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The Effect of Social Media Addiction on Romantic Relationship Outcomes: Factors Associated with Social Media Addiction

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The Effect of Social Media Addiction on Romantic Relationship Outcomes: Factors

Associated with Social Media Addiction

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Thesis commentary submitted in fulfillment of the requirement for a Ph.D. by Published Work

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February, 2021

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DEDICATION

To my parents for their unflinching support and dedication towards my academic goals.

ACKNOWLEDGEMENTS

AUTHOR'S DECLARATION

I declare that the submitted material is based on my original research and has not been copied from the work of others except to the extent that such work has been cited and acknowledged within the text of my work. None of the submitted material, or the published work, has been formally submitted for any other degree.

LIST OF PUBLICATIONS

1. Abbasi, I. S., & AlGhamdi, N. G. (2017a). When flirting turns into infidelity: The Facebook dilemma. *The American Journal of Family Therapy, 45*(1), 1-14. doi:10.1080/01926187.2016. 1277804

2. Abbasi, I. S., & AlGhamdi, N. G. (2017b). The pursuit of romantic alternatives online: Social media friends as potential alternatives. *Journal of Sex & Marital Therapy, 44*(1), 16-28. doi:10.1080/0092623X.2017.1308450

3. Abbasi, I. S. (2019a). The link between romantic disengagement and Facebook addiction: Where does relationship commitment fit in? *The American Journal of Family Therapy*, *46*(4), 375-389. https://doi.org/10.1080/01926187.2018.1540283

4. Abbasi, I. S. (2018a). Social media and committed relationships: What factors make our romantic relationship vulnerable? *Social Science Computer Review, 37*(3), 425-434. doi: 10.1177/0894439318770609

5. Abbasi, I. S. (2018b). Falling prey to online romantic alternatives: Evaluating social media alternative partners in committed versus dating relationships. *Social Science Computer Review, 37*(6), 723-733. doi:10.1177/0894439318793947

6. Abbasi, I. S. (2019b). Social media addiction in romantic relationships: Does user's age influence vulnerability to social media infidelity? *Personality and Individual Differences*, *139*, 277-280. doi: 10.1016/j.paid.2018.10.038

7. Abbasi. I.S., & Drouin, M. (2019). Neuroticism and Facebook Addiction: How social media can affect mood? *The American Journal of Family Therapy, 47*(4), 199-215. doi: https://doi.org/10.1080/01926187.2019.1624223

8. Abbasi, I. S., & Dibble, J. (2019). The role of online infidelity behaviors in the link between mental illness and social media intrusion. *Social Science Computer Review,* 1-14. Advance online publication. doi: 10.1177/0894439319857079

Abstract

Does exposure to glamorous profiles on social media evoke romantic dissatisfaction? Or is social media a refuge for unsatisfied partners? Social networking sites (SNSs) have simplified virtual interactions with strangers cum instant 'friends', whose embellished profiles evoke jealousy, envy, dissatisfaction, and unhappiness. SNSs also provide easy access to alternative romantic partners, which adversely affects commitment to the primary relationship. Commitment is choosing to forsake other choices. Theoretically, commitment to a romantic partner diminishes if alternative partners are readily available. Researchers argue that preoccupation with SNSs activities and monitoring romantic alternatives affect commitment by lowering satisfaction, offering alternatives, and displacing time and emotional investments. Authors of existing studies have mostly used college student populations to examine the effect of SNSs use on romantic relationships. Findings from such studies cannot be generalised to other populations because college students are less likely to be committed, cohabiting, or married. To increase the generalisability of research, I designed three independent studies to explore factors that are linked with SNSs compulsive use (addiction) in both college and non-college populations.

The results showed that romantic disengagement was positively linked with Facebook addiction, and that relationship commitment alone was not enough to protect committed partners against Facebook addiction. Younger partners, irrespective of their relationship status (committed or dating), were predisposed to SNSs addiction and SNSs-related infidelity behaviours. They also experienced low commitment and were more likely to subscribe to a significantly greater number of SNS accounts than older partners. Dating partners, as opposed to committed partners, reported better quality of available romantic alternatives (especially sexual alternatives) despite reporting no difference in their SNSs-related infidelity behaviours or

relationship satisfaction. There was also a significant positive relationship between SNSs addiction and SNSs-related infidelity behaviours, and this relationship was moderated by age. Additionally, neuroticism was connected with negative affect and Facebook addiction partially mediated this relationship. Finally, mental health status was also linked with SNSs addiction and this relationship was partially mediated by SNSs-related infidelity behaviours.

