number of current members. This was done by requesting to join the page and awaiting approval by the page's administrator. I continued to join various groups throughout the duration of the survey. At the time of the survey's closure, I was a

member of 100 groups.

The survey announcement was posted to each group's timeline where members could view the survey information and link. Depending on the privacy settings of each group, the announcement could be posted directly, or the administrator had to approve the posting before it could be viewed by group members. Many of the groups allowed direct postings or approved post requests, while several others did not approve the posting. Once posted or approved, group members could send/share the survey link to other Facebook members. The announcement was reposted approximately every 3 weeks depending on the amount of responses from established members.

To increase response rate, three additional recruitment methods were used. First, private messaging through Facebook's messenger was used to contact members of the groups directly and individually. The message included the announcement and a summary of the study (see Appendix E for sample message). Depending on the privacy settings for each member, approval was also required by the recipient to view the message. Once accepted and viewed, the recipient was able to click the survey link and/or forward the message to other Facebook members. Second, I contacted the executive director of The Louisiana Counseling Association (LCA) to request my study be included in the monthly e-blast sent to members of the LCA. Last, the online participant pool at Walden University was used. Each of the additional recruitment methods targeted parents of adolescents to increase the overall response rate. The survey was opened on March 8th, 2017 at 9:00CST. The survey was closed in the fall of 2017 when 80 surveys were completed.

Characteristics of the Sample

Over 9 months, the survey yielded 185 responses of which 43% were complete. Of the 80 completed surveys, 22.4% were from young adolescence (13 to 14 years), 41.2% from middle adolescence, and 36.2% from late adolescence (17 to 18 years). Due to the low number of completed surveys from young adolescents, the emotion regulation of younger adolescents cannot be fully explored. This is important due to the progression of emotional development occurring in early, middle, and late adolescence. No further demographic data was obtained. See Table 1 for completed surveys according to age (13 to 18).

Table 1

Completed Surveys by Age

Age	Completed Surveys
13	6.2%
14	16.2%
15	23.7%
16	17.5%
17	15.0%
18	21.2%

Note. $n = 80$.

Data were exported from SurveyMonkey.com directly to an SPSS file which was saved on a password protected USB drive. An additional copy of the original data file was exported to EXCEL as well.

Assumptions

Multivariate multiple regression requires certain assumptions to be met. Outcome variables must be moderately correlated, observations must be independent, and data must be normally distributed (Lund Research, 2013). In addition, the multiple regression model requires absence of multicollinearity and significant outliers (Lund Research, 2013).

Correlation Among Dependent Variables

Pearson's *r* values were used to determine correlations among outcome variables. Emotional control, emotional self-awareness, and situational responsiveness are outcome variables while social networking use, online social connectedness, and parent-child relationship are predictor variables. See Table 2 for Pearson's *r* correlation coefficients among variables.

Table 2

Pearson's r Correlation Coefficients Among Variables (n = 80)

Variable	1	2	3	4	5	6
1. Social networking use	---	.345**	-.138	-.234*	-.296**	-.111
2. Online social connectedness		---	.103	.024	.056	.007
3. Parent-child relationship			---	.394**	.253*	.095
4. Emotional control				---	.422**	.258*
5. Emotional self-awareness					---	.274*
6. Situational responsiveness						---

Note. **. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Independent variables. social networking use, online social connectedness, parent-child relationship.
Dependent variables. emotional control, emotional self-awareness, situational responsiveness.

As shown in Table 2, the correlations among outcome variables range from poor to strong. The variables situational responsiveness and emotional control were poorly correlated with a Pearson's *r* value of .258 while emotional control and emotional self-awareness were moderately correlated with a Pearson's value of .422. Emotional self-awareness and situational responsiveness were poorly correlated with a Pearson's *r* value of .274. Because several outcome variables were poorly correlated, use of multivariate multiple regression was not appropriate for this data set. Instead, separate multiple regressions for each dependent variable were performed.

Multicollinearity

For multiple regression to be used, predictor variables should not be strongly correlated (Lund Research, 2013). The presence of multicollinearity among independent

variables makes it difficult to determine which predictor variable is responsible for variance in the outcome variables (Lund Research Ltd, 2013). Correlations among predictor variables were considered problematic if $r > 0.4$. As shown in Table 2, Pearson's r values showed weak relationships among predictor variables ($r < 0.4$).

Multicollinearity of independent variables was further tested using variation inflation factor values. Variance inflation factor values near 1.0 indicated absence of collinearity (Lund Research Ltd, 2013). Variance inflation factor values were 1.176 for social media use, 1.166 for online social connectedness, and 1.047 for parent-child relationship indicating no correlation among predictor variables.

