

ABSTRACT

THE IMPACT OF FACEBOOK USE ON RELATIONSHIP SATISFACTION, SEXUAL SATISFACTION, AND SELF-ESTEEM

By

Erica L. Kurowski

May 2015

The present study investigated the impact of intensity of Facebook use, attachment anxiety, and attachment avoidance on relationship satisfaction, sexual satisfaction, and self-esteem as perceived by individuals within heterosexual couples. One hundred and thirty-nine members of the social networking site, Facebook, who were currently involved in an exclusive, heterosexual relationship with a partner who was also a member of Facebook, completed an online survey in order to be included in the study. Results indicated that intensity of Facebook use was a significant predictor of sexual satisfaction, but did not significantly predict relationship satisfaction or self-esteem. In addition and consistent with previous literature, the current study found that attachment avoidance was a significant predictor of relationship satisfaction and attachment anxiety significantly predicted self-esteem. Given the lack of research in the area of Facebook use, the results from this study offer a platform for future researchers to investigate the complexities of the social networking site on face-to-face relationships.

THE IMPACT OF FACEBOOK USE ON RELATIONSHIP SATISFACTION,
SEXUAL SATISFACTION, AND SELF-ESTEEM

A THESIS

Presented to the Department of Advanced Studies in Education and Counseling
California State University, Long Beach

In Partial Fulfillment
of the Requirements for the Degree
Master of Science in Counseling
Option in Marriage and Family Therapy

Committee Members:

Paul Ratanasiripong, Ph.D. (Chair)
Bita Ghafoori, Ph.D.
Judy Prince, Psy.D.

College Designee:

Marquita Grenot-Scheyer, Ph.D.

By Erica L. Kurowski

B.A., 2009, California State University, Long Beach

May 2015

UMI Number: 1586160

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



UMI 1586160

Published by ProQuest LLC (2015). Copyright in the Dissertation held by the Author.

Microform Edition © ProQuest LLC.

All rights reserved. This work is protected against unauthorized copying under Title 17, United States Code



ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

ACKNOWLEDGEMENTS

I would like to start by thanking my husband, Matt. You have allowed me the opportunity to chase, and achieve, my dreams and goals, while selflessly putting yours on hold in order to not only support our family, but my journey through this stressful and exciting process. You shouldered extra responsibilities and my emotional meltdowns with love, not resentment, which I appreciate more than you could ever know. Without your encouragement, I would not have been able to even conceive attempting my thesis, let alone actually completing it. I love you and thank you for always being on my team.

To my sister, Morgan, who took care of my children like they were her own during the endless hours I put into this thesis. Where would I be without you? Knowing you were there for me at every hour of the day, on a dime's notice, was crucial to my success. Thank you so much for all of your support and time, for which I will be forever grateful. I love you!

To my parents, who have always told me that I could achieve whatever I put my mind to. Over the past year, those words carried me through the times when I wanted to give up or felt too overwhelmed. Having you both as examples inspired the work ethic needed to complete my thesis despite the many obstacles that popped up along the way. I love you both and thank you for your endless love and support.

Dr. Paul, my first professor in graduate school, my advisor, my thesis chair, and my mentor, I blame it all on you! You set your expectations high from the start and I have spent the past year giving my best efforts to meet them. This set me up for success

and I appreciate the trust and belief you have had in me. I thank you for challenging me, which only made me better. Whether you are aware of it, you convinced me to do the thesis by reassuring me that you would be there for me and available throughout the entire process, which you always were. Had I not chosen the thesis route, I believe I would have had some regret, but because of you, I am only filled with pride. Thank you for the time and energy you dedicated to my thesis and enhancing my experience in conducting such.

Thank you Dr. Ghafoori and Dr. Prince for your participation on my committee and for the insight and feedback that you provided. Your time, energy, and support are much appreciated.

Jeanessa and Sonja, I am so honored and happy to have had the opportunity to share this journey with you. Thank you for your emotional support and professional opinions. Your company in the library and late night feedback took the fear and loneliness out of completing my thesis. I appreciate your friendships and the time we spent together over the past year.

Finally, to my other friends and family that contributed to my success by offering emotional support, childcare, and encouragement, thank you! Thank you for helping me accomplish my goal and being there for me in times when I could not always reciprocate. Amy, thanks for letting me vent, forcing me to slow down when I became a crazy lady, and watching the kids. Kerri, thank you for making me laugh when I felt like crying. Kannon, Kasen, and Kade, my beautiful children, I would like to dedicate my thesis to you. I want you all to know that you can accomplish whatever you put your mind to! Thank you for your sacrifices and filling my heart with love everyday. I love you to the

moon and back.

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iii
LIST OF TABLES	x
LIST OF FIGURES	xi
CHAPTER	
1. OVERVIEW OF THE STUDY	1
Introduction.....	1
Statement of the Problem.....	3
Purpose of the Study	4
Importance of the Study.....	5
Operational Definitions.....	6
Heterosexual Couple.....	6
Committed Relationship	6
Facebook.....	6
Facebook Use.....	7
Relationship Satisfaction	7
Sexual Satisfaction.....	7
Self-Esteem.....	8
Attachment Avoidance.....	8
Attachment Anxiety	8
2. LITERTURE REVIEW	9
Relationship Satisfaction	9
Sexual Satisfaction.....	10
Attachment Style.....	11
Attachment Style and Sexual Satisfaction	12
Attachment Style and Relationship Satisfaction.....	14
Facebook Use.....	15
Facebook Use and Attachment Styles.....	16
Facebook Use and Self-Esteem	17
Facebook Use and Relationship Satisfaction	19
Conclusion	20

CHAPTER	Page
Conceptual Frameworks	21
3. METHODOLOGY	24
Introduction.....	24
Hypotheses.....	26
Preliminary Hypotheses.....	26
Hypotheses for Individuals	26
Hypothesis 2.....	26
Hypothesis 3.....	26
Hypothesis 4.....	26
Hypotheses for Couples Using the Actor-Partner Interdependence Model	27
Model 1: Intensity of Facebook Use on Relationship Satisfaction	27
Model 2: Self-Esteem on Relationship Satisfaction	28
Model 3: Intensity of Facebook Use on Sexual Satisfaction	28
Model 4: Self-Esteem on Sexual Satisfaction	29
Participants.....	30
Instrumentation	33
Facebook Intensity Scale	33
Global Measure of Sexual Satisfaction.....	34
Global Measure of Relationship Satisfaction	34
Rosenberg Self-Esteem Scale	35
Experience in Close Relationship Scale-Revised	35
Procedure	36
Data Analysis	37
Preliminary Hypotheses	37
Hypothesis 1a.....	37
Hypothesis 1b.....	37
Hypothesis 1c.....	38
Hypothesis 1d.....	38
Hypothesis 1e.....	38
Hypotheses for Individuals	38
Hypothesis 2.....	38
Hypothesis 3.....	39
Hypothesis 4.....	39
Exploratory Analysis for Couples for Actor-Partner Independence Model	39
Model 1: Intensity of Facebook Use on Relationship Satisfaction.....	40
Hypothesis 5a.....	40
Hypothesis 5b.....	40
Hypothesis 5c.....	40
Hypothesis 6a.....	40
Hypothesis 6b.....	40
Hypothesis 6c.....	41

CHAPTER	Page
Hypothesis 7a.....	41
Hypothesis 7b.....	41
Hypothesis 7c.....	41
Hypothesis 8a.....	41
Hypothesis 8b.....	42
Hypothesis 8c.....	42
Model 2: Self-Esteem on Relationship Satisfaction	42
Hypothesis 9.....	42
Hypothesis 10.....	42
Hypothesis 11a.....	42
Hypothesis 11b.....	43
Hypothesis 12.....	43
Model 3: Intensity of Facebook Use on Sexual Satisfaction	43
Hypothesis 13a.....	43
Hypothesis 13b.....	43
Hypothesis 13c.....	43
Hypothesis 14a.....	44
Hypothesis 14b.....	44
Hypothesis 14c.....	44
Hypothesis 15a.....	44
Hypothesis 15b.....	44
Hypothesis 15c.....	44
Hypothesis 16a.....	45
Hypothesis 16b.....	45
Hypothesis 16c.....	45
Model 4: Self-Esteem on Sexual Satisfaction.....	45
Hypothesis 17.....	45
Hypothesis 18.....	46
Hypothesis 19a.....	46
Hypothesis 19b.....	46
Hypothesis 20.....	46
 4. RESULTS	 47
Hypothesis 1a.....	47
Hypothesis 1b.....	47
Hypothesis 1c.....	48
Hypothesis 1d.....	48
Hypothesis 1e.....	48
Hypotheses for Individuals	50
Hypothesis 2.....	50
Hypothesis 3.....	51
Hypothesis 4.....	52

CHAPTER	Page
5. DISCUSSION	53
Relationship Satisfaction	53
Sexual Satisfaction	55
Self-Esteem	57
Limitations	58
Implications	59
Conclusion	60
REFERENCES	61

LIST OF TABLES

TABLE

1. Descriptive Characteristics of Participants	31
2. Summary Data for All Scales	49
3. Pearson's Correlations Between Variables	49
4. Multiple Regression Analysis for Variables Predicting Relationship Satisfaction	50
5. Multiple Regression Analysis for Variables Predicting Sexual Satisfaction ..	51
6. Multiple Regression Analysis for Variables Predicting Self-Esteem	52

LIST OF FIGURES

FIGURE	Page
1. Predicted effects of independent variables on relationship satisfaction	21
2. Predicted effects of independent variables on sexual satisfaction	22
3. Predicted effects of independent variables on self-esteem	23

CHAPTER 1

OVERVIEW OF THE STUDY

Introduction

The internet is no longer a luxury, but a common household tool that is depended on for information, communication, and developing and maintaining relationships. The question is no longer whether people are using the internet, but how often and in what capacity (Giordano & Giordano, 2011). In fact, young adults of the 21st century have been described as the “new media generation” (Brown, 2006, p. 279). Due to the growing popularity of the internet, the use of social networking sites (SNS) is increasing exponentially (Giordano & Giordano, 2011). SNS have quickly become a new addiction in which a recent study found users spend over 110 billion minutes per month on worldwide (Giordano & Giordano, 2011). Debatin, Lovejoy, Horn, and Hughes (2009) suggest that SNS have the ability to penetrate the daily routine of their users, becoming invisible and taken for granted. New identities can be created in the online environment through the use of SNS when the physical body is not actually present for social encounters (Zhao, Grasmuck, & Martin, 2008). Identity reconstruction poses many dangers, but research has shown that the removal of face-to-face interactions can allow some disadvantaged people to overcome the obstacles associated with discernible features such as stigmatized appearances or stuttering (Zhao et al., 2008).

In 2004, Mark Zuckerberg, a Harvard undergraduate student, created Facebook, a SNS considered to be the fastest growing in the world (Sheldon, 2008). The site allows

members to create online profiles, post pictures, display identities, interests, and personal information as well as connect with other users (Stewart, Dainton, & Goodboy, 2014). According to a survey, Sheldon (2008) reports that 93% of college students have a Facebook account. Facebook is increasingly becoming a topic of research due to its prevalence worldwide (Clayton, Nagurney, & Smith, 2013). Much has been published on the risks of addiction to Facebook; however, little is known about the consequences of such or the personal characteristics of the people who use the site (Sheldon, 2008). Given Facebook's pervasive qualities and universality, it is important to study its impact on all facets of humans' daily lives.

One such area lacking significant research is how the use of Facebook affects both members within a committed, heterosexual couple. The dynamics within a couple continually evolve due to the influence of factors outside of the relationship (Clayton et al., 2013). Facebook, a relatively new platform for facilitating communication, is one factor researchers are beginning to investigate in connection with relationships because of its negative impact on some human behavior such as jealousy and anxiety (Clayton et al., 2013). A major area of concern should be sexual and relationship satisfactions as both are integral to the success of the couple.

One theoretical perspective relative to relationship and sexual satisfaction is attachment theory (Butzer & Campbell, 2008). The impact of attachment has not been extensively explored in wake of the technological changes of the 21st century (Rao & Madan, 2013). It has been suggested that people's main attachment figure could be transferred from parents to a romantic partner during adulthood (Li & Chan, 2012), but few studies have investigated whether Facebook can act as another form of an attachment

figure. Oldmeadow, Quinn, and Kowert (2013) asserted that Facebook could potentially serve needs for belonging, closeness, and security for individuals with high levels of anxiety/avoidant attachment styles. Their data revealed that Facebook use is somewhat influenced by attachment style (Oldmeadow et al., 2013), supporting the notion that attachment style's significant connection to behavior in offline relationships could also be representative of attachment style's connection to behavior within a relationship online (Jenkins-Guarnieri, Wright, & Hudiburg, 2012). Nevertheless, in-depth research has not looked at the impact of attachment styles and Facebook use on couples. Considering the potential for excessive use and/or development for strong attachments to Facebook by individuals, the impact of such extreme usage patterns on individuals and their romantic partners needs to be further investigated (Elphinston & Noller, 2011).