Overall, SNSs addiction appeared to be linked with adverse personal (neuroticism, mental illness) and romantic outcomes (romantic disengagement, low commitment, SNSs-related infidelity). Relationship status (dating vs committed/married) and age also appeared to influence the connection between SNSs addiction and adverse behaviours. Future studies can build on these findings and explore other SNSs behaviours that are linked with adverse relationship outcomes. SNSs are likely to remain the main platform for virtual communications for the foreseeable future. Therefore, users should be wary of SNSs interactions that can potentially jeopardise their romantic relationships.

Chapter 1

Introduction

Social networking sites (SNSs) enable their subscribers/users (users, henceforth) to connect in a virtual social environment by simply initiating a 'friend' request. Once the users are connected as 'friends', they can freely interact and monitor each other's profiles. While SNSs can facilitate relationship maintenance and development of social capital (Kwon et al., 2013), they also entail a 'dark side' (Fox, 2016), which alludes to the negative behaviours and repercussions that spiral out of SNSs use/abuse. For example, a simple expression of interest (such as liking or commenting on a picture) can be perceived as a way of initiating romantic engagement (Marwick & boyd, 2014). This perception, supplemented by frequent virtual interactions and exposure to attractive images, may transform an innocuous interest into an emotional affair (Abbasi & AlGhamdi, 2017a). Virtual interactions are prone to be uninhibited and could perpetuate emotional intimacy through self-disclosures (Carter, 2016). Self-disclosure promotes understanding and reciprocation, which may escalate non-intimate conversations into intimate disclosures (Abbasi & AlGhamdi, 2017b). Authors of a recent study found that the extent of self-disclosure corresponds to the degree of social intimacy, and trust partially mediated the relationship between the success of online dating and social intimacy (Nayar & Koul, 2020).

Researchers argue that Facebook is used by partners to solicit romantic alternatives, irrespective of their relationship status (that is, single or committed; Drouin et al., 2014). Romantic alternatives represent the desired potential or continuing romantic or sexual partner with whom one communicates, but to whom one is not presently exclusively committed (Dibble & Drouin, 2014). Additionally, the unique affordances of social media (such as anonymity, accessibility, acceptability, ambiguity, and affordability; Abbasi & AlGhamdi, 2017a; Hertlein &

Stevenson, 2010) further accentuate and contribute to adverse outcomes such as development/escalation of violence among romantic partners and breakdown of romantic relationships (Clayton et al., 2013; Cravens & Whiting, 2015; Drouin et al., 2014; Fox et al., 2014).

Theoretically, interest in alternatives is a manifestation of low commitment (Rusbult, 1980). In the context of social media, researchers found that romantic partners with low commitment were more likely to send and accept friend requests with romantic interests (Drouin et al., 2014). However, commitment was unrelated to the number of alternatives on Facebook and the frequency of participants' solicitation behaviours (Drouin et al., 2014). Displacing time and emotional investments away from the primary relationship and into an extra-dyadic relationship undermines commitment (Rusbult et al., 2011). Whereas, mutual satisfaction, absence of alternatives, and investments made in the relationship strengthen commitment (Rusbult, 1980). Additionally, increased dependence on the primary relationship bolsters commitment, and lowered dependence weakens commitment (Rusbult et al., 1998).

SNSs enable users to publicly declare their relationship status, provide a link to their partner's profile, and create a couple's page. Certain SNSs activities could strengthen the primary romantic relationship. In support of this notion, authors of a longitudinal study indicated that, in dating couples, Facebook self-presentational cues (such as indicating correct relationship status, posting dyadic photographs, posting on a partner's wall) were linked with an increase in relationship commitment, which in turn increased the likelihood that the couple would be together after six months (Toma & Choi, 2015). In this study, the number of mutual friends and the number of posts written

by partners on the participants' walls were negatively linked with commitment. In another study, partner's surveillance and infidelity surfaced as significant mediators between SNSs use and relationship conflict (Arikewuyo et al., 2018).