Normality

Boxplots were generated to check for outliers in distribution of all variables. Outliers were noted in the predictor variable of online social connectedness and outcome variable of situational responsiveness. Histograms for each variable were also generated to test data against a predefined normally distributed data set. See Figure 1 for histograms of all variables. Distributions approximated normal distributions with minimal skew in the data.

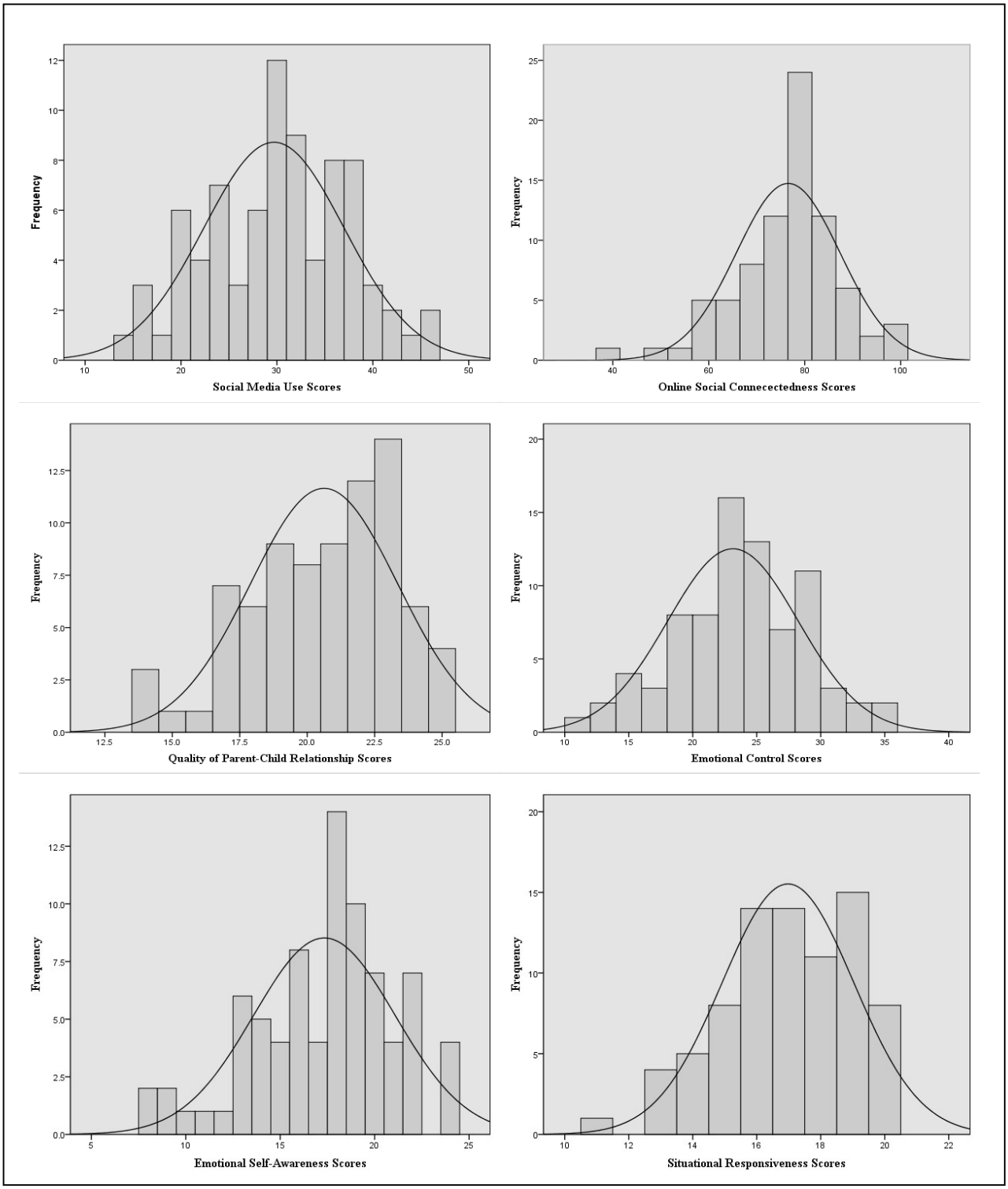

Figure 1. Histograms of all variables.

The Kolmogorov-Smirnov value was used to further test for normality. The null hypothesis was rejected if $p < .05$. The predictor variables of Facebook use ($p = .024$) and parent-child relationship ($p = .000$) as well as outcome variables of emotional self-awareness ($p = .000$) and situational responsiveness ($p = .003$) were noted as nonnormal.