Statement of the Problem

Committed relationships are complex and can be influenced by factors affecting the couple as a whole unit and each member separately, as individuals. According to Bowlby's attachment theory, as infants, people develop attachment patterns that are believed to remain consistent throughout life, but can be susceptible to change if affected by negative or positive relationship experiences (Brassard, Pélouin, Dupuy, Wright, & Shaver, 2012). Attachment style can impact multiple aspects of a relationship. It has been found that insecure individuals report more dissatisfying sexual outcomes (Davis, Shaver, Widaman, Vernon, Follette, & Beitz, 2006), and sexuality is considered an essential component for healthy, stable, romantic relationships (Bassard et al., 2012). Another study revealed that Facebook use is somewhat influenced by attachment style (Oldmeadow et al., 2013), but no research has looked at how attachment styles and

Facebook use of both partners impact the overall relationship and sexual satisfactions within a couple.

Much research has been done on the effects of Facebook use on individuals, but the impact of Facebook use on couples is currently understudied. In addition, the majority of studies conducted have been done on adolescents and college students, who are reportedly the most frequent users of SNS (Buffardi & Campbell, 2008). One study conducted found that high levels of Facebook use was associated with negative relationship outcomes (Clayton et al., 2013), but only required one partner in the couple to participate. Facebook jealousy has been linked to more jealous behavior in offline relationships and an inclination towards Facebook addiction (Elphinston & Noller, 2001). Jealousy has strong connections to attachment anxiety (Elphinston & Noller, 2001), but research has not explored the relationship between Facebook use, attachment styles, and relationship and sexual satisfaction levels. Because a couple is made up of two partners, it is pertinent to study the perspectives of both individuals within a relationship to truly understand the impact Facebook use has on committed, heterosexual couples.

Purpose of the Study

The purpose of the present study is to examine how Facebook use impacts relationship and sexual satisfactions within committed, heterosexual couples. Expanding upon previous research, the current study will investigate said impact, taking into account attachment styles and self-esteem levels of both partners within the couple, which has yet to be done. The participant pool will include subjects in early adulthood up to the age of 65 so that the results will be more representative of the population. Requiring both partners of the couple to complete the survey will enable the researchers to use a dyadic

design, which considers partners' perceptions and effects on each other (Brassard et al., 2012).

The study will examine the following research questions: (1a) Will higher intensity of Facebook use within a couple be negatively associated with overall relationship and sexual satisfaction? (1b) Will higher intensity of Facebook use within a couple be positively associated with self-esteem? (1c) Will a higher intensity of Facebook use be positively associated with attachment style within a couple? (2a) Will attachment style be negatively associated with overall relationship and sexual satisfaction? (2b) Will attachment style be negatively associated with self-esteem? (3) Will higher levels of self-esteem within the couple be positively associated with overall relationship and sexual satisfaction?

Importance of the Study

Couples generally enter partnerships with the hope that they will achieve a desired level of satisfaction both relationally and sexually. Unfortunately, there are many factors influencing the relationship that jeopardize such happiness (Clayton et al., 2013). In today's technology dependent society, one force threatening relationship success is Facebook (Clayton et al., 2013). Research on the impact of Facebook use on couples is extremely limited despite its popularity and addictive qualities. Dependent on attachment styles, individuals who are either anxious or avoidant might be using Facebook to fulfill needs that have traditionally been satisfied by their partners, causing relationship and sexual dissatisfaction. The current study will investigate any connections between attachment styles, self-esteem, and Facebook use while examining the effects on relationship and sexual satisfactions within couples.

The contribution of results found from this study will be fundamental in reevaluating what factors impact couples' ability to have higher levels of relationship and sexual satisfaction in the evolving world of technology. Clinicians could potentially incorporate relevant assessments of Facebook usage and attachment styles into therapeutic sessions when working with clients who express relationship discord. In addition, new interventions could be developed to assist couples that might be impacted by these factors. Whether there is an increase or decrease in overall satisfaction, the overlap of online and offline relationships needs to be studied extensively so we can understand its implications.

Operational Definitions

Heterosexual Couple

Heterosexual couple will be defined as one partner being male and one partner being female within the couple. This information will be obtained when couples fill out initial demographic information on the survey. Each partner within the couple will have to report if they are male or female by checking a box inquiring about biological sex.

Committed Relationship

Committed relationship will be defined as a couple that has been reportedly dating for more than 1 month (Stewart et al., 2014). This time frame will increase the likelihood that the partners are exclusively committed to one another and view the relationship as stable (Papp, Danielewicz, & Cayemberg, 2012). This information will also be obtained through the survey while collecting demographic information.

Facebook

Facebook is a free SNS created in February 2004 by Mark Zuckerberg, a Harvard

undergraduate student (Sheldon, 2008). Facebook allows its members to present themselves in an online, self-constructed profile, accumulate “friends” who can post comments on each other’s profiles, and view each other’s pages (Ellison, Steinfield, & Lampe, 2007). Facebook users can also join virtual groups based on common interests, hobbies, occupations, educational institutions or cohorts, and see what classes they have in common. Through profile pages, Facebook users can display romantic relationship statuses, hometown, and current geographic locations as well as provide contact information.

Facebook Usage

Facebook usage will be assessed using the Facebook Intensity Scale developed by Ellison et al. (2007). The measure includes two self-reported assessments of Facebook usage to investigate the extent to which each partner is actively engaged in Facebook activities (Ellison et al., 2007).

Relationship Satisfaction

Relationship satisfaction will be defined as a subjective assessment on how individuals evaluate the general satisfaction of their romantic relationship (Li & Chang, 2012). Relationship satisfaction will be measured using the Global Measure of Relationship Satisfaction scale (GMREL; Lawrence & Byers, 1998).

Sexual Satisfaction

Sexual satisfaction will be defined as the self-reported assessment of the positive and negative qualities of one’s sexual relationships (Brassard et al., 2012; Byers, Demmons, & Lawrence, 1998). Previous literature reports that sexual communication, frequency of sex, and relationship satisfaction are three components that impact sexual

satisfaction (Péloquin, Brassard, Delisle, & Bédard, 2013). Sexual satisfaction will be measured using the Global Measure of Sexual Satisfaction scale (GMSEX; Lawrence & Byers, 1998).

Self-Esteem

Self-esteem will be defined as the extent to which one values, praises, likes, approves, and views oneself (Tazghini & Siedlecki, 2013). The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1989) is used to examine levels of self-esteem.

Attachment Avoidance

Attachment avoidance pertains to how an individual perceives closeness and emotional intimacy in relationships (Brassard et al., 2012). Adults with an avoidant attachment style tend to be less invested in their relationships and try to achieve more psychological and emotional independence from their partners (Butzer & Campbell, 2008). Attachment avoidance will be measured through the Experience in Close Relationship Scale-Revised (ECR-R; Fraley, Waller, & Brennan, 2000).

Attachment Anxiety

Attachment anxiety pertains to the degree of which individuals ruminate and worry about being abandoned and/or rejected by their partners causing them to be overly dependent on others for approval (Brassard et al., 2012; Butzer & Campbell, 2008). Attachment anxiety will be measured through the ECR-R (Fraley et al., 2000)

CHAPTER 2
LITERATURE REVIEW
Relationship Satisfaction

Relationships are fundamental for the well-being of people. Romantic relationships introduce a closer bond consumed around intimacy, sex, friendship, and communication. Stafford and Canary (1991) developed relational maintenance typology, which includes positivity, assurances, openness, sharing, and social networks that fosters relationship satisfaction within couples. The term satisfaction is subjective and the definition may vary depending on the individual. However, the difference between satisfied and dissatisfied is presumed understood according to previous literature (Schwartz & Young, 2009).

Sources of relationship satisfaction can be subjective to each individual couple; however, some contributors to overall relationship satisfaction have been established through research crediting relationship satisfaction as a good measure of relationship strength (Hand, Thomas, Buboltz, Deemer, & Buyanjargal, 2013). Timm and Keiley (2011) assert that marriage is a universal source of relationship satisfaction that eventually begins to taper, especially after the first 10 years of marriage, with 50% of first marriages ending in separation or divorce. Another indicator of relationship satisfaction is intimacy, which can help guard the relationship against destructive influences that threaten it (Hand et al., 2013). Relationship satisfaction is an important topic of interest because high levels of relationship satisfaction are positively linked to

deeper commitment within a couple (Hendrick, 1998), physical health of each partner (Kiecolt-Glaser & Newton, 2001), and general life satisfaction (House, Landis, & Umberson, 1988).

Sexual Satisfaction

Sexuality is another component found essential to the success of a healthy and stable romantic relationship (Brassard et al., 2012). Research has found correlations between sexual satisfaction and happiness, as well as associations among levels of sexual and relationship satisfaction (Schwartz & Young, 2009). Sexual frequency has the strongest correlation to sexual satisfaction (Schwartz & Young, 2009). Other elements found to impact sexual satisfaction levels are the introduction of new children and work (Schwartz & Young, 2009). Children likely limit the amount of private time a couple has available for one another. In addition, the opportunity for spontaneity is dramatically decreased, as children generally require adherence to strict schedules. Work stressors and scheduling conflicts potentially decrease the amount of time and effort available for each partner to contribute to the relationship.

Purnine and Carey (1997) found that communication is another significant factor contributing to sexual satisfaction within couples. Good communication was also found responsible for creating relationship satisfaction (Schwartz & Young, 2009). Specifically, verbal and nonverbal, intimate communication have been linked to both relationship and sexual satisfaction (Byers, 2005). Byers (2005) extended upon previous literature and found that poor communicators in long-term relationships reported decreases in relationship and sexual satisfaction. The opposite was concluded about good communicators who reported increases in satisfaction levels (Byers, 2005). However, the

study did not investigate what factors contributed to the effectiveness of the communication within the couple. Furthermore, one study found that good sexual communication was significantly related to both sexual and marital satisfaction (Timm & Keiley, 2011). While communication has been soundly established as a predictor of sexual and relationship satisfaction, attachment style and self-esteem are two other variables found to influence satisfaction levels within couples.

Attachment Style

Adult attachment theory originated from Bowlby's (1969) work on children-parent bonding at an early stage. The theory proposes that children develop an internal representation of themselves based upon the quality of their relationship with a primary caregiver, generally a parent, and others around them (Bowlby, 1969). The quality of these early attachments influences how secure children feel exploring their surroundings and determines how they will participate in and view future relationships with others such as parents, children, and romantic partners (Levy, Ellison, Scott, & Bernecker, 2011). Behaviors exhibited in romantic relationships often parallel those commonly associated with an individual's attachment style.

Adult attachment can be considered a continuum that spans across two opposite dimensions of attachment anxiety and attachment avoidance (Oldmeadow et al., 2013; Péloquin et al., 2013). A secure attachment is situated at the low ends of both or in the middle of the continuum. When infants are tended to by attentive, warm, loving, and sensitive caregivers, they will develop a secure model of self and initiate exploration with the ability and confidence of knowing that they have a secure base with which to return (Davis et al., 2006). Caregivers, who interact with their infants in an unpredictable

manner such as being overprotective on some occasions and unavailable on others, produce infants with attachment anxiety (Stephan & Bachman, 1999). Attachment anxiety can be described as being insecure within interpersonal relationships and having a fear of abandonment because of doubts concerning one's lovability (Péloquin et al., 2013).

Caregivers who are consistently inattentive to their infants create children with attachment avoidance (Stephan & Bachman, 1999). Attachment avoidance pertains to an individual's hesitation for closeness with others and generally signifies being uncomfortable with intimacy (Jenkins-Guarnieri et al., 2012). Bowlby (1979) suggests that once an attachment style is formed, it is presumed to stay consistent unless adjusted to accommodate for significant life changes or persistent interactions with a romantic partner (Fraley & Davis, 1997).

Attachment Style and Sexual Satisfaction

Previous research has also shown that sexuality is associated with attachment orientations and is considered to be a means to fulfilling attachment needs (Davis, Shaver, & Vernon, 2004). Negative feelings during sex and lower levels of sexual satisfaction have been associated with both attachment anxiety and attachment avoidance within individuals (Birnbaum, Reis, Mikulincer, Gillath, & Orpaz, 2006; Gentzler & Kerns, 2004; Tracy, Shaver, Albino, & Cooper, 2003). Inhibited communication or inability to express one's needs about sex has been linked to low levels of physical, sexual satisfaction (Davis et al., 2006). Connections between sexual motives, satisfaction, and attachment styles have also been studied (Péloquin et al., 2013).

Adults high on the attachment anxiety dimension used sexuality to feel closer to

their romantic partners and ease fears of abandonment (Péloquin et al., 2013), which has been found predictive of more occasions of unwanted sexual behavior (Feeney, Peterson, Gallois, & Terry, 2000). Research has found that individuals with attachment anxiety report using sexuality to obtain power over their partners and increase intimacy (Péloquin et al., 2013). One study found that attachment anxiety in the male partner was a predictor of their female partner's sexual dissatisfaction, but the same prediction could not be made based on attachment anxiety in females (Brassard et al., 2012). Individuals with attachment anxiety also use sex to fulfill needs for reassurances and relationship security, but these motives often result in unsatisfactory sexual experiences because unrealistic expectations cannot be met (Birnbaum et al., 2006).