   Due to ethical considerations, I focused on examining personal and relationship factors that could protect against or predispose partners to romantic indulgences with online alternatives. To accomplish this, I conducted three IRB approved studies and reported the findings in six research papers, which are accompanied by two literature reviews. Note that some of the research papers are based on the same datasets, but include analyses of different variables (i.e., age, relationship status, SNSs addiction, romantic disengagement, commitment, infidelity, neuroticism, and mental health).

Chapter 2

Literature Review

SNSs allow users to create and organize a social 'supernet' (Donath, 2007) through which public and private interactions occur easily. Public interactions (referred to as social grooming; Donath, 2007) demonstrate the existence of a relationship publicly (such as posting on a friend's wall, liking, commenting, tagging). In contrast, private interactions occur discreetly through private messages (Fox et al., 2013). Interactions on SNSs enable users to remain loosely connected with friends and acquaintances, develop and maintain existing and new relationships, receive news, and stay up to date with what is happening around the world (Alloway & Alloway, 2012; Billedo et al., 2015; Fox et al., 2013). Currently, Facebook is the most popular SNS, with 1.79 billion daily and 2.70 billion monthly active users (as of June 2020; Zephoria, 2020a).

Researchers have explored the underlying motivations for SNSs use. Proponents of the dual-factor model of Facebook use (Nadkarni & Hofmann, 2012) suggest that the need to belong and self-presentation are two main motivations for using Facebook. These motivations may work separately or in conjunction to drive SNSs use. For instance, SNSs profiles are manipulated to project a highly desirable social image online (Mendelson & Papacharissi, 2010). This allows users to meet their basic need to belong (Sheldon et al., 2011). Moreover, the uses and gratifications theory (Katz et al., 1974), which was originally developed for media, is now employed to examine the underlying motivations for social media use. These motivations include developing and maintaining relationships, seeking communication, information, escape, entertainment, use of Facebook applications or features, social identification, social influence,

interconnectivity, popularity, social support, social connectedness, and pursuing romantic partners (Kwon et al., 2013; Sheldon et al., 2011; Utz et al., 2015). Of all these, the 'interpersonal habitual entertainment' emerged as the strongest gratification factor for Facebook use (Valentine, 2012). Interpersonal habitual entertainment is a combination of relationship maintenance, entertainment, and a habit motive (Valentine, 2012). This suggests that users regard SNSs activities as an entertaining way of maintaining relationships, which ultimately develops into a habit.

SNSs are continually developing new features to meet the unique needs of their user populations. For instance, Facebook is a multi-media platform that is used mostly for hedonic gains and to establish and maintain existing as well as new relationships, including modern romantic relationships (Billedo et al., 2015; Qiu et al., 2012). LinkedIn is used mostly for utilitarian purposes by career-oriented individuals to grow their professional networks, Twitter is used to share public information, Tinder is used to find romantic partners, and Snapchat is used mostly by young people for sensitive messaging (Vaterlaus et al., 2016).

Chapter 3

The Effects of Using Social Networking Sites

There are both advantages and disadvantages connected with SNSs use. The underlying motivations that drive SNSs use determine whether social media will have a beneficial or harmful effect on users' lives. For instance, SNSs can have desirable effects when they are used for discussions to support people who have health concerns (Phua, 2013) or when they are used to encourage people to engage in civic and political activities (such as voting or jury duty; Hyun & Kim, 2015), or when they are used to develop and maintain social capital (Barker et al., 2015). Conversely, the adverse effects arising from SNSs use abound in the literature. For example, SNSs use can adversely affect users' self-worth, happiness, and subjective well-being by exposing them to negative experiences such as hate speech, arguments, and aggressive behaviours (Sabatini & Sarracino, 2014; Stein et al., 2019). SNSs use can also potentially develop into a recurring behavioural pattern (or habit) that could lead to a psychological dependency (Turel & Serenko, 2012). There is also evidence to support the idea that greater internet use predicts a lack of intimacy and lower relationship quality (Halpern & Katz, 2017). Facebook use was also inversely linked to marriage quality and happiness (Valenzuela et al., 2014). Interestingly, people in marriages of a shorter duration (three years or less) reported more Facebook-related relationship conflicts than those in longer marriages (Clayton et al., 2013). These researchers argued that newly established relationships may be at a greater risk due to higher Facebook use (Clayton et al., 2013).