Skew and kurtosis values were examined for normality using the descriptives model for all variables (Rose, Spinks, and Canhoto, 2015). Skew and kurtosis were calculated using z-values from the following equation:

$$Z = \frac{Skew\ value}{SEskewness}, Z = \frac{Kurtosis}{SEkurtosis}$$

The null hypothesis was rejected if the calculated scores fell outside of the range of -1.96 and 1.96. See Table 3 for values of skew and kurtosis.

Table 3

Calculated Values of Skew and Kurtosis

Variable	Skew	Kurtosis
Social networking use	-0.42	-0.94
Online social connectedness	-2.39	2.56
Parent-child relationship	-1.98	-0.60
Emotional control	-0.58	-0.22
Emotional self-awareness	-1.73	0.06
Situational responsiveness	-1.73	-0.49

The predictor variable of online social connectedness was noted as skewed (-2.39) and kurtotic (2.56) while parent-child relationship was only skewed (-1.98).

Independence of Errors

Data were checked for independence of errors using the Durbin-Watson statistic for each outcome variable of emotional control, situational responsiveness, and emotional self-awareness. There was independence of errors as assessed by a Durbin-Watson statistic of less than 2.5 for each regression. Durbin-Watson values were 2.07, 2.04, and 2.41 respectfully indicating independence of errors.

Summary of Assumptions

Boxplots showed outliers in the predictor of online social connectedness and outcome variable of situational responsiveness. Histograms indicated minimal skew in data with approximated normal distributions. Further tests of normality showed

nonnormal predictors of Facebook use and parent-child relationship along with outcome variables of emotional self-awareness and situational responsiveness with Kolmogorov-Smirnov values of $p < .05$. Minimal skew and kurtosis were noted in the predictor variables of online social connectedness and parent-child relationship. Although data were considered nonnormal, data are only problematic given a small sample size (Sainani, 2012). According to Sainani (2012), a sample size of 80 is considered adequate for parametric statistics of nonnormal data. The departure from normality is not considered severe enough to be problematic for this study ($n = 80$).

The assumption of multicollinearity was met indicating weak or no correlations among predictor variables. Durbin-Watson values showed independence of errors in outcome variables. Pearson's *r* values among outcome variables did not support the use of multivariate multiple regression. Instead, individual multiple regression was used for each dependent variable of emotional control, emotional self-awareness, and situational responsiveness.

Interaction Term

The use of individual multiple regressions allowed for examination of the predictive relationship among social networking use, online social connectedness, and quality of parent-child relationship with emotional regulation abilities of adolescents. Additionally, the interaction among predictor variables on subscales of emotion regulation was included in the analysis. The interaction term used predictors of social networking use, online social connectedness, and quality of parent-child relationship. To create the interaction term, predictor variables were first centered by subtracting their

mean value. The interaction term was created by multiplying the centered predictor variables then renamed. This variable became the interaction term used in each regression (Stigma Plus Consulting, 2018).

Results

Descriptive Statistics

Descriptive statistics were used to obtain measures of central tendency and measures of spread (Lund Research Ltd, 2013). See Table 4 for descriptive statistics of all variables.

Table 4

Descriptive Statistics for All Variables (n = 80)

Variable	*M*	*SD*	Minimum	Maximum
Social networking use	29.6	7.3	14	46
Online social connectedness	76.5	10.8	39	100
Parent-child relationship	20.6	2.7	14	25
Emotional control	23.1	5.0	11	34
Emotional self-awareness	17.3	3.7	8	24
Situational responsiveness	16.9	2.0	11	20

Each research question addressed a predictor variable and included corresponding hypotheses for each outcome variable, or subscale of the ERICA. Outcome variables

measured different facets of emotion regulation including emotional control, emotional self-awareness, and situational responsiveness. The fourth research question examined the interaction among predictors with emotion regulation.

Overall Regression Models

Results of the overall regression models are presented first then descriptive statistics and results of research questions follow. See table 5 for a summary of all regression models.

Table 5

Standardized Parameter Estimates and Confidence Intervals for Variables (n = 80)

Variable	Unstandardized *B*	ß	95% CI for *B* Lower	Upper	*p*
Dependent Variable Emotional control					
Predictor Variable					
1. Social networking use	-.140	-.201	-.298	.018	.081
2. Online social connectedness	.027	.057	-.078	.132	.612
3. Parent-child relationship	.677	.364	.277	1.077	.001
4. Interaction term	.000	-.020	-.005	.004	.848
Dependent Variable Emotional self-awareness					
Predictor Variable					
1. Social networking use	-.170	-.332	-.288	-.052	.005
2. Online social connectedness	.051	.147	-.028	.130	.202
3. Parent-child relationship	.245	.179	-.055	.545	.108
4. Interaction term	.001	.084	-.002	.005	.443
Dependent Variable Situational responsiveness					
Predictor Variable					
1. Social networking use	-.023	-.083	-.092	.045	.497
2. Online social connectedness	.007	.036	-.039	.052	.768
3. Parent-child relationship	.084	.002	-.090	.258	.339
4. Interaction term	-.002	-.209	-.004	.000	.072

Interaction term: social media use, online social connectedness, parent-child relationship.