Péloquin et al. (2013) found that individuals with attachment avoidance used sexuality to fulfill egotistical needs rather than to experience intimacy with their partners. This finding parallels previous research on adolescents that found individuals with high attachment avoidance did not have similar sexual motives as those with attachment anxiety, but instead used sexuality to obtain peer approval and/or for stress reduction (Davis et al., 2004). In addition, adolescents with attachment avoidance expressed a low perceived sex drive and were more likely to use sex to fulfill personal needs such as losing their virginity versus to express love for a romantic partner (Tracy et al., 2003). Although findings with adolescents are similar to those of adults, research on adolescents cannot be generalized to apply to the adult population. However, it has been found that both adults and adults with partners who had higher attachment avoidance reported lower levels of sexual satisfaction (Butzer & Campbell, 2008; Péloquin et al., 2013). Adults with attachment avoidance are likely to feel less comfortable with sexual activity because

of their inherent aversion for close proximity (Péloquin et al., 2013).

Attachment Style and Relationship Satisfaction

Attachment theory has also been studied in the area of couples' relationships from adolescence through adulthood. Similar to children, adolescents and adults frequently turn to their romantic partner, the new primary attachment figure, in times of distress and to fulfill needs (Brassard et al., 2012). However, the new relationship is more mutual than the unilateral attachment established in childhood with both partners depending on each other for security (Brassard, et al., 2012) and relationship satisfaction.

Individuals with attachment anxiety report lower levels of romantic relationship satisfaction (Stephan & Bachman, 1999). These individuals are more hesitant to trust their partners and exhibit obsessive commitment to their relationships (Stephan & Bachman, 1999). Perceived inadequacy can also cause partners with attachment anxiety to feel insecure or rejected, contributing to lowered relationship satisfaction (Brassard et al., 2012). Individuals with attachment avoidance show an opposite level of commitment towards their partners, but also rate low on levels of trust in their romantic relationships (Stephan & Bachman, 1999). In addition, those with high attachment avoidance experience less relationship satisfaction, which could be attributed to their tendency to engage in game playing and other deceptive behaviors that damage their relationships (Stephan & Bachman, 1999). A meta-analysis also found that highly avoidant attachment styles are more negatively associated with positive indicators of relationship quality than anxious attachment (Li & Chan, 2012). Partners with a secure attachment report more relationship satisfaction because they feel confident and worthy within their romantic relationship (Brassard et al., 2012). In addition, individuals who rate low on anxiety and

avoidant attachment scales are able to trust that their partners will not reject or abandon them (Brassard et al., 2012).

Facebook Use

Over 1.2 billion members interact on Facebook (Noyes, 2014) to connect with others, share information, and express personal and professional interests. This particular SNS has been found to span both personal and professional realms, yet despite its prevalence worldwide, there is relatively little empirical evidence or theory driven research available to address the complex impacts of Facebook use (Cheung, Chiu, & Lee, 2011; Giordano & Giordano, 2011). The majority of theory-based research investigates privacy concerns and identity formulation given that Facebook allows its users to communicate and connect with one another while maintaining a certain degree of anonymity (Debatin, Lovejoy, Horn, & Hughes, 2009; Ellison et al., 2007; Zhao et al., 2008). Users are able create identities that they view as better than their real identity and that differ from the limited anonymity offered by offline environments that they participate in (Zhao et al., 2008).

While identity presentation is an appealing aspect, there are other motivations that influence the use of Facebook. A study conducted on students found the Facebook was primarily used to maintain relationships as well as to pass time when bored (Sheldon, 2008). Coley (2006) investigated students' involvement in cyber communities and reported that students find Facebook use convenient because being online is already part of their daily routine. Other reasons contributing to Facebook use are personality factors, attachment style, and self-esteem.

Ross et al. (2009) used elements of the Five Factor Model, which divides

personality characteristics into five dimensional traits, to explain why university students utilized Facebook. The study found that the extraversion trait was associated with the use of Facebook for additional social purposes, but not as a substitute (Ross et al., 2009). Students with openness to experience characteristics were more willing to employ Facebook as an alternative method of communication (Ross et al., 2009). Extraversion, openness to experience, and neuroticism have also been reported as significantly related to the frequency of social media use (Correa, Hinsley, & de Zuniga, 2010). Correa et al. (2010) infer that lack of anonymity accounts for what makes Facebook more appealing to extroverts than introverts who have been found to gravitate towards chat rooms and other social services that conceal true identities. The researchers also found that Facebook use had a positive relationship to the openness to experience personality trait amongst older people, but not younger Facebook users (Correa et al., 2010). Lastly, Correa et al. believed that neuroticism was positively related to Facebook use because the SNS offers a sense of community and support that is alluring to individuals who experience more loneliness and anxiety; two characteristics often associated with neuroticism. Some correlation has been found between personality traits and Facebook use, but there are only minimally conclusive results associating the dimension of motivation to any specific personality variables (Ross et al., 2009).

Facebook Use and Attachment Styles

Personality characteristics and personal values can also influence online and offline relationships as evidenced by the association of attachment style with relationship quality (Whitty & Gavin, 2001). Previous research has revealed that Facebook use is affected by attachment style, particularly an anxious attachment style, amongst adults

(Oldmeadow et al., 2012). Oldmeadow et al. (2012) found that an anxious attachment style was associated with increased Facebook usage especially when users were feeling negative emotions and a need to alleviate their concerns of being alone. Some characteristics of Facebook such as maintaining long distance relationships and regulation over the amount of time spent engaging with other users, gives this particular SNS the potential ability to fulfill the needs of those with highly anxious and/or avoidant attachment styles (Oldmeadow et al., 2012). For example, for individuals with anxious attachment, Facebook may be an attractive vehicle to gain confidence by controlling self-representation through pictures posted and friends accepted. In addition, instant access to the site and its social network offers immediate relief for those feeling lonely in their interpersonal relationships (Oldmeadow, et al., 2012). This SNS allows users to feel connected without the fear of rejection. One study conducted to explore the link between attachment styles and the social networking habits of adolescents in Urban Bangalore found that participants with an insecure attachment used Facebook because it met their needs for affection and belonging (Rao & Madan, 2013). Users with an avoidant attachment style in one study were found to engage in less Facebook use and were less likely to hold a positive attitude about the site (Oldmeadow et al., 2012).

Facebook Use and Self-Esteem

Self-esteem, similar to satisfaction, is a subjective term that is difficult to define, but typically relates to ones' sense of self-worth and self-respect (Rosenberg, 1989). Tazghini (2013) refers to self-esteem as how much one values and approves oneself. Self-esteem is another variable shown to be associated with Facebook use and one that researchers are taking a particular interest in.

The social compensation hypothesis postulates individuals with lower self-esteem engage in online activity to compensate for lowered self-esteem (Tazghini & Siedlecki, 2013). Activities could include accumulating more friends on Facebook, participating in Facebook groups, and posting on Facebook walls. Ellison et al. (2007) discovered that individuals with lower self-esteem benefited from Facebook use more so than those with higher self-esteem. One possible explanation could be that individuals with lower self-esteem have more access to interpersonal relationships online than they have available offline. For example, it is easier to seek out “friends” on the site by merely requesting a member to accept an invitation rather than approaching an individual and engaging in a conversation that would have to be mutually enjoyable for an offline friendship to form. In addition, a person with low self-esteem could seek out multiple “friends” at the same time on Facebook, which would not be as easy to do in an offline environment.

Higher intensity of Facebook usage has also been linked to more positive self-views (Gentile, Twenge, Freeman, & Campbell, 2012). Steinfield (2008) proposed that having access to a network of individuals online makes it easier for students with low self-esteem to interact with others. Similar to these findings, Mehdizadeh (2007) found that individuals with low self-esteem tended to check their Facebook page more often as well as spent more time on the site than those with higher levels of self-esteem. However, when compared to a control group, Gonzales and Hancock (2011) found that individuals who viewed their own Facebook profile reported higher levels of self-esteem. A potential explanation for these results could be that the users created their Facebook page to portray themselves in a positive and socially acceptable light and were continually exposed to their most polished self (Gonzales & Hancock, 2011). Gentile et

al. (2012) found similar results that indicated users who spent more time editing and thinking about their Facebook profile reported higher levels of self-esteem. Another study conducted with psychology undergraduate students from an Australian university found approaching, but insignificant, associations between Facebook use and self-esteem (Skues, Williams, & Wise, 2012). One explanation for the difference in results could be the limited sample used by Skues et al. (2012). Controlling for variables that might alter their results, Lee, Moore, Park, and Park (2012) found that users with low self-esteem reported having more Facebook friends than those with high self-esteem, which the researchers argued were due to users' desire to appear popular and increase their sense of belonging. Tazghini and Sidiecki (2013) did not find similar results, but did find that individuals with lower self-esteem were more likely to accept friend requests from acquaintances and strangers. Overall, studies have found mixed results for the association between Facebook use and self-esteem.

Facebook Use and Relationship Satisfaction

Some negative impacts of SNS are an increased tendency for online monitoring, internet addiction, and jealousy; however, few studies have investigated the relationship between Facebook usage and relationship satisfaction. Clayton et al. (2013) declare that internet usage, in general, has been shown to have a negative impact on romantic relationships because at least one partner can experience feelings of exclusion and decreased passion and intimacy. Facebook surveillance is another concern affecting the romantic relationships of adolescents. While monitoring may serve the purpose of getting to know a partner in a new relationship, it can also evoke feelings of jealousy resulting in less relationship satisfaction (Elphinston et al., 2011; Tokunaga, 2011).

Facebook gives users the ability to portray dating statuses, but disagreements over these statuses have been linked to low levels of relationship satisfaction in females (Papp et al., 2012). Clayton et al. (2013) found that high levels of Facebook use are associated with romantic relationship conflict such as divorce and cheating. The study's results were also attributed to increased jealousy, temptation of physical and/or emotional cheating, and partner neglect particularly in romantic relationships of less than three years (Clayton et al., 2013). Another study found that individuals who reported low levels of satisfaction with their offline relationships engaged in a higher frequency of Facebook use (Sheldon, 2008), which shows the necessity for further investigation on how couples are being effected by the advancing intensity of Facebook use.

Conclusion

Attachment style and self-esteem are important predictors of relationship and sexual satisfaction within romantic relationships. Because of this, extensive research has been done examining these interactions; however, one area lacking empirical research is the impact of Facebook use on couples' relationship and sexual satisfaction. In addition, some studies have investigated the connections between attachment style, self-esteem, and Facebook use and have laid the groundwork for the current study; however, there are limitations to most of the studies given that they commonly assessed students and adolescents. More research needs to be conducted to examine the impact of the associations between Facebook use, attachment style, and self-esteem on relationship and sexual satisfaction levels within heterosexual couples.

Conceptual Frameworks

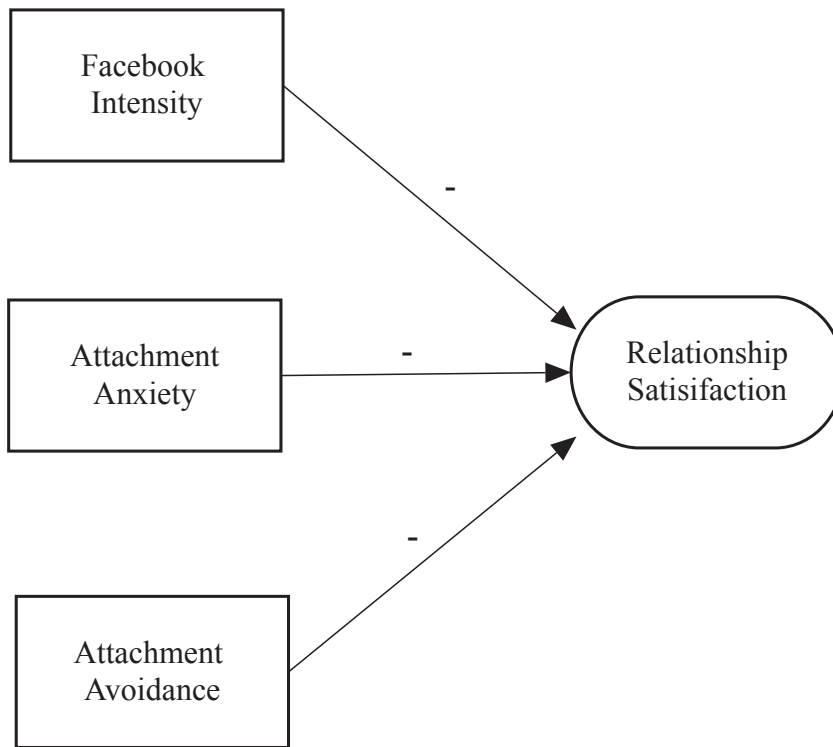


FIGURE 1. Predicted effects of independent variables on relationship satisfaction. As intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of relationship satisfaction will decrease.