There is ambiguity regarding how relationship troubles are linked to SNSs use. However, it is clear that some users consider some of their SNSs friends as romantic

alternatives (Dibble et al., 2015; Dibble et al., 2018), which can potentially lead to jealousy, surveillance, conflict, loss of trust, envy, social tension, and infidelity (Carter, 2016; Drouin et al., 2014; Mukesh et al., 2016). Researchers have also found that exposure to alternatives on SNSs is directly related to making a romantic comparison with one's primary partner (de Lenne et al., 2018).

SNSs communications may evoke romantic jealousy (Muise et al., 2013), which is inversely linked with relationship satisfaction (Tokunaga, 2016). Romantic jealousy can be defined as an emotional, behavioural, or cognitive response triggered to protect a romantic relationship from a perceived or real threat (such as a rival partner; Bevan, 2013). In studies involving various cultures and age groups, romantic jealousy has consistently emerged as the main outcome of Facebook interactions with a romantic alternative (Fox & Moreland, 2015; Rueda et al., 2015). Interestingly, certain social media types cause more jealousy than others. For example, Snapchat activity has been linked with greater jealousy than Facebook (Utz et al., 2015), which could be because of the exchange of explicit images. Research indicated that 13% of European young adults and 1.3% of US adults reported using Snapchat app for sexting (sharing explicit sexual images; Roesner et al., 2014; Utz et al., 2015).

Chapter 4

Variables of Interest

Below are the key variables examined in the three studies.

SNSs Addiction

SNSs developers are constantly looking for new features to ensure maximum 'dwell time' (mean time that a user spends engaging in a website's content), extend 'scroll depth' (how far down a user views the webpage), minimise 'bounce rate' (how quickly a user navigates away from a website after viewing just one page), and reduce time between visits (Aboujaoude & Lina, 2020). To engage viewers and encourage constant involvement, SNSs offer variable interval reinforcements (such as new content) that are augmented by classical conditioning cues (mobile notifications; Hormes et al., 2014). Thus, the framework of SNSs is structured to reinforce constant access to online content and also encourages 'sofalizing' (a combination of 'sofa' and 'socializing'), which alludes to engaging in online interactions rather than meeting others offline (Tosuntaş et al., 2020).

Simple virtual communications can potentially progress into habitual interactions and eventually evolve into a pathological psychological dependency (Turel & Serenko, 2012) called 'social networking addiction' (SNSs addiction; Andreassen et al., 2012; Karaiskos et al., 2010; Kuss & Griffiths, 2017) or 'Facebook intrusion' (Elphinston & Noller, 2011). SNSs addiction represents an obsessive pattern of seeking and using SNSs that interferes with relationship functioning and daily activities (Elphinston & Noller, 2011). Although controversial, the term social media addiction is now prevalent in literature (Block, 2008). Researchers justify using the term 'SNSs addiction' based on the

physiological and neuro-chemical bodily reactions, which are linked with social media interactions. For example, SNSs use is linked with physiological arousal and activation of appetitive pathways that resemble other behavioural addictions (Wise et al., 2010). Social media friends' reactions such as likes, tags, shares, and comments are associated with the release of dopamine in the brain, which motivates further social media use (Haynes, 2018). SNSs addiction also shares many symptoms which characterise substance-related addictions (Kuss & Griffiths, 2011, 2017). These include salience (cognitive preoccupation with an activity that dominates thinking and behaviour), mood modification (induction of mood alterations, feelings of pleasure and/or sadness), tolerance (an increased amount of activity is required to achieve the same state of mind that was initially achieved with low usage), interpersonal conflict (problems at home or work), withdrawal (experiencing negative psychological and/or physiological symptoms when the activity is curtailed or discontinued), and relapse (reinstatement of the problematic behaviour after abstinence or control; Andreassen et al., 2012; Kuss & Griffiths, 2017). Additional symptoms of SNSs addiction include deficient self-regulation, concealment of addictive behaviours, escapism, loss of control, and neglect of personal life (Kuss & Griffiths, 2011).