Emotional control subscale. The regression was statistically significant, $F(4, 75) = 4.44$, $p = .003$. The predictor variables accounted for 14.9% of variance in scores

of emotional control (as measured by adjusted R^2).

Emotional self-awareness subscale. The regression was statistically significant, $F(4, 75) = 3.53$, $p = .011$. The predictor variables accounted for 11.4% of variance in scores of emotional self-awareness (as measured by adjusted R^2).

Situational responsiveness. The regression was not statistically significant, $F(4, 75) = 1.23$, $p = .305$. The predictor variables accounted for 1.2% of variance in scores of situational responsiveness (as measured by adjusted R^2).

Research Question #1: Facebook Use and Emotion Regulation

Does social networking use through Facebook predict scores of emotion regulation in a sample of adolescents?

Three null hypotheses relate to research question one:

$H_0$1: Social networking use through Facebook does not predict scores of emotional control in a sample of adolescents. I failed to reject the null hypothesis that social networking use through Facebook was not a statistically significant predictor of the emotional control subscale score, $B = -.140$, ß = -.201, $p = .081$.

$H_0$2: Social networking use through Facebook does not predict scores of emotional self-awareness in a sample of adolescents. The null hypothesis that social networking use through Facebook was not a statistically significant predictor of the emotional self-awareness subscale score was rejected. Social networking use was a statistically significant predictor of the emotional self-awareness subscale score ($p = .005$). Results showed a one unit increase in social networking use predicted decreased

emotional self- awareness by .170 units. Social networking use had the strongest relationship with emotional self-awareness, ß = -.332.

$H_0$3: Social networking use through Facebook does not predict scores of situational responsiveness in a sample of adolescents. I failed to reject the null hypothesis that social networking use through Facebook was not a statistically significant predictor of the situational responsiveness subscale score, B = -.023, ß = -.083, p = .497.

Research Question #2: Online Connectedness to Facebook and Emotion Regulation

Does online social connectedness to Facebook predict scores of emotion regulation in a sample of adolescents?

Three null hypotheses relate to research question two:

$H_0$4: The online social connectedness to Facebook does not predict scores of emotional control in a sample of adolescents. I failed to reject the null hypothesis that online social connectedness to Facebook was not a statistically significant predictor of the emotional control subscale score, B = .027, ß = .057, p = .612.

$H_0$5: The online social connectedness to Facebook does not predict scores of emotional self-awareness in a sample of adolescents. I failed to reject the null hypothesis that online social connectedness to Facebook was not a statistically significant predictor of the emotional self-awareness subscale score, B = .051, ß = .147, p = .202.

$H_0$6: The online social connectedness to Facebook does not predict scores of situational responsiveness in a sample of adolescents. I failed to reject the null hypothesis that online social connectedness to Facebook was not a statistically significant predictor of the situational responsiveness subscale score, B = .007, ß = .036, p = .768.

Research Question #3: Quality of Parent-Child Relationship and Emotion Regulation

Does quality of parent-child relationship predict scores of emotion regulation in a sample of adolescents?

Three null hypotheses relate to research question three:

$H_0$7: The quality of parent-child relationship does not predict scores of emotional control in a sample of adolescents. The null hypothesis that quality of parent-child relationship was not a statistically significant predictor of the emotional control subscale score was rejected and the alternative hypothesis was accepted. Quality of parent-child relationship showed a significant relationship with scores of emotional control (p = .001). The results showed a one unit increase in quality of parent-child relationship predicted an increase in emotional control by .677 units. Quality of parent-child relationship had the strongest relationship with emotional control, ß = .364.

$H_0$8: The quality of parent-child relationship does not predict scores of emotional self-awareness in a sample of adolescents. I failed to reject the null hypothesis that quality of parent-child relationship was not a statistically significant predictor of the emotional self-awareness subscale score, B = .245, ß = .179, p = .108.

$H_0$9: The quality of parent-child relationship does not predict scores of situational responsiveness in a sample of adolescents. I failed to reject the null hypothesis that quality of parent-child relationship was not a statistically significant predictor of the situational responsiveness score, B = .084, ß = .002, p = .339.