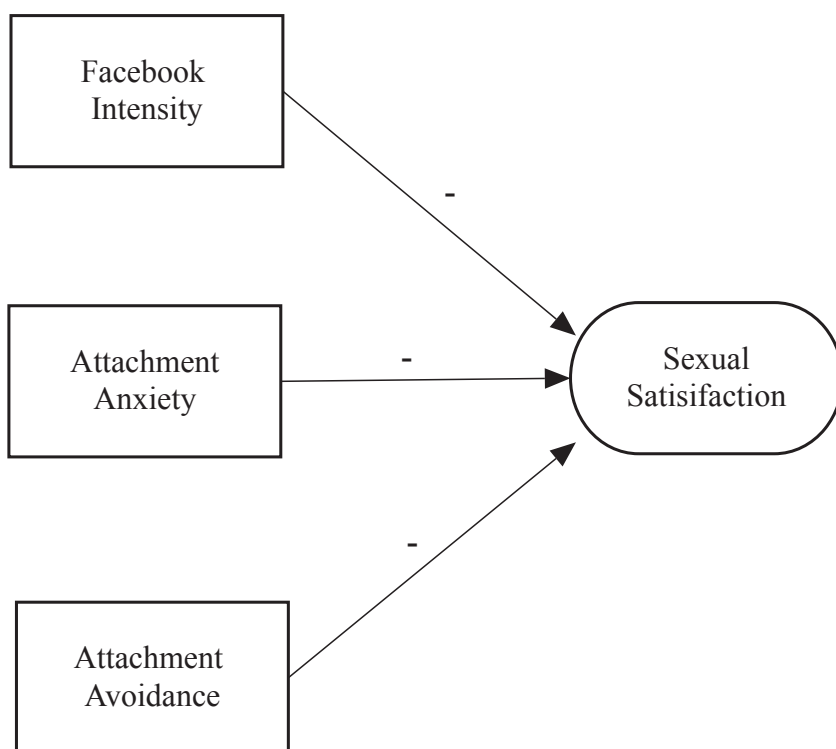


FIGURE 2. Predicted effects of independent variables on sexual satisfaction. As intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of sexual satisfaction will decrease.

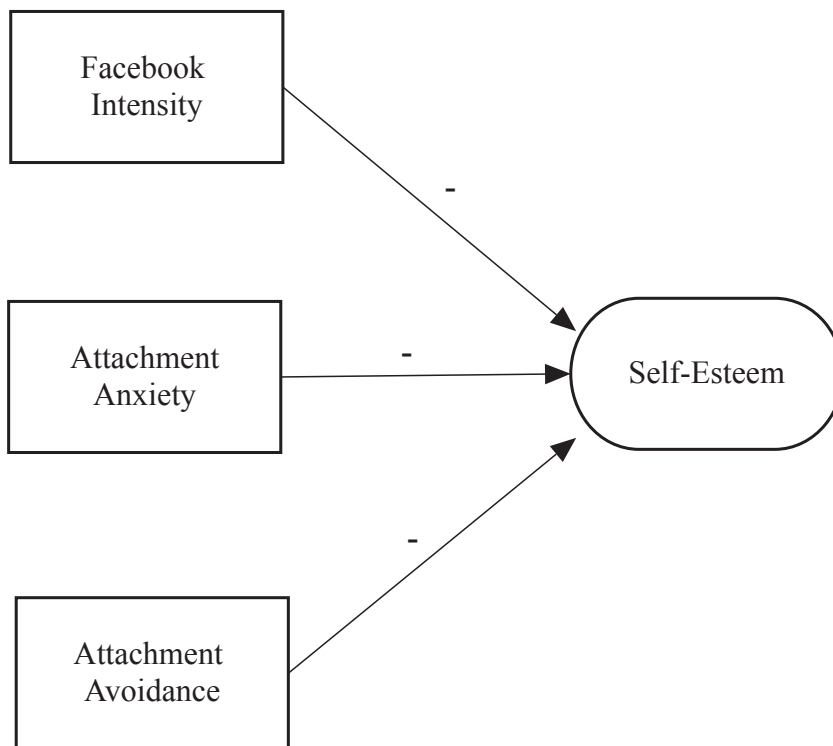


FIGURE 3. Predicted effects of independent variables on self-esteem. As intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of self-esteem will decrease.

CHAPTER 3
METHODOLOGY

Introduction

The purpose of the present study is to examine how Facebook use impacts relationship and sexual satisfaction within committed, heterosexual couples while taking into account attachment styles and self-esteem levels of both partners within the couple, which has yet to be done. Facebook is used in both personal and professional settings; however, there is relatively little empirical evidence or theory driven research available addressing the potential impacts of Facebook usage (Cheung et al., 2011; Giordano & Giordano, 2011). Previous studies have indicated that adult attachment is a strong predictor of romantic relationship quality (Li & Chan, 2012) so considering the potential for development of strong attachments to Facebook by individuals, the impact of such extreme usage patterns on individuals and their romantic partners needs to be further investigated (Elphinston & Noller, 2011). In addition, previous studies investigating the relationship between Facebook use and self-esteem have produced conflicting results and have not assessed both members of heterosexual couples, which will allow this study to offer new data on the topic.

Cook and Kenny's (2005) approach called actor-partner interdependence model (APIM) was utilized to conceptualize the dyadic data. The APIM builds upon the Social Relations Model (SRM; Kenny, 1994; 1996) of dyadic behavior, which contends that members of relationships influence each other because they belong to the same

interpersonal system. APIM assumes that a person's thoughts, feelings, and behaviors are not only influenced by their own characteristics, but also by their partner's attributes (Kenny, 1996). In the current study, both members of the couple were required to participate allowing dyadic data to be treated as one unit of analysis or non-independent rather than individual (Kashy & Kenny, 2000). APIM acknowledges the interdependence of data and estimates the effect a predictor variable has on one's own outcome (actor effect) and the effect a predictor variable has on one's partner's outcome (partner effect) (Bretz, 2009). The model also accounts for any interactional effects between the two. Three types of independent variables can be identified for each couple or dyad: between-dyad, within-dyad, and mixed variables (Kashy & Kenny, 2000). Between-dyad variables are the same for each member within the couple, but vary across couples such as length of the relationship (McMahon, Pouget, & Tortu, 2006). Within-dyad variables vary across members within the couple, but have the same total of scores as other couples in the sample such as gender (McMahon et al., 2006). Finally, mixed variables differ both between and within couples such as age (McMahon et al., 2006). In the current study, the within-dyad variable is gender and the mixed variables are attachment anxiety and attachment avoidance, intensity of Facebook use, self-esteem levels, relationship satisfaction, and sexual satisfaction.

Multilevel modeling, sometimes called hierarchical or nested model (MLM; Bryk & Raudenbush, 1992) will be used to analyze the data collected. The data in the current study will be organized into hierarchical clustered data, with individuals nested within couples. The analyses will be done utilizing Fixed Effects in SPSS in which the outcome variables will be relationship and sexual satisfaction levels of the couple. The predictor

variables will be both the actor's scores and partner's scores of attachment anxiety, attachment avoidance, intensity of Facebook use, and self-esteem. Gender will be the distinguishing factor within all heterosexual couples. Prior to using the MLM to analyze the data, grand means will be centered across both partners.

To examine the role that attachment anxiety, attachment avoidance, intensity of Facebook use, and self-esteem have on relationship and sexual satisfaction within heterosexual couples, four models will be tested.

Hypotheses

Preliminary Hypotheses

The following preliminary hypotheses were made: (1a) It is hypothesized that attachment anxiety will be positively correlated with intensity of Facebook use; (1b) It is hypothesized that attachment avoidance will be positively correlated with intensity of Facebook use; (1c) It is hypothesized that attachment anxiety will be negatively correlated with self-esteem; (1d) It is hypothesized that attachment avoidance will be negatively correlated with self-esteem; and, (1e) It is hypothesized that intensity of Facebook use will be negatively correlated with self-esteem.

Hypotheses for Individuals

Hypothesis 2. It is hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of relationship satisfaction will decrease.

Hypothesis 3. It is hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of sexual satisfaction will decrease.

Hypothesis 4. It is hypothesized that as intensity of Facebook use, attachment

anxiety, and attachment avoidance increases, levels of self-esteem will decrease.

Hypotheses for Couples using the Actor-Partner Interdependence Model

Model 1: Intensity of Facebook Use on Relationship Satisfaction. The following hypotheses were made about actor effects: (5a) It is hypothesized that higher levels of attachment anxiety will be associated with lower levels of relationship satisfaction; (5b) It is hypothesized that higher levels of attachment avoidance will be associated with lower levels of relationship satisfaction; (5c) It is hypothesized that higher levels of actor's intensity of Facebook use will be associated with lower levels of relationship satisfaction.

The following hypotheses were made about partner effects: (6a) It is hypothesized that higher levels of partner attachment anxiety will be associated with lower levels of relationship satisfaction; (6b) It is hypothesized that higher levels of partner attachment avoidance will be associated with lower levels of relationship satisfaction; (6c) It is hypothesized that higher levels of partner's intensity of Facebook use will be associated with lower levels of relationship satisfaction.

The following hypotheses were made about interactions at level 1: (7a) It is hypothesized that actor attachment anxiety and actor attachment avoidance will interact to predict lower levels of relationship satisfaction; (7b) It is hypothesized that actor attachment anxiety and actor intensity of Facebook use will interact to predict lower levels of relationship satisfaction; and, (7c) It is hypothesized that actor attachment avoidance and actor intensity of Facebook use will interact to predict lower levels of relationship satisfaction.

The following hypotheses were made about interactions at level 2: (8a) It is hypothesized that actor attachment anxiety and partner attachment anxiety will interact to

predict lower levels of relationship satisfaction; (8b) It is hypothesized that actor attachment avoidance and partner attachment avoidance will interact to predict lower levels of relationship satisfaction; and, (8c) It is hypothesized that actor intensity of Facebook use and partner intensity of Facebook use will interact to predict lower levels of relationship satisfaction.

Model 2: Self-Esteem on Relationship Satisfaction. The following hypothesis was made about actor effects: (9) It is hypothesized that higher levels of actor self-esteem will be associated with higher levels of relationship satisfaction.

The following hypothesis was made about partner effects: (10) It is hypothesized that higher levels of partner self-esteem will be associated with higher levels of relationship satisfaction.

The following hypotheses were made about interactions at level 1: (11a) It is hypothesized that higher actor attachment anxiety and lower self-esteem will interact to predict lower levels of relationship satisfaction; and, (11b) It is hypothesized that higher actor attachment avoidance and lower self-esteem will interact to predict lower levels of relationship satisfaction.

The following hypothesis was made about interactions at level 2: (12) It is hypothesized that actor self-esteem and partner self-esteem will interact to predict higher levels of relationship satisfaction.

Model 3: Intensity of Facebook Use on Sexual Satisfaction. The following hypotheses were made about actor effects: (13a) It is hypothesized that higher levels of attachment anxiety will be associated with lower levels of sexual satisfaction; (13b) It is hypothesized that higher levels of attachment avoidance will be associated with lower

levels of sexual satisfaction; (13c) It is hypothesized that higher levels of actor's intensity of Facebook use will be associated with lower levels of sexual satisfaction.

The following hypotheses were made about partner effects: (14a) It is hypothesized that higher levels of partner attachment anxiety will be associated with lower levels of sexual satisfaction; (14b) It is hypothesized that higher levels of partner attachment avoidance will be associated with lower levels of sexual satisfaction; (14c) It is hypothesized that higher levels of partner's intensity of Facebook use will be associated with lower levels of sexual satisfaction.

The following hypotheses were made about interactions at level 1: (15a) It is hypothesized that actor attachment anxiety and actor attachment avoidance will interact to predict lower levels of sexual satisfaction; (15b) It is hypothesized that actor attachment anxiety and actor intensity of Facebook use will interact to predict lower levels of sexual satisfaction; and, (15c) It is hypothesized that actor attachment avoidance and actor intensity of Facebook use will interact to predict lower levels of sexual satisfaction.

The following hypotheses were made about interactions at level 2: (16a) It is hypothesized that actor attachment anxiety and partner attachment anxiety will interact to predict lower levels of sexual satisfaction; (16b) It is hypothesized that actor attachment avoidance and partner attachment avoidance will interact to predict lower levels of sexual satisfaction; and, (16c) It is hypothesized that actor intensity of Facebook use and partner intensity of Facebook use will interact to predict lower levels of sexual satisfaction.

Model 4: Self-Esteem on Sexual Satisfaction. The following hypothesis was made about actor effects: (17) It is hypothesized that higher levels of actor self-esteem

will be associated with higher levels of sexual satisfaction.

The following hypothesis was made about partner effects: (18) It is hypothesized that higher levels of partner self-esteem will be associated with higher levels of sexual satisfaction.