The biopsychosocial model of internet addiction (Griffiths, 2005) can also explain the mechanism underlying SNSs addiction because internet addiction and SNSs addiction are closely linked with each other (Kuss & Griffiths, 2011, 2017). SNSs addiction may develop as a result of biopsychosocial processes in conjunction with situational and structural factors. Users may seek constant gratification through habitual interactions that are reinforced by conditioned cues. This pattern could lead users to a state of dependency and eventually addiction.

It is noteworthy that most of the research on SNSs addiction is carried using self-report scales (e.g., Facebook Intrusion questionnaire; Elphinston & Noller, 2011) and the participants

were not clinically diagnosed with Facebook or SNSs addiction. The Facebook intrusion scale measures aspects of behavioral addiction such as 'cognitive pre-occupation' measured using item "I often think about Facebook when I am not using it"; 'interpersonal conflict' measured using item "arguments have arisen with others because of my Facebook use"; 'euphoria' measured using item "I feel connected to others when I use Facebook"; 'relapse and reinstatement' measured using item "I have been unable to reduce my Facebook use"; 'loss of control' measured using item " I lose track of how much I am using Facebook"; 'withdrawal' measured using item "the thought of not being able to access Facebook makes me feel distressed". High scores on the Facebook intrusion questionnaire point towards an excessive attachment or over-engagement with Facebook that interferes with daily activities and relationship functioning (Elphinston & Noller, 2011). This pattern is also seen in other behavioral addictions. Nevertheless, the current Diagnostic and Statistical Manual of Mental Disorders (DSM-V) did not include 'Internet addiction' or social media addiction' as an addiction disorder. However, DSM-V has classified Internet Gaming Disorder as an addiction disorder and has listed Internet addiction as a condition for further study. I will be using the term 'SNSs addiction' throughout the document to refer to problematic SNSs use.

Relationship Commitment

Relationship commitment is the key force within a romantic relationship and represents an intention to maintain and invest in a long-term relationship (Rusbult, 1980). It is described as a balance between the partner's investment in the relationship and his/her quality of available alternatives such that greater investments correspond to lower quality of alternatives (Rusbult, 1980). Relationship commitment manifests itself as a psychological attachment to one's partner (Rusbult et al., 1998) and is influenced by three independent factors: satisfaction with the

relationship, quality of alternatives, and investment size (Rusbult et al., 2011). Investments are the concrete resources that are afforded by the partnership, which would be lost if the relationship ends. Essentially, partners who are satisfied with their significant other, lack better romantic alternatives, and are heavily invested in their relationship develop a psychological attachment to their significant other (Rusbult et al., 2011).

It is noteworthy that partners in a committed relationship are not immune to evaluating romantic alternatives (Fletcher, 2002). As mentioned earlier, Facebook is used by partners (both in dating and committed relationships) to solicit romantic alternatives who are masked as 'friends' (Drouin et al., 2014). High frequency of SNSs use is also directly linked with greater exposure to SNSs friends' profiles and information shared by them (Joinson, 2008). In theory, committed partners derogate romantic alternatives (Rusbult, 1980). However, researchers found that the frequency of young adults' (18-32 years) exposure to romantic alternatives on SNSs was positively related to their pursuit of those alternatives, which also adversely affected their commitment (de Lenne et al., 2018).

A recent PEW (2020) survey found that a majority of the sample of SNSs users (70%) admitted to lying online to appear more attractive. Unsurprisingly then, some users succumb to the seemingly idyllic digital lives of other users and perceive having a greater number and quality of alternatives available to them (Chua & Chang, 2016). It is possible that SNSs have reformed users' perceptions regarding the availability and quality of potential romantic alternatives. Quality of alternatives is the evaluation of the rewards and costs of the available best alternative to the primary relationship (such as a new partner, preference for being single, spending time with friends/family; Impett et al., 2001). Thinking about alternatives and/or

perceiving to have a better quality of available alternatives is inversely linked with relationship satisfaction and commitment (Drouin et al., 2015).