Research Question #4: Interaction Among Predictors with Emotion Regulation

Is there an interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotion regulation in a sample of adolescents?

Three null hypotheses were posed for this research question:

$H_0$10: There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional control in a sample of adolescents. I failed to reject the null hypothesis that the interaction term was not a statistically significant predictor of the emotional control subscale score, $B = .000$, ß = -.020, $p = .848$.

$H_0$11: There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of emotional self-awareness in a sample of adolescents. I failed to reject the null hypothesis that the interaction term was not a statistically significant predictor of the emotional self-awareness subscale score, $B = .001$, ß = .084, $p = .443$.

$H_0$12: There is no interaction among social networking use, online social connectedness to Facebook, and quality of parent-child relationship when predicting scores of situational responsiveness in a sample of adolescents. I failed to reject the null hypothesis that the interaction term was not a statistically significant predictor of the of the situational responsiveness subscale score, $B = -.002$, ß = -.209, $p = .072$.

Summary

Four research questions were addressed for this research study. Each research question focused on a predictor variable: social networking use, online social connectedness, and quality of parent-child relationship. The interaction term was addressed in the last research question and included each predictor variable. Research questions included three sets of hypotheses addressing the dependent variables of different components of emotion regulation: emotional control, emotional self-awareness, and situational responsiveness.

Research question one examined the predictive relationship of social networking use through Facebook with adolescent emotion regulation. A significant relationship was found among adolescent Facebook use and emotional self-awareness. Research question two resulted in no predictive relationship among online social connectedness to Facebook with adolescent emotion regulation. Research question three examined the predictive relationship of the parent-child relationship with adolescent emotion regulation. A significant relationship was found among quality of parent-child relationship and emotional self-awareness.

Research question four resulted in no interaction among independent variables with emotion regulation. Overall, the predictors of social networking use and quality of parent-child relationship were statistically significant predictors of emotion regulation. Increased Facebook use predicted a decrease in emotional self-awareness, or the adolescent's ability to recognize their emotions. Improved quality of parent-child relationship predicted greater emotional control, or an adolescent's ability to control their

emotions. The predictor of online social connectedness showed no predictive relationship with emotion regulation and the situational responsiveness regression was nonsignificant. Additionally, the interaction term was not significant in predicting emotion regulation. In Chapter 5, interpretations of the findings are presented along with the limitations of the study. Implications for social change, application, and recommendations for future research are provided.

Chapter 5

Introduction

This study examined the predictive relationship among Facebook use, online social connectedness to Facebook, and quality of parent-child relationship with the ability to control, recognize, and express emotion in a sample of adolescents. The interaction effect among predictors with emotion regulation was also assessed. The adolescent sample was gathered through postings in Facebook groups, private messaging, and e-mail by the LCA. Online surveys assessed each of the predictor variables of social networking use, online social connectedness, and quality of parent-child relationship while outcome variables of emotional control, emotional awareness, and situational responsiveness were assessed using subscales of a survey. Due to problematic data, individual multiple regressions were used for analysis instead of the multivariate multiple regression that was originally proposed.

Results of the research indicated significant main effects for predictors of social networking use and quality of parent-child relationship. Increased Facebook use predicted decreased emotional self-awareness, or the ability to recognize one's emotions. Increased quality of parent-child relationship predicted improved emotional control in adolescents, or the ability to manage one's emotions. The remaining predictors showed no statistically significant relationship with emotion regulation and interactions among predictors proved to be nonsignificant. In this chapter, the interpretation of findings, limitations, recommendations for future study, and implications of research are provided.

Interpretation of Findings

The dynamic approach incorporates environmental and social influences when defining emotion (Fogel et al., 1992). From the dynamic approach to emotion, the social process theory was introduced (Fogel et al., 1992). The social process theory of emotion uses social interaction and relationships to explain the variability in emotion (Fogel et al., 1992). The research questions in this study were based on the influences of social networking use, online social connectedness, and quality of parent-child relationship on adolescent emotion regulation. Specifically, the social process theory was applied to the social networking platform of Facebook to examine the relationship among social networking use and emotion regulation in adolescents. To my knowledge, there is no study applying the social process theory of emotion to the online environment.