The following hypotheses were made about interactions at level 1: (19a) It is hypothesized that higher actor attachment anxiety and lower self-esteem will interact to predict lower levels of sexual satisfaction; and, (19b) It is hypothesized that higher actor attachment avoidance and lower self-esteem will interact to predict lower levels of sexual satisfaction

The following hypothesis was made about interactions at level 2: (20) It is hypothesized that actor self-esteem and partner self-esteem will interact to predict higher levels of sexual satisfaction.

Participants

The survey was taken by 147 individuals. Subjects were comprised of individuals between the ages of 19 and 64 years old ($M = 32.07$, $SD = 10.28$) who were residents of the United States and reported being in an exclusive relationship for a minimum of 1 month. In addition, all participants were current members of the SNS Facebook. Questions at the beginning of the survey assessed for subject requirements and automatically ended the survey if participants did not meet all qualifiers. Individuals who did not complete at least one of the six survey instruments were omitted. After the exclusions, 139 participants remained eligible and were used for data analysis. Participants were recruited through online networking, specifically on Facebook, as well as Socialpsychology.org, a website dedicated to psychological studies, wherein they were

requested on a voluntary basis to follow a link to the survey hosted by Qualtrics.com. Those who completed the survey were eligible to enter a drawing to win one of two \$50 Visa gift cards. Demographic information was collected on all participants including their gender, age, ethnicity, religious preference, highest level of education, income range, family structure, number of children, length of current relationship, and length of Facebook membership.

Within the current study, female participants ($n = 110, 79.7\%$) far outnumbered male participants ($n = 28, 20.3\%$), which eliminated the possibility of running any exploratory analysis to detect gender differences amongst the variables. In addition, only 12 couples completed the online survey. Therefore, the APIM was not utilized to test hypotheses five through 20 due to such low couple participation.

TABLE 1. Descriptive Characteristics of Participants

Variable	<i>n</i>	%
Gender		
Male	28	20.3
Female	110	79.7
Age		
<i>M</i> = 32.07		
<i>SD</i> = 10.28		
Range (19-64)		
Ethnic Identification		
White/Caucasian	122	87.8
African American	0	0.0
Hispanic/Latino	10	7.2
Asian	4	2.9
Native American	0	0.0
Pacific Islander	0	0.0
Other	3	2.2

TABLE 1. Continued

Variable	<i>n</i>	%
Religious Preference		
Buddhist	1	0.8
Catholic	32	24.4
Jewish	1	0.8
Muslim	0	0.0
Protestant	11	8.4
Other	86	65.6
Highest Level of Education Completed		
Less than high school	0	0.0
High school/GED	14	10.2
Some college	41	29.9
2-year college degree	9	6.6
4-year college degree	58	42.3
Master's degree	11	8.0
Doctoral degree	2	1.5
Professional degree (JD, MD)	2	1.5
Annual Income Range		
Below \$20,000	23	16.7
\$20,000 - \$29,999	8	5.8
\$30,000 - \$39,999	14	10.1
\$40,000 - \$49,999	16	11.6
\$50,000 - \$59,999	16	11.6
\$60,000 - \$69,999	10	7.2
\$70,000 - \$79,999	3	2.2
\$80,000 - \$89,999	41	29.7
\$90,000 or more	7	5.1
Family Structure		
In a relationship without children	49	35.8
In a relationship with children	16	11.7
Married without children	20	14.6
Married with children	48	35.0
Life partner without children	2	1.5
Life partner with children	2	1.5
How Many Children Total		
<i>M</i> = 1.19		
<i>SD</i> = 1.41		
Range (0-6)		

TABLE 1. Continued

Variable	<i>n</i>	%
How Many Children under 18 Living in the House <i>M</i> = .74 <i>SD</i> = 1.04 Range (0-5)		
Length of Current Relationship in Years <i>M</i> = 7.82 <i>SD</i> = 8.83 Range (0-40)		
Length of Facebook Membership in Years <i>M</i> = 4.32 <i>SD</i> = 2.06 Range (1-10)		

Instrumentation

Facebook Intensity Scale (FIS)

Facebook usage will be measured using the Facebook Intensity Scale (FIS), which was developed by Ellison et al. (2007) and has been utilized in studies investigating Facebook use among the collage-aged population (Jenkins-Guarnieri et al., 2012). The scale was developed as a better measurement of Facebook usage by accounting for more than just frequency or duration indices (Ellison et al., 2007). The FIS is comprised of eight questions including approximate time spent per day on Facebook and number of total “friends” accumulated (Jenkins-Guarnieri et al., 2012). In addition, this measure includes a series of 5-point Likert-scale attitudinal questions designed to assess the individual’s engagement and emotional attachment to the site (Ellison et al., 2007).

Responses range from 1 (strongly disagree) to 5 (strongly agree). These questions include “Facebook has become part of my daily routine” and “I would feel sorry if Facebook shut down.” Ellison et al. (2007) found a relatively high internal consistency (Cronbach’s $\alpha = .83$) from the data collected with the FIS as a measurement when examining the relationship between Facebook usages and the formation and maintenance of social capital (Ellison et al., 2007). Following Ellison et al. (2007), individual items will be standardized before summing to account for individual responses. The Cronbach’s α of the FIS for this study was .760.

Global Measure of Sexual Satisfaction (GMSEX)

The Global Measure of Sexual Satisfaction (GMSEX) assesses overall physical and physiological sexual satisfaction by asking participants to rate their sex life on five 7-point bipolar scales: *good–bad*, *pleasant–unpleasant*, *positive–negative*, *satisfying–unsatisfying*, *valuable–worthless* (Lawrence & Byers, 1998). Scores ranging from 5 to 35 are summed, with higher scores indicating greater sexual satisfaction. The GMSEX has test-retest reliability between .84 and .78 and Cronbach’s α between .90 and .96 (Lawrence & Byers, 1998). The Cronbach’s α of the GMSEX for this study was .869.

Global Measure of Relationship Satisfaction (GMREL)

The Global Measure of Relationship Satisfaction (GMREL) is identical to the GMSEX except that respondents rate their overall relationship satisfaction without taking into account anything related to sex. Higher summed scores indicate greater relationship satisfaction. Respondents rate their relationship on five 7-point bipolar scales: *good–bad*, *pleasant–unpleasant*, *positive–negative*, *satisfying–unsatisfying*, *valuable–worthless* (Lawrence & Byers, 1998). Scores ranging from 5 to 35 are summed, with higher scores

indicating greater relationship satisfaction. GMREL has test-retest reliability between .81 and .70 and Cronbach's α between .91 and .96 (Lawrence & Byers, 1998). The Cronbach's α of the GMREL for this study was .886.

Rosenberg Self-Esteem Scale (RSES)

Self-esteem will be measured using the Rosenberg Self-Esteem Scale (Rosenberg, 1989). The RSES is a 10 item, 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Five of the items are positively worded, such as "On a whole, I am satisfied with myself." Five of the items are negatively worded, such as "I feel I do not have much to be proud of." The questions are aggregated; therefore, some scores need to be reverse-coded for higher scores to represent higher levels of self-esteem (Jenkins-Guarnieri et al., 2012). Previous results from several studies (Sinclair et al., 2010) have shown this scale to be a reliable measure (Tazghini & Siedlecki, 2013). One study assessing self-esteem of college students reported a Cronbach's α ranging from .88 to .90 (Robins, Hendlin, & Trzesiewski, 2001) with another study reporting an internal consistency of .79 (Hyland, Boduszek, Dhingra, Shevlin, & Egan, 2014). The Cronbach's α of the RSES for this study was .908.

Experience in Close Relationship Scale-Revised (ECR-R)

Attachment style will be measured using the Experiences in Close Relationships Questionnaire-Revised (ECR-R; Fraley et al., 2000). The ECR-R is a 36-item self-report questionnaire that requires participants to rate each item on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). There are 18 questions measuring attachment anxiety and 18 questions measuring attachment avoidance. Examples of attachment anxiety items include "I am afraid that I will lose my partner's love" and "I

worry that my partner doesn't really love me." Examples of attachment avoidance items are "I prefer not to be too close to romantic partners" and "I prefer not to show a partner how I feel deep down." While studying adult attachment, sexual satisfaction, and relationship satisfaction within married couples, Butzer and Campbell (2008) averaged mean scores of two scales: attachment avoidance and attachment anxiety and found a relatively high internal consistency. The study reported a Cronbach's α of 0.89 for men and 0.89 for women for the anxiety dimension and a Cronbach's α of 0.93 for men and 0.94 for women for the avoidance dimension (Butzer & Campbell, 2008). The Cronbach's α of the ECR-R Attachment Anxiety for this study was .915. The Cronbach's α of the ECR-R Attachment Avoidance for this study was .912.

Procedure

Participants were recruited online through social networking on the SNS Facebook, as well as Socialpsychology.org, a website dedicated to psychological studies, to voluntarily follow a link to complete an internet survey hosted by Qualtrics.com. No membership was required for the participants to access the link. As a member of Facebook, permission was granted to "share" a recruitment message with information regarding the current research study. The recruitment message was entitled "Couple participation requested: Internet survey investigates the impact of Facebook use on relationship and sexual satisfaction within heterosexual couples" and contained additional details about the study. The survey included an informed consent page, qualification questions that filtered out subjects who did not meet the requirements for participation, a demographics questionnaire, FIS, ECR-R, RSES, GMREL, and GMSEX scales, each on separate pages, an anonymous identification question, and information about the gift

cards raffle. Couples filled out the survey, separately, which consisted of 90 questions and took subjects approximately 30 minutes to complete. Because dual participation was required of the couples, one question asked for the last 5 digits of the female partner's cell phone number or primary number if a cell phone number was unavailable. This ensured that the participants' identification stayed anonymous, but allowed the researcher to pair up partners in order to analyze the results and verify completion for the gift cards raffle. The incentive for participation was the chance to win one of two \$50 Visa gift cards that were raffled off once all data was collected and the survey was closed. Upon completion of the survey, participants were brought to an informational page that explained how to enter the gift cards raffle. Winners were notified through a reply to their original entry email and asked for a mailing address in which to receive the gift card.

Data Analysis

Preliminary Hypotheses

Hypothesis 1a. It is hypothesized that attachment anxiety will be positively correlated with intensity of Facebook use. Specifically, individuals that have higher scores on the ECR-R anxiety subscale will have higher scores on the FIS. Pearson's correlation will be used to test the hypothesis that the ECR-R anxiety subscale scores correlate positively to FIS scores.

Hypothesis 1b. It is hypothesized that attachment avoidance will be positively correlated with intensity of Facebook use. Specifically, individuals that have higher scores on the ECR-R avoidance subscale will have higher scores on the FIS. Pearson's correlation will be used to test the hypothesis that the ECR-R avoidance subscale scores

correlate positively to FIS scores.

Hypothesis 1c. It is hypothesized that attachment anxiety will be negatively correlated with self-esteem. Specifically, individuals that have higher scores on the ECR-R anxiety subscale will have lower scores on the RSES. Pearson's correlation will be used to test the hypothesis that the ECR-R anxiety subscale scores correlate negatively to RSES scores.

Hypothesis 1d. It is hypothesized that attachment avoidance will be negatively correlated with self-esteem. Specifically, individuals that have higher scores on the ECR-R avoidance subscale will have lower scores on the RSES. Pearson's correlation will be used to test the hypothesis that the ECR-R avoidance subscale scores correlate negatively to RSES scores.

Hypothesis 1e. It is hypothesized that intensity of Facebook use will be positively correlated with self-esteem. Specifically, individuals that have higher scores on the FIS will have higher scores on the RSES. Pearson's correlation will be used to test the hypothesis that the FIS scores correlate positively to RSES scores.

Hypotheses for Individuals

Hypothesis 2. It is hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of relationship satisfaction will decrease. Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale will predict lower scores on the GMREL. Multiple regression will be used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increase, the GMREL scores will decrease.

Hypothesis 3. It is hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of sexual satisfaction will decrease. Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale will predict lower scores on the GMSEX. Multiple regression will be used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increase, the GMSEX scores will decrease.

Hypothesis 4. It is hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increases, levels of self-esteem will decrease. Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale will predict lower scores on the RSES. Multiple regression will be used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increase, the RSES scores will decrease.

Exploratory Analysis for Couples Using Actor-Partner Interdependence Model

If enough subjects for both genders participate in the survey, the following exploratory analysis will be conducted utilizing the APIM. After all data collection, female participants (n = 110, 79.7%) far outnumbered male participants (n = 28, 20.3%), which eliminated the possibility of running any exploratory analysis to detect gender differences amongst the variables. Furthermore, only 12 couples completed the online survey. Therefore, the APIM was not utilized to test hypotheses five through 20 due to such low couple participation.