It is noteworthy that relationship satisfaction and commitment are often correlated (e.g. Fletcher et al., 2000), yet they are not interchangeable. Relationship satisfaction is the level of happiness a person feels within his/her romantic relationship (Corra et al., 2009). Interestingly, even when partners feel satisfied with their significant other, they may still not experience total commitment to their relationship (Impett et al., 2001). Commitment carries a higher weight than relationship satisfaction in predicting whether partners will continue with or terminate their primary relationship (Rusbult et al., 2011). This may be because committed partners depend on their primary relationship for financial, emotional, and social needs (Rusbult et al., 1998). Consequently, committed partners include their significant other in their own self-concept (e.g., they frequently use we, our, us) and transmit a sense of 'we-ness' to the world (Aron et al., 1992; Rusbult et al., 2011).

Marital Disaffection

Marital disaffection or romantic disengagement refers to a deterioration of love, an increasing sense of indifference, gradual loss of emotional attachment, and a decline in caring for one's partner (Barry et al., 2008; Kayser, 1993; for an in-depth review also see Abbasi & AlGhamdi, 2017c). Researchers contend that marital disaffection stems from a lack of emotional intimacy, increasing negativity, controlling behaviours, and/or inadequate ways of resolving conflict (Barry et al., 2008; Kayser, 1993, 1996; Kayser & Rao, 2006). Partners who communicate well and exchange regular displays of affection report higher relationship satisfaction because their needs (such as security,

companionship, intimacy, and belonging) are met within their relationship (Phillips et al., 2009).

It is plausible that the emotionally indifferent partners are prone to using SNSs more often to fill

their emotional void (Seidman, 2013; Sheldon et al., 2011).

Infidelity

      SNSs interactions with romantic alternative(s) may lead users to develop an emotional

intimacy that could lead to infidelity (Hertlein & Piercy, 2006). Infidelity consists of

"interactions in a relationship in which at least one of the people engaging in it understands there

to be a violation of agreed or implicit sexual and/or emotional boundaries within their couple

relationship" (Daines, 2006, p. 48). Given the lack of physical presence and absence of

contextual cues, online interactions can quickly become uninhibited and elicit strong physical

and sexual reactions (Alapack et al., 2005; Carter, 2016; Helsper & Whitty, 2010). Although

cybersex may be prevalent in virtual romantic interactions (Smith, 2011), online infidelity can be

both emotional and/or sexual (Henline et al., 2007). Researchers argue that emotional affairs are

the hallmark of Internet infidelity (Hertlein & Piercy, 2006). Other SNSs infidelity behaviours

include adding an incorrect relationship status, 'friending' ex-partner(s), viewing pornography,

sending private messages, and flirting (Clayton et al., 2013; Cravens et al., 2013). The

detrimental effects of infidelity on romantic relationships include low relationship satisfaction,

conflicts, negative emotional experiences, fights, retaliatory behaviours, loss of trust, reduced

feelings of love, separation, and relationship termination (Drouin et al., 2014, 2015; Valenzuela

et al., 2014). It is noteworthy that the risk of infidelity is lower in relationships that manifest

higher commitment (McAnulty & Brineman, 2007).

Mental Illness

Individuals living with mental illness also use SNSs to communicate and connect with others online. Researchers found that problematic SNSs use was positively associated with personality disorders, eating disorders, anxiety, stress, obsessive-compulsive disorder, attention deficit hyperactivity disorder, and depression (Moreno et al., 2011; Steers et al., 2013; Hussain & Griffiths, 2018). Another study found that 97% of young people (12-21 years) living with mental illness used SNSs (Birnbaum et al., 2015). Acknowledging the link between mental illness and SNSs use, the American Academy of Pediatrics (AAP; 2011) coined the term 'Facebook depression', which is characterised by "depression that develops when pre-teens and teens spend a great deal of time on social media sites, such as Facebook, and then begin to exhibit classic symptoms of depression" (p. 802). Interestingly, some researchers have found a positive correlation between depression and uncontrolled SNSs use (Hanprathet et al., 2015; Wegmann et al., 2015); while others have found an inverse relationship between depression and SNSs addiction (Andreassen et al., 2016).

The quality of SNSs experiences and users' perceptions about their online interactions (whether positive or negative) appeared to be more important in predicting adverse mental health outcomes than the frequency of SNSs use (Davila et