More time spent on Facebook use has been linked to depression, decreased self-esteem, feelings of hopelessness, and symptoms of a major depressive episode (Moreno et al., 2011; Steers et al., 2014). Results of this study indicated a significant relationship between Facebook use and emotional self-awareness. Increased Facebook use predicted decreased emotional self-awareness, or an adolescent's ability to recognize emotion. The quality of parent-child relationship has been shown to affect emotion regulation in children and adolescents through attachment, parenting-styles, and modeling of parental behaviors (Hershenberg et al., 2011; Kiel & Kalomiris, 2015; see review by Zimmer-Gembeck et al., 2015). Results showed quality of parent-child relationship predicted emotional control in adolescents. Improved quality of parent-child relationship predicted an increase in emotional control, or an adolescent's ability to control emotion. These

results support the theoretical frame work of social process theory which incorporates social and environmental factors as determinants of emotion regulation.

Limitations

There were several limitations to this study including scope of social networking targeted, age of participants, and the sampling method used. During data collection, parents/group members suggested adolescents have moved away from using Facebook, which may limit the generalizability of this study. When responding to the survey invitation, group members would often comment that their teenager(s) no longer use Facebook or that Facebook is no longer the preferred social networking platform of teens. Instead, teenagers are now using other social networking platforms, such as Instagram, Twitter, and Snapchat. This is important because without the popularity of Facebook among adolescents, the relevance of this study is limited. This is further discussed in the recommendations section of this chapter.

The completion rate was not evenly dispersed among early, middle, and late adolescence. Early adolescence had the lowest completion rate of 22.4% while middle adolescence had the highest completion rate of 41.2%. Emotion regulation matures as one progress through adolescence including recognition, modeling, situational awareness, and expression of emotion (Gresham & Gullone, 2012; Shore, 2016; Zimmer-Gembeck & Skinner, 2011). Findings are limited in generalizability to the entire period of adolescence due to the development that begins in early adolescence and progresses through middle and late adolescence (Gresham & Gullone, 2012; Kappas, 2013; Zimmer-Gembeck & Skinner, 2011).

Gender differences were not assessed in this study. This is important due to the differences exhibited by males and females in social networking use (Anderson & Pew Research Center, 2015; Misra, Dangi, & Patel, 2015) and emotion regulation (Gullone et al., 2010; Nolen-Hoeksema & Aldao, 2011; Bender et al., 2012; Nolen-Hoeksema, 2012). Without examining gender differences, results cannot be applied to male and female populations specifically.

Recommendations

Research focusing on the relationship between adolescent emotion regulation and other social networking platforms such as Twitter, Snapchat, and Instagram should be considered. Comparisons among groups would indicate which platform had a significant relationship with adolescent emotion regulation. Additionally, future research would benefit from determining which type of social networking sites (e.g. video-based platforms like Snapchat or picture-based platforms like Instagram) are significantly related to adolescent emotion regulation. The findings of this research were limited to the single social networking site of Facebook. During data collection, I was advised by parents/group members of their children's nonuse of Facebook. Instead, adolescents prefer other social networking and social media platforms. In order to increase the validity and generalizability of future research regarding social networking use and emotion regulation, the scope of social networking sites should be expanded.

In order to increase generalizability to the adolescent period, future research should be age-specific. Future research specific to age would allow for comparison among the developmental stages of adolescence. In this study, completion rates favored

middle adolescence while early adolescence had the lowest number of completed surveys. Knowledge of differences among different developmental stages would help to understand the role of social networking use in emotion regulation occurring in early, middle, and late adolescence.

Future research would benefit from assessing gender differences in determining the role of social networking use in emotion regulation between groups of males and females. Prior research showed differences between male and female emotion regulation abilities. Adolescent females experience more difficulty in managing negative emotion compared to males (Bender et al., 2012) while adolescent males are more likely to suppress emotions compared to females (Gullone et al., 2010). Gender-specific data can also be applied to social networking use. With females more likely to use visual platforms like Facebook and Instagram as compared to males (Anderson & Pew Research Center, 2015), gender differences should be assessed in further exploration of the relationship between social networking use and adolescent emotion regulation.

Replication of this study using a larger sample size and/or different variables would expand research in the field of adolescent emotion regulation and increase generalizability. Behavioral variables like frequency of social networking use, duration of time spent on social networking sites, and user activity should be included in future research to provide further understanding of influential factors on adolescent emotion regulation and well-being. Additionally, a longitudinal study would provide a deeper view of the roles of behavioral, social, and environmental factors in emotion regulation.

Research focusing on the effects of social networking use continues to grow, but the adolescent population remains unexplored. The majority of existing research focuses on college students and adults (see English et al., 2012; Kross et al., 2013; Moreno et al., 2014; Steers et al., 2014; Wilcox & Stephen, 2012). Research linking adolescent social networking use and emotion regulation is an area in need of exploration. More research focusing on the relationship between social networking use and emotion regulation can provide further understanding of the influences of online social contexts with adolescent emotion regulation and promote overall well-being.