Model 1: Intensity of Facebook Use on Relationship Satisfaction

Hypothesis 5a. It is hypothesized that higher levels of attachment anxiety will be associated with lower levels of actor relationship satisfaction. Specifically, actor's who have higher scores on the ECR-R anxiety subscale will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 5b. It is hypothesized that higher levels of attachment avoidance will be associated with lower levels of actor relationship satisfaction. Specifically, actor's who have higher scores on the ECR-R avoidance subscale will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 5c. It is hypothesized that higher levels of actor's intensity of Facebook use will be associated with lower levels of actor relationship satisfaction. Specifically, actor's who have higher scores on the FIS will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 6a. It is hypothesized that higher levels of partner attachment anxiety will be associated with lower levels of actor relationship satisfaction. Specifically, partner's who have higher scores on the ECR-R anxiety subscale will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 6b. It is hypothesized that higher levels of partner attachment avoidance will be associated with lower levels of actor relationship satisfaction. Specifically, partner's who have higher scores on the ECR-R avoidance subscale will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 6c. It is hypothesized that higher levels of partner's intensity of Facebook use will be associated with lower levels of actor relationship satisfaction. Specifically, partner's who have higher scores on the FIS will have lower scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 7a. It is hypothesized that actor attachment anxiety and actor attachment avoidance will interact to predict lower levels of actor relationship satisfaction. An interaction term will be formed by combining the product scores from the ECR-R of actor attachment anxiety and attachment avoidance. Test of fixed effects will be performed to test this hypothesis.

Hypothesis 7b. It is hypothesized that actor attachment anxiety and actor intensity of Facebook use will interact to predict lower levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R anxiety subscale, FIS, and GMREL.

Hypothesis 7c. It is hypothesized that actor attachment avoidance and actor intensity of Facebook use will interact to predict lower levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R avoidance subscale, FIS, and GMREL.

Hypothesis 8a. It is hypothesized that actor attachment anxiety and partner attachment anxiety will interact to predict lower levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R and GMREL.

Hypothesis 8b. It is hypothesized that actor attachment avoidance and partner attachment avoidance will interact to predict lower levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R and GMREL.

Hypothesis 8c. It is hypothesized that actor intensity of Facebook use and partner intensity of Facebook use will interact to predict lower levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the FIS and GMREL.

Model 2: Self-Esteem on Relationship Satisfaction

Hypothesis 9. It is hypothesized that higher levels of actor self-esteem will be associated with higher levels of actor relationship satisfaction. Specifically, actor's who have higher scores on the RSES will have higher scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 10. It is hypothesized that higher levels of partner self-esteem will be associated with higher levels of actor relationship satisfaction. Specifically, partner's who have higher scores on the RSES will have higher scores on the GMREL. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 11a. It is hypothesized that actor attachment anxiety and self-esteem will interact to predict lower levels of relationship satisfaction. An interaction term will be created with actor attachment anxiety and actor self-esteem. Tests of fixed effect will be performed to test this hypothesis using data collected from the ESR-R anxiety subscale and GMREL.

Hypothesis 11b. It is hypothesized that actor attachment avoidance and self-esteem will interact to predict lower levels of relationship satisfaction. An interaction term will be created with actor attachment avoidance and actor self-esteem. Tests of fixed effect will be performed to test this hypothesis using data collected from the ESR-R avoidance subscale and GMREL.

Hypothesis 12. It is hypothesized that actor self-esteem and partner self-esteem will interact to predict higher levels of relationship satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the RSER and GMREL after an interaction term of actor self- esteem and partner self-esteem has been created.

Model 3: Intensity of Facebook Use on Sexual Satisfaction

Hypothesis 13a. It is hypothesized that higher levels of attachment anxiety will be associated with lower levels of actor sexual satisfaction. Specifically, actor's who have higher scores on the ECR-R anxiety subscale will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 13b. It is hypothesized that higher levels of attachment avoidance will be associated with lower levels of actor sexual satisfaction. Specifically, actor's who have higher scores on the ECR-R avoidance subscale will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 13c. It is hypothesized that higher levels of actor's intensity of Facebook use will be associated with lower levels of actor sexual satisfaction. Specifically, actor's who have higher scores on the FIS will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 14a. It is hypothesized that higher levels of partner attachment anxiety will be associated with lower levels of actor sexual satisfaction. Specifically, partner's who have higher scores on the ECR-R anxiety subscale will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 14b. It is hypothesized that higher levels of partner attachment avoidance will be associated with lower levels of actor sexual satisfaction. Specifically, partner's who have higher scores on the ECR-R avoidance subscale will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 14c. It is hypothesized that higher levels of partner's intensity of Facebook use will be associated with lower levels of actor sexual satisfaction. Specifically, partner's who have higher scores on the FIS will have lower scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 15a. It is hypothesized that actor attachment anxiety and actor attachment avoidance will interact to predict lower levels of actor sexual satisfaction. An interaction term will be formed by combining the product scores from the ECR-R of actor attachment anxiety and attachment avoidance. Test of fixed effects will be performed to test this hypothesis.

Hypothesis 15b. It is hypothesized that actor attachment anxiety and actor intensity of Facebook use will interact to predict lower levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ECR-R anxiety subscale, FIS, and GMSEX.

Hypothesis 15c. It is hypothesized that actor attachment avoidance and actor intensity of Facebook use will interact to predict lower levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R avoidance subscale, FIS, and GMSEX.

Hypothesis 16a. It is hypothesized that actor attachment anxiety and partner attachment anxiety will interact to predict lower levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R and GMSEX.

Hypothesis 16b. It is hypothesized that actor attachment avoidance and partner attachment avoidance will interact to predict lower levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the ESR-R and GMSEX.

Hypothesis 16c. It is hypothesized that actor intensity of Facebook use and partner intensity of Facebook use will interact to predict lower levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the FIS and GMSEX.

Model 4: Self-Esteem on Sexual Satisfaction

Hypothesis 17. It is hypothesized that higher levels of actor self-esteem will be associated with higher levels of actor sexual satisfaction. Specifically, actor's who have higher scores on the RSES will have higher scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 18. It is hypothesized that higher levels of partner self-esteem will be associated with higher levels of actor sexual satisfaction. Specifically, partner's who have higher scores on the RSES will have higher scores on the GMSEX. Tests of fixed effects will be performed to test this hypothesis.

Hypothesis 19a. It is hypothesized that actor attachment anxiety and self-esteem will interact to predict lower levels of sexual satisfaction. An interaction term will be created with actor attachment anxiety and actor self-esteem. Tests of fixed effect will be performed to test this hypothesis using data collected from the ESR-R anxiety subscale and GMSEX.

Hypothesis 19b. It is hypothesized that actor attachment avoidance and self-esteem will interact to predict lower levels of sexual satisfaction. An interaction term will be created with actor attachment avoidance and actor self-esteem. Tests of fixed effect will be performed to test this hypothesis using data collected from the ESR-R avoidance subscale and GMSEX.

Hypothesis 20. It is hypothesized that actor self-esteem and partner self-esteem will interact to predict higher levels of sexual satisfaction. Test of fixed effects will be performed to test this hypothesis using data collected by the RSER and GMSEX after an interaction term of actor self- esteem and partner self-esteem has been created.

CHAPTER 4

RESULTS

The current study was conducted to explore significant relationships between the following variables: attachment anxiety, attachment avoidance, intensity of Facebook use, relationship satisfaction, sexual satisfaction, and self-esteem levels within individuals who are part of an exclusive relationship. Exploratory hypotheses were developed in the event that enough couples partook in the survey; however, low participation rates by both partners did not allow for the analysis of couple's data. Preliminary hypotheses were tested using Pearson's correlation and hypotheses for individuals were tested using multiple regressions, both set at a .05 significance level ($p < .05$).

Hypothesis 1a

It was hypothesized that attachment anxiety would be positively correlated with intensity of Facebook use. Specifically, individuals that had higher scores on the ECR-R anxiety subscale would have higher scores on the FIS. Pearson's correlation was used to test the hypothesis that the ECR-R anxiety subscale scores correlate positively to FIS scores. There was a slight, positive correlation; however, the correlation was not significant, $r = .08$, $p = .39$.

Hypothesis 1b

It was hypothesized that attachment avoidance would be positively correlated with intensity of Facebook use. Specifically, individuals that had higher scores on the

ECR-R avoidance subscale would have higher scores on the FIS. Pearson's correlation was used to test the hypothesis that the ECR-R avoidance subscale scores correlate positively to FIS scores. Contrary to the prediction, there was a slight, negative correlation; however, the correlation was not significant, $r = -.02$, $p = .78$.

Hypothesis 1c

It was hypothesized that attachment anxiety would be negatively correlated with self-esteem. Specifically, individuals that had higher scores on the ECR-R anxiety subscale would have lower scores on the RSES. Pearson's correlation was used to test the hypothesis that the ECR-R anxiety subscale scores correlate negatively to RSES scores. There was a statistically significant, negative correlation, $r = -.51$, $p < .001$. The result supported the hypothesis that attachment anxiety is negatively correlated with self-esteem levels.

Hypothesis 1d

It was hypothesized that attachment avoidance would be negatively correlated with self-esteem. Specifically, individuals that had higher scores on the ECR-R avoidance subscale would have lower scores on the RSES. Pearson's correlation was used to test the hypothesis that the ECR-R avoidance subscale scores correlate negatively to RSES scores. There was a statistically significant, negative correlation, $r = -.36$, $p < .001$. The result supported the hypothesis that attachment avoidance is negatively correlated with self-esteem levels.

Hypothesis 1e

It was hypothesized that intensity of Facebook use would be positively correlated with self-esteem. Specifically, individuals that had higher scores on the FIS would have

higher scores on the RSES. Pearson's correlation was used to test the hypothesis that the FIS scores correlate positively to RSES scores. Contrary to the prediction, there was a slight, negative correlation; however, the correlation was not significant, $r = -.06, p = .53$.

TABLE 2. Summary Data for All Scales

Name of Scale	<i>M</i>	<i>SD</i>	Min	Max	Cronbach's α	Items	Scale
Experiences in Close Relationships - Revised - Anxiety	41.81	17.39	18	108	.92	18	1-7
Experiences in Close Relationships - Revised - Avoidance	39.01	14.79	18	83	.91	18	1-7
Facebook Intensity	29.84	6.15	10	43	.76	8	
Rosenberg's Self-Esteem Scale	32.78	5.17	17	40	.91	10	1-4
Global Measure Of Relationship Satisfaction	11.53	6.79	5	29	.87	5	1-7
Global Measure Of Relationship Satisfaction	11.71	6.74	5	30	.87	5	1-7

TABLE 3. Pearson's Correlations Between Variables

Variables	1	2	3	4	5	6
1. Avoidance		.42**	-.02	-.36**	.45**	.25*
2. Anxiety			.08	-.51**	.29**	.23*

TABLE 3. Continued

Variables	1	2	3	4	5	6
3. Facebook Use				-.06	.14	.21*
4. Self-Esteem					-.31**	-.22*
5. Relationship Satisfaction						.65**
6. Sexual Satisfaction						

Note: * = $p < .05$, and ** = $p < .01$.

Hypotheses for Individuals

Hypothesis 2

It was hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increased, levels of relationship satisfaction would decrease. Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale would predict lower scores on the GMREL. Multiple regression was used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increased, the GMREL scores would decrease. Results, as displayed in Table 4, indicated that when considering intensity of Facebook use, attachment anxiety, and attachment avoidance, only attachment avoidance was a significant predictor of relationship satisfaction.

TABLE 4. Multiple Regression Analysis for Variables Predicting Relationship Satisfaction

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Adj. R</i> ²	<i>R</i> ²	<i>F</i>	<i>df</i>
Model					.216	.239	10.348***	(3, 102)

TABLE 4. Continued

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Adj. R</i> ²	<i>R</i> ²	<i>F</i>	<i>df</i>
Intensity of Facebook	.166	.100	.146	1.660				
Attachment Anxiety	.040	.037	.104	1.063				
Attachment Avoidance	.188	.045	.409	4.205***				

Note: * = $p < .05$, and *** = $p < .001$

Hypothesis 3

It was hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increased, levels of sexual satisfaction would decrease.

Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale would predict lower scores on the GMSEX. Multiple regression was used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increased, the GMSEX scores would decrease. Results, as displayed in Table 5, indicated that when considering intensity of Facebook use, attachment anxiety, and attachment avoidance, only intensity of Facebook use was a significant predictor of sexual satisfaction.

TABLE 5. Multiple Regression Analysis for Variables Predicting Sexual Satisfaction

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Adj. R</i> ²	<i>R</i> ²	<i>F</i>	<i>df</i>
Model					.112	.138	5.250**	(3, 101)
Intensity of Facebook	.259	.100	.244	2.593*				
Attachment Anxiety	.046	.039	.126	1.168				

TABLE 5. Continued

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Adj. R</i> ²	<i>R</i> ²	<i>F</i>	<i>df</i>
Attachment Avoidance	.084	.048	.189	1.763				

Note: * = $p < .05$, and *** = $p < .001$.

Hypothesis 4

It was hypothesized that as intensity of Facebook use, attachment anxiety, and attachment avoidance increased, levels of self-esteem would decrease. Specifically, higher scores on the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale would predict lower scores on the RSES. Multiple regression was used to test the hypothesis that as the FIS, ECR-R anxiety subscale, and ECR-R avoidance subscale scores increased, the RSES scores would decrease. Results, as displayed in Table 6, indicated that when considering intensity of Facebook use, attachment anxiety, and attachment avoidance, only attachment anxiety was a significant predictor of self-esteem.

TABLE 6. Multiple Regression Analysis for Variables Predicting Self-Esteem

Variable	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>Adj. R</i> ²	<i>R</i> ²	<i>F</i>	<i>df</i>
Model					.270	.292	13.594***	(3,102)
Intensity of Facebook	-.009	.074	-.010	-.155				
Attachment Anxiety	-.132	.028	-.438	-4.691***				
Attachment Avoidance	-.182	.033	-.182	-1.951				

Note: * = $p < .05$, and *** = $p < .001$.

CHAPTER 5

DISCUSSION

The current study focused on the impact of Facebook use, attachment anxiety, and attachment avoidance on individuals' perceived levels of relationship and sexual satisfaction as well as self-esteem. The goal was to expand current literature on how intensity of Facebook use interacts with attachment styles and effects levels of satisfaction within exclusive, intimate relationships. Additionally, an exploratory research plan was designed to investigate how partners' (within a heterosexual couple) intensity of Facebook use, attachment style, and self-esteem influence each others' levels of satisfaction by doing a dual analysis of data or treating dyadic data as one unit rather than independent. However, low couple participation prevented the use of the APIM and no such results were derived from the data collected. Findings from the current study will be discussed according to the following dependent variables: relationship satisfaction, sexual satisfaction, and self-esteem. In addition, the chapter will also address implications of the findings and limitations that should be considered by future researchers building upon the current study.

Relationship Satisfaction

Results from the current study found that attachment avoidance was a significant predictor of relationship satisfaction while attachment anxiety and intensity of Facebook use were not. While it is reasonable to assume that an individual with attachment avoidance would report lower levels of relationship satisfaction because of their innate

hesitation for closeness with others and commonly found distress associated with intimacy (Jenkins-Guarnieri et al., 2012), the results from the current study indicated otherwise. Interestingly, and contrary to previous literature, which has found that individuals with attachment avoidance rated lower on levels of trust and satisfaction within their romantic relationships (Stephan & Bachman, 1999), attachment avoidance was found to be significant predictor of greater relationship satisfaction. Because we were not able to collect data from both individuals within the relationship, it is possible that the participants' partner had a secure attachment style, which allowed them to respect and process, in a healthy manner, any tendency the subject had to engage in typically avoidant behaviors. This might allow the partner with attachment avoidance to feel understood and supported, which could actually increase relationship satisfaction. Another possibility is that the non-participating partner had a compatible, avoidant attachment style, which could account for the lack of discord within the relationship. In addition, while other studies have linked attachment avoidance with lower levels of relationship satisfaction, researchers and clinicians cannot assume that all individuals with attachment avoidance will experience lower levels of satisfaction within their relationships.

While previous studies have reported that individuals with attachment anxiety experience lower levels of relationship satisfaction likely due to their feelings of inadequacy and perceived sense of rejection (Brassard et al., 2012; Stephan & Bachman, 1999), the current study did not find attachment anxiety to be a significant predictor of relationship satisfaction. It is possible that individuals are receiving some level of validation from Facebook use that, while not statistically significant, is still contributing

to a more overall sense of satisfaction, which is transferring into their relationship. This is an area that should be a focus of future research due to the discrepancies between findings.

Little research has been done on the interaction between Facebook use and relationship satisfaction; therefore, the results found by the current study do not contradict any previous research. One reason that intensity of Facebook use was not found to be a significant predictor of relationship satisfaction could be that Facebook members do not think that their usage affects their own relationship satisfaction towards their partners. Future researchers should use the proposed APIM to conduct a study done with both partners within the couple in order to assess the interaction between these variables at a more specific level.

Sexual Satisfaction

Results from the current study found that intensity of Facebook use was a significant predictor of sexual satisfaction while attachment anxiety and attachment avoidance were not. No previous research aimed at investigating the relationship between Facebook use and sexual satisfaction was found; therefore, the findings of this study will hopefully inspire future researchers to address the linkage between the two variables. Because sexual frequency has been reported to be the strongest correlation to sexual satisfaction (Schwartz & Young, 2009), increased intensity of Facebook use might be responsible for more frequent sexual connections between partners. Positive comments, picture “likes,” or an increase in “friends” could potentially make the individual feel more confident, which might make them more eager to participate in sexual behaviors. Communication has also been found to be a significant factor

contributing to sexual satisfaction within couples (Purnine & Carey, 1997), which could be another explanation for the current study's results. A previous study found that poor communication in long-term relationships was associated with a decrease in sexual satisfaction (Byers, 2005). Partners' could be using Facebook as a form of positive communication, allowing them to connect at times when they might not otherwise be able to such as while at work or at school; therefore, actually increasing feelings of closeness and intimacy, which are commonly associated with sexuality. Ross et al. (2009) found that the openness to experience personality characteristic was associated with frequency of social media use. It is conceivable that participants who reported higher intensity of Facebook use possessed this characteristic and were more open to new sexual experiences, which might improve sexual satisfaction. A final, potential rationale for the linkage between higher intensity of Facebook use and increased levels of sexual satisfaction is the competitive factor of the SNS. Many Facebook members tend to portray their lives in a more positive light than may actually be the case; there could be some form of informal, unintentional competition upon peers. This competition factor means looking better, engaging in more exotic and exciting activities, and having the "best" relationships. As a result, participants might actually be benefiting sexually while trying to create the lives they are so fervently attempting to display.

Both attachment anxiety and attachment avoidance have been examined when assessing levels of sexual satisfaction within individuals; however, results vary across studies (Birnbaum et al., 2006; Brassard et al., 2012; Butzer & Campbell, 2008; Byers, 2005; Péloquin et al., 2013). Given the inconsistencies amongst results offered by previous literature and the fact that neither attachment avoidance nor attachment anxiety

were found to be significantly predictive of sexual satisfaction in the current study, this is another area for future research to continue to investigate and expand upon. Gender differences and age can be one explanation for discrepancies between findings. The present study focused on adults, but was not able to perform a t-test to explore any gender difference due to low levels of male participation.

Self-Esteem

Results from the current study found that attachment anxiety was a significant predictor of self-esteem while attachment avoidance and intensity of Facebook use were not. Previous research has concluded that individuals with an insecure attachment style report lower levels of global self-esteem, however, attachment avoidance and attachment anxiety were combined into one, broad term unlike the present study (Bylsma, Cozzarelli, & Sumer, 1997). Ringer, Buchanan, Olesek, and Lysaker (2014) also reported similar findings to the present study, but their subjects consisted of individuals with schizophrenia so it is difficult to generalize their results. Again, the relationship between attachment styles and self-esteem in both individuals and couples is an area in which more research is needed.

Similar to a study conducted with psychology undergraduate students that found approaching, but insignificant, associations between Facebook use and self-esteem (Skues et al., 2012), the present study concluded that Facebook use was not a significant predictor of self-esteem. The interaction between Facebook use and self-esteem needs to be further investigated as evidenced by the varying results found within previous literature. One explanation for the discrepancies of results could be that Facebook use can be distinguished by numerous behaviors. Since examination of the usage patterns by

Facebook members is a fairly novel addition to psychological research, it is possible that the FIS is not the best assessment tool to address the complexities of Facebook use.

Limitations

There are a number of limitations that need to be considered specific to this study. First, all variables were self-reported, which could induce response biases. Another limitation influencing response biases could be lack of anonymity within the couple with which the individual belonged. If the individuals completed the survey in their partner's presence, this could cause lack of honesty when responding. Unfortunately, due to the nature of this study being solely offered online, no other precautions could have been taken to avoid this limitation, except for giving appropriate instructions before the survey was initiated.

Additionally, this study requested dual participation; however, there was no assurance that both partners would complete the survey. An incentive was offered, but low couple participation limited analysis to individual data only. Since both partners did not complete the survey in most cases and the survey was offered exclusively online, the current study ended up with an overwhelming amount of female participants compared to males, which did not allow for any analysis examining gender differences between variables. Future researchers who wish to study couples should offer the survey both online and in person in order to ensure an analyzable amount of couple participation. On another demographic level, the study's sample was not very ethnically diverse. Almost all of the subjects identified as "White/Caucasian," which makes it difficult to generalize the results to the general U.S. population. Lack of diversity and couple participation also makes it challenging to create hypotheses as to why results of the current study differ

from those of previous literature.

Another limitation is that this study does not take into account other factors that could be influencing relationship and sexual satisfaction, such as an affair or other personal difficulties. In regards to Facebook use, this study did not investigate profile appearances or disclosed relationship statuses, which might also contribute to levels of self-esteem and relationship and sexual satisfaction within the couple.

Implications

The present study helps validate the findings of previous research as well as offers new contributions that can be fundamental in reevaluating what factors impact individuals' ability to have relationship satisfaction, sexual satisfaction, and self-esteem within an exclusive, romantic, relationship in the evolving world of technology. Clinicians could potentially incorporate relevant assessments of Facebook usage and attachment styles into therapeutic sessions when working with clients who express relationship discord. In addition, new interventions could be developed to assist couples that might be impacted by these factors. Despite an increase or decrease in relationship satisfaction, sexual satisfaction, and/or self-esteem, the overlap of online and offline relationships needs to be studied extensively so mental health employees can understand its implications.

The finding that intensity of Facebook use predicts sexual satisfaction levels is of particular importance given that no other study has been conducted examining the relationship between the two variables. Sexuality has been found to be essential to the success of a healthy and stable romantic relationship (Brassard et al., 2012). If Facebook use is somehow increasing levels of sexual satisfaction perceived by an individual within

a couple, clinicians need to be aware of its impact and be able to identify the behavior as a possible tool to strengthen positive interactions between partners. In addition, the results of this study can be used as a platform for future researchers who wish to investigate how Facebook use affects couples.

Finally, the results show that relationships are complex and further research needs to be conducted to understand all factors that influence levels of satisfaction. Even more important is the need for research using models such as the APIM, which investigates the interactional influence of variables on individuals within dyads. The limitations set forth above can assist future researchers in successfully conducting a study using the APIM, which would allow for a deeper analysis of the complexities of the intensity of Facebook use on couples' perceived levels of relationship satisfaction, sexual satisfaction, and self-esteem.

Conclusion

The outcomes of this study both strengthen some conclusions offered by previous literature while challenging others due to discrepancies in results. Through the inconsistencies, it is made clear that further research investigating the effects of technology on face-to-face relationships needs to be conducted. Facebook, given its immense and universal popularity, is of particular importance. Not only did this study conclude that Facebook use is a significant predictor of increased sexual satisfaction for individuals in heterosexual relationships, many other effects of its use have yet to be examined. However, until an assessment tool addressing the many intricacies of the SNS has been developed, Facebook use will be a difficult variable to thoroughly investigate and understand.

REFERENCES

REFERENCES

- Birnbaum, G., Reis, H., Mikulincer, M., Gillath, O., & Orpaz, A. (2006). When sex is more than just sex: Attachment orientations, sexual experience, and relationship quality. *Journal of Personality and Social Psychology, 91*(5), 929-943. doi: 10.1037/0022-3514.91.5.929
- Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York, NY: Basic Books.
- Bowlby, J. (1979). *The making and breaking of affectional bonds*. London, UK: Tavistock/Routledge.
- Brassard, A., Péloquin, K., Dupuy, E., Wright, J., & Shaver, P. R. (2012). Romantic attachment insecurity predicts sexual dissatisfaction in couples seeking marital therapy. *Journal of Sex & Marital Therapy, 38*(3), 245-262. doi:10.1080/0092623X.2011. 606881
- Bretz, K. (2009). *An actor-partner interdependence model of attachment processes, conflict resolution, and psychological abuse on relationship quality in a community sample of heterosexual couples* (Unpublished doctoral dissertation). University of North Texas, Denton, TX.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models in social and behavioral research: Applications and data analysis methods*. Beverly Hills, CA: Sage.
- Brown, J. D. (2006). Emerging adults in a media saturated world. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century* (pp. 279-299). Washington, DC: American Psychological Association.
- Buffardi, L., & Campbell, W. (2008). Narcissism and social networking web sites. *Personality & Social Psychology Bulletin, 34*(10), 1303-1314. doi: 10.1177/0146167208320061
- Butzer, B., & Campbell, L. (2008). Adult attachment, sexual satisfaction, and relationship satisfaction: A study of married couples. *Personal Relationships, 15*(1), 141-154. doi:10.1111/j.1475-6811.2007.00189.x