Implications

The results of this study have implications for potential social change on the individual, organizational, and empirical level. At the individual level, adolescents and parents will be informed how Facebook use and the parent-child relationship impact adolescent emotion regulation. This is important because there is no found literature linking the area of social networking use and adolescent emotion regulation. Specifically, the more an adolescent uses Facebook, the less likely they are to recognize their own emotions. Difficulty in managing emotional self-awareness has been linked to adolescents suffering from social anxiety and/or depression which are common mental disorders of adolescence (Klemanski, Curtiss, McLaughlin, & Nolen-Hoeksema, 2017). Healthy emotional development and increased quality of life are associated with adaptive adolescent emotion regulation (Berking & Wupperman, 2012; Siener & Kerns, 2012; Song et al., 2014; Viner et al., 2012). The findings of this study implicate the role of

social networking as a predictor of maladaptive adolescent emotional development and well-being.

Parents of adolescents will benefit from knowing greater quality of parent-child relationship relates to better emotional control. Findings of this study indicate the importance of the quality of parent-child relationship in the development of healthy adolescent emotion regulation. This is consistent with current literature supporting the link between healthy parent-child relationship and adolescent emotion regulation (Moed et al., 2014; Kiel & Kalomiris, 2015; see review by Zimmer-Gembeck et al., 2015). The interaction term was not significant which implies the quality of parent-child relationship does not impact the predictive relationship between increased Facebook use and emotional self-awareness. Increased Facebook use predicts an adolescent's inability to recognize their own emotion even when the quality of parent-child relationship is high. Additionally, increased Facebook use did not influence the predictive relationship between greater quality of parent-child relationship and adolescent emotional control.

At the organizational level, the results are important in that the findings can provide a foundation for development of future therapeutic practices focused on emotion regulation and dysregulation in the adolescent population. Incorporation of these findings into therapeutic practices like counseling, mental health assessment, and psychological models will help with understanding and treatment of symptomology linked to emotion dysregulation. Mental health professionals and practitioners can implement preventative strategies and interventions focusing on adaptive emotion regulation. Knowledge of the relationship between Facebook use and emotion regulation

will allow teachers, administrators, and school counselors to apply these results to counseling practices for adolescents suffering from depression and anxiety or engaging in risky behaviors and substance abuse. Additionally, school staff and administrators can use these findings when implementing policies regarding social networking use in the school environment by limiting access to social networking websites and informing students and parents of the negative impact of increased Facebook use.

Findings of this research have empirical implications by providing support for the dynamic approach to emotion, specifically Fogel's (1992) social process theory of emotion. This supports existing literature incorporating social and environmental influences on emotional development (Fogel et al., 1992). Application of the social process theory of emotion allowed for examination of the relationship between Facebook use and quality of parent-child relationship with adolescent emotion regulation. The results of this study support Fogel's social process theory of emotion and its application to the social networking platform.

The interaction term which included social networking use, online social connectedness, and quality of parent-child relationship was not significant. Facebook use predicted emotional control despite scores of quality of parent-child relationships. In other words, there was no evidence that a greater quality of parent-child relationship lessened the influence of increased Facebook use on emotional self-awareness in adolescents. Quality of parent-child relationship predicted emotional control despite scores of Facebook use. Increased Facebook use did not impact the predictive

relationship between greater quality of parent-child relationship and increased emotional control.

Conclusion

Adaptive emotion regulation is associated with proper daily functioning, healthy relationships, improved mental well-being and physical health (see Compare et al., 2014). Although research has focused on the role of social networking in areas of depression, anxiety, and self-esteem, there is a lack of research linking the relationship of social networking use to adolescent emotion regulation. This study provides essential knowledge bridging the gap between adolescent social networking use and emotion regulation. Such knowledge broadens the field of adolescent mental health by identifying influential factors in determining emotion regulation and dysregulation in adolescents. In addition to expanding the fields of social networking use and mental well-being, this study adds to the limited research targeting the adolescent population.

By examining the predictive relationship among Facebook use, online social connectedness, and the quality of parent-child relationship on adolescent emotion regulation, possible factors contributing to adaptive and maladaptive emotion regulation were identified. A significant relationship was found between Facebook use and emotional self-awareness as increased Facebook use predicted decreased emotional self-awareness, or an adolescent's ability to recognize their own emotion. Such findings provide a plausible explanation for the relationship between social networking use and common adolescent pathology such as depression, substance abuse, and anxiety as prior research suggests (see Klemanski et al., 2017; see Thapar et al., 2012; see Viner et al.,

2012). This is important due to the co-occurring prevalence of social networking use and depression during adolescence.

The findings indicated a significant relationship between the quality of parent-child relationship and emotional control, or an adolescent's ability to control their emotion. Improved parent-child relationship predicted increased emotional control by adolescents. This supports existing literature on the influence of parent-child relationship including attachment, modeling, and referencing of parental emotion on adolescent emotion regulation (see Bowlby 1969, 1973; see Kiel & Kalomiris, 2015). The findings provide detail into the relationship between parent-child relations and emotion regulation by indicating emotional control as an important component influenced by the quality of parent-child relationship.

The findings of this research support the dynamic view of emotion which defines emotion as complex and influenced by external factors. Incorporation of the social networking environment by assessing Facebook use expands the dynamic view of emotion and application of Fogel's (1992) social process theory of emotion. The significant relationship found between Facebook use and emotion regulation adds to the multicomponent view of emotion responses by focusing on the effects of the social networking environment.

The findings of the study further conceptualize the social behaviors related to emotion regulation and dysregulation in adolescence. The relationship found between Facebook use and emotional self-awareness provides deeper examination of the negative impact of social networking use on adolescent emotional well-being. Poor emotional

self-awareness resulting from increased Facebook use indicates a direct influence of social networking use on emotion regulation capabilities of adolescents. Healthy adolescent emotional development is comprised of functional emotion regulation determined, in part, by social behaviors and the parent-child relationship (Kiel & Kalmoiris, 2015; Kullik & Petermann, 2013). This study indicates Facebook use as a social behavior that is influential in predicting adaptive versus maladaptive emotion regulation and a precipitant to the development of healthy adolescent emotional well-being.

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Appendix A: Emotion Regulation Index for Children and Adolescents

Items
1. I am a happy person.
2. When adults are friendly to me, I am friendly to them.
3. I handle it well when things change or I have to try something new.
4. When I get upset, I can get over it quickly.
5. When things don't go my way I get upset easily.
6. When other kids are friendly to me, I am friendly to them.
7. I have angry outbursts.
8. I enjoy seeing others get hurt or upset.
9. I can be disruptive at the wrong times.
10. I get angry when adults tell me what I can and cannot do.
11. I am a sad person.
12. I have trouble waiting for something I want.
13. I am quiet and shy, and I don't show my feelings.
14. I do things without thinking about them first.
15. When others are upset I become sad or concerned for them.
16. I annoy others by not minding my own business.

Appendix B: Social Media Use Integration Scale

	Items
5[a]	I feel disconnected from friends when I have not logged into Facebook.
6[a]	I would like it if everyone used Facebook to communicate.
7[a]	I would be disappointed if I could not use Facebook at all.
8[a]	I get upset when I can't log on to Facebook.
10[a]	I prefer to communicate with others mainly through Facebook.
13[a]	Facebook plays an important role in my social relationships.
4[b]	I enjoy checking my Facebook account.
11[b]	I don't like to use Facebook. (r)
14[b]	Using Facebook is part of my everyday routine.
17[b]	I respond to content that others share using Facebook.

Appendix C: Facebook Social Connectedness Scale

Items
1. I feel comfortable in the presence of strangers when I'm on Facebook.
2. I am in tune with the Facebook world.
3. *Even among my Facebook friends, there is no sense of brother/sisterhood.
4. I fit in well in new Facebook situations.
5. I feel close to people of Facebook.
6. *I feel disconnected from the Facebook world around me.
7. *Even around Facebook friends I know, I don't feel that I really belong.
8. I see Facebook friends as friendly and approachable.
9. *I feel like an outsider when I'm on Facebook.
10. I feel understood by the people I know when I'm on Facebook.
11. *I feel distant from Facebook friends.
12. I am able to relate to my Facebook friends.
13. *I have little sense of togetherness with my Facebook friends.
14. I find myself actively involved in Facebook friend's lives.
15. *I catch myself losing a sense of connectedness with society when I am on Facebook.
16. I am able to connect with other people of Facebook.
17. *I see myself as a loner when I am on Facebook.
18. *I don't feel related to most people on Facebook.
19. My Facebook friends feel like family.
20. *I don't feel I participate with anyone or any group on Facebook.

Appendix D: Quality of Parent-Child Relationship Index

Items
1. Does [adult] know where you are when you are not at home?
2. Does [adult] know who you are with when you are not at home?
3. Do you feel that [adult] trusts you?
4. If you were in trouble or you were sad, would you discuss it with [adult]?
5. Do you and your parent(s) [the adults(s) you live with] have fun together?
6. How often do/does the adult(s) you live with nag you?
7. How often do/does the adult[s] you live with take away your privileges?

Appendix E: Sample Facebook Message