- Byers, E. S. (2005). Relationship satisfaction and sexual satisfaction: A longitudinal study of individuals in long-term relationships. *Journal of Sex Research, 42*(2) 113-118. doi: 10.1080/00224490509552264
- Byers, E. S., Demmons, S., & Lawrence, K. (1998). Sexual satisfaction within dating relationships: A test of interpersonal exchange model of sexual satisfaction. *Journal of Social and Personal Relationships, 15*, 257-267. doi: 10.1177/0265407598152008
- Bylsma, W. H., Cozzarelli, C., & Sumer, N. (1997). Relation between adult attachment styles and global self-esteem. *Basic and Applied Social Psychology, 19*(1), 1-16. doi: 10.1207/15324839751037101
- Cheung, C. M. K., Chiu, P., & Lee, M. K. O. (2011). Online social networks: Why do students use Facebook? *Computers in Human Behavior, 27*(4), 1337-1343. doi: 10.1016/j.chb.2010.07.028
- Clayton, R. B., Nagurney, A., & Smith, J. R. (2013). Cheating, breakup, and divorce: Is Facebook use to blame? *CyberPsychology, Behavior, and Social Networking, 16*(10), 717-720. doi: 10.1089/cyber.2012.0424
- Coley, T. (2006). *Students and cyber communities*. (Unpublished doctoral dissertation). University of South Carolina, Columbia, SC.
- Cook, W. L. & Kenny, D. A. (2005). The actor-partner interdependence model: A model of bidirectional effects in development studies. *International Journal of Behavioral Development, 29*(2), 101-109. doi: 10.1080/01650250444000405
- Correa, T., Hinsley, A. W., & de Zuniga, H. G. (2010). Who interacts on the web? The intersection of users' personality and social media use. *Computers in Human Behavior, 26*, 247-253. doi: 10.1016/j.chb.2009.09.003
- Davis, D., Shaver, P. R., & Vernon, M. L. (2004). Attachment style and subjective motivations for sex. *Personality and Social Psychology Bulletin, 30*(8), 1076-1090. doi: 10.1177/0146167204264794
- Davis, D., Shaver, P. R., Widaman, K. F., Vernon, M. L., Follette, W. C., & Beitz, K. (2006). "I can't get no satisfaction": Insecure attachment, inhibited sexual communication, and sexual dissatisfaction. *Personal Relationships, 13*(4), 465-483. doi: 10.1111/j.1475-6811.2006.00130.x
- Debatin, B., Lovejoy, J. P., Horn, A. K. & Hughes, B. N. (2009). Facebook and online privacy: Attitudes, behaviors, and unintended consequences. *Journal of Computer-Mediated Communication, 15*, 83-108. doi: 10.1111/j.1083-6101.2009.01494.x

- Ellison, N., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends”: Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, *12*(4), 1143-1168. doi: 10.1111/j.1083-6101.2007.00367.x
- Elphinston, R. A., & Noller, P. (2011). Time to face it! Facebook intrusion and the implications for romantic jealousy and relationship satisfaction. *CyberPsychology, Behavior, and Social Networking*, *14*(11), 631-636. doi: 10.1089/cyber.2010.0318
- Feeney, A., Peterson, C., Gallois, C., & Terry, D. (2000). Attachment style as a predictor of sexual attitudes and behavior in late adolescence. *Psychology and Health*, *14*(6), 1105-1122. doi: 10.1080/08870440008407370
- Fraley, R.C., Davis, K.E. (1997). Attachment formation and transfer in young adults' close friendships and romantic relationships. *Personal Relationships*, *4*, 131-144
- Fraley, R. C., Waller, N. G., & Brennan, K. A. (2000). An item response theory analysis of self-report measures of adult attachment. *Journal of Personality and Social Psychology*, *78*(2), 350-365. doi: 10.1037/0022-3514.78.2.350
- Gentile, B., Twenge, J. M., Freeman, E. C., & Campbell, W. K. (2012). The effect of social networking websites on positive self-views: An experimental investigation. *Computers in Human Behavior*, *28*(5), 1929-1933. doi: 10.1016/j.chb.2012.05.012
- Gentzler, A. L., & Kerns, K. A. (2004). Associations between insecure attachment and sexual experiences. *Personal Relationships*, *11*(2), 249-265. doi: 10.1111/j.1475-6811.2004.00081.x
- Giordano, C., & Giordano, C. (2011). Health professions students’ use of social media. *Journal of Allied Health*, *40*(2), 78-81.
- Gonzales, A. L., & Hancock, J. T. (2010). Mirror, mirror on my Facebook wall: Effects of exposure to Facebook on self-esteem. *CyberPsychology, Behavior and Social Networking*, *14*(1-2), 357-364. doi:10.1089/cyber.2009.0411
- Hendrick, S. S. (1998). A generic measure of relationship satisfaction. *Journal of Marriage and the Family*, *50*, 79-83. doi:10.1089/cyber.2009.0411
- House, J. S., Landis, K. R., & Umberson, D. (1988). Social relationships and health. *Science*, *241*, 540–545.
- Hyland, P., Boduszek, D., Dhingra, K., Shevlin, M., & Egan, A. (2014). A bifactor approach to modeling the Rosenberg self esteem scale. *Personality and Individual Differences*, *66*, 188-192. doi: 10.1016/j.paid.2014.03.034

- Jenkins-Guarnieri, M. A., Wright, S. L., & Hudiburgh, L. M. (2012). The relationships among attachment style, personality traits, interpersonal competency, and Facebook use. *Journal of Applied Developmental Psychology, 33*, 294-301. doi: 10.1037/a0030946
- Kashy, D. A., & Kenny, D. A. (2000). The analysis of data from dyads and groups. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 451–477). New York, NY: Cambridge University Press.
- Kenny, D. (1994). *Interpersonal perception: A social relations analysis*. New York: Guilford Press.
- Kenny, D. (1996). Models of nonindependence in dyadic research. *Journal of Social and Personal Relationships, 13*, 279-294.
- Kenny, D. A., Kashy, D. A., & Cook, W. (2006). *Dyadic data analysis*. New York, NY: Guilford.
- Kiecolt-Glaser, J. K. & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin, 127*, 472–503.
- Lawrence, K., & Byers, E. (1998) Interpersonal exchange model of sexual satisfaction questionnaire. In C.M. Davis, W.L. Yarber, R. Bauserman, G. Shreer, & S. L. Davis (Eds.), *Sexuality-related measure: A compendium* (2nd ed., pp. 514-519). Thousand Oaks, CA: Sage.
- Lee, J., Moore, D., Park, S., & Park, E. (2012). Who wants to be “friend-rich”? Social compensatory friending on Facebook and the moderating role of public self-consciousness. *Computers in Human Behavior, 28*(3), 1036-1043. doi: 10.1016/j.chb.2012.01.006
- Levy, K. N., Ellison, W. D., Scott, L. N., & Bernecker, S. L. (2011). Attachment style. *Journal of Clinical Psychology, 67*(2), 193-203. doi: 10.1002/jclp.20756
- Li, T. & Chan, D. (2012). How anxious and avoidant attachment affect romantic relationship quality differently: A meta-analytic review. *European Journal of Social Psychology, 42*, 406-419. doi: 10.1002/ejsp.1842
- McMahon, J. M., Pouget, E. R., & Tortu, S. (2006). A Guide for multilevel modeling of dyadic data with binary outcomes using SAS PROC NL MIXED. *Computational Statistics and Data Analysis, 50*(12), 3663-3680. doi: 10.1016/j.csda.2005.08.008
- Mehdizadeh, S. (2010). Self-presentation 2.0: Narcissism and self-esteem on Facebook. *CyberPsychology, Behavior and Social Networking, 13*(4), 357-364. doi: 10.1089/cyber.2009.0257

- Noyes, D. (2014, June 13). *The top 20 valuable Facebook statistics*. Retrieved from <http://zephoria.com/social-media/top-15-valuable-facebook-statistics/>
- Oldmeadow, J., Quinn, S., & Kowert, R. (2013). Attachment style, social skills, and Facebook use amongst adults. *Computers in Human Behavior, 29*(3), 1142-1149. doi: 10.1016/j.chb.2012.10.006
- Papp, L.M., Danielewicz, J., & Cayemberg, C. (2012). Are we Facebook official? Implications of dating partners' Facebook use and profiles for intimate relationship satisfaction. *CyberPsychology, Behavior, & Social Networking, 15*(2), 85-90. doi: 10.1089/cyber.2011.0291
- Péloquin, K., Brassard, A., Delisle, G., & Bedard, M. M. (2013). Integrating the attachment, caregiving, and sexual systems into the understanding of sexual satisfaction. *Canadian Journal of Behavioural Science, 45*(3), 185-195. doi: 10.1037/a0033514
- Purnine, D., & Carey, M. (1997). Interpersonal communication and sexual adjustment: The roles of understanding and agreement. *Journal of Consulting and Clinical Psychology, 65*(6), 1017-1025. doi: 10.1037/0022-006X.65.6.1017
- Rao, G., & Madan, A. (2013). A Study exploring the link between attachment styles and social networking habits of adolescents in urban Bangalore. *International Journal Scientific and Research Publications, 3*(1), 1-12.
- Ringer, J. M., Buchanan, E. E., Olesek, K., & Lysaker, P. H. (2014). Anxious and avoidant attachment styles and indicators of recovery in schizophrenia: Associations with self-esteem and hope. *Psychology and Psychotherapy: Theory, Research, and Practice, 87*(2), 209-221. doi: 10.1111/papt.12012
- Robins, R. W., Hendlin, H. M., & Trzesiewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg self-esteem scale. *Personality and Social Psychology Bulletin, 27*(2), 151-161. doi: 10.1177/0146167201272002
- Rosenberg, M. (1989). *Society and the adolescent self-image* (Rev. ed.). Middletown, CT: Wesleyan University Press.
- Ross, C., Orr, E. S., Siscic, J., Arseneault, J. M., Simmering, M. G., & Orr, R. R. (2009). Personality and motivations associated with Facebook use. *Computers in Human Behavior, 25*, 578-586. doi: 10.1016/j.chb.2008.12.024
- Schwartz, P., & Young, L. (2009). Sexual satisfaction in committed relationships. *Sexuality Research & Social Policy, 6*(1), 1-17. doi: <http://dx.doi.org/10.1525/srsp.2009.6.1.1>

- Sinclair, S. J., Blais, M. A., Gansler, D. A., Sandberg, E., Bistis, K., & LoCicero, A. (2010). Psychometric properties of the Rosenberg Self-Esteem Scale: Overall and across demographic groups living within the United States. *Evaluation & The Health Professionals, 33*(1), 56-80. doi: 10.1177/0163278709356187
- Sheldon, P. (2008). The relationship between unwillingness-to-communicate and students' Facebook use. *Journal of Media Psychology, 20*(2), 67-75. doi: 10.1027/I864-1105.20.2.67
- Skues, J., Williams, B., & Wise, L. (2012). The effects of personality traits, self-esteem, loneliness, and narcissism on Facebook use among university students. *Computers in Human Behavior, 28*(6), 2414-2419. doi: 10.1016/j.chb.2012.07.012
- Stafford, L., & Canary, D. J. (1991). Maintenance strategies and romantic relationship type, gender and relational characteristics. *Journal of Social and Personal Relationships, 8*, 217-242. doi: 10.1177/0265407591082004
- Steinfeld, C. (2008). Social capital, self-esteem, and use of online social network sites: A longitudinal analysis. *Journal of Applied Developmental Psychology, 29*(6), 434-445. doi: 10.1016/j.appdev.2008.07.002
- Stephan, C., W., & Bachman, G. F. (1999). What's sex got to do with it? Attachment, love schemas, and sexuality. *Personal Relationships, 6*(1), 111-123. doi: 10.1111/j.1475-6811.1999.tb00214.x
- Stewart, M., Dainton, M., & Goodboy, A. (2014). Maintaining relationships on Facebook: Associations with uncertainty, jealousy, and satisfaction. *Communication Reports, 27*(1), 13. doi: 10.1080/08934215.2013.845675
- Tazghini, S., & Siedlecki, K. L. (2013). A mixed method approach to examining Facebook use and its relationship to self-esteem. *Computers in Human Behavior, 29*(3), 827-832. doi: 10.1016/j.chb.2012.11.010
- Timm, T. M., & Keiley, M. K. (2011). The effects of differentiation of self, adult attachment, and sexual communication on sexual and marital satisfaction: A path analysis. *Journal of Sex & Marital Therapy, 37*(3), 206-223. doi:10.1080/0092623X.2011.564513
- Tokunaga, R. S. (2011). Social networking site or social surveillance site? Understanding the use of interpersonal electronic surveillance in romantic relationships. *Computers in Human Behavior, 27*(2), 705-713. doi: 10.1016/j.chb.2010.08.014

- Tracy, L., Shaver, P. R., Albino, A. W., & Cooper, M. L. (2003). Attachment styles and adolescent sexuality. In P. Florsheim (Ed.), *Adolescent romance and sexual behavior: Theory, research, and practical implications* (pp. 136-179). Chicago: IL.
- Whitty, M., & Gavin, J. (2001). Age/sex/location: Uncovering the social cues in the development of online relationships. *CyberPsychology & Behavior*, 4(5), 623-630. doi: 10.1089/109493101753235223
- Zhao, S., Grasmuck, S., & Martin, J. (2008). Identity construction on Facebook: Digital empowerment in anchored relationship. *Computers in Human Behavior*, 24(5), 1816-1836. doi: 10.1016/j.chb.2008.02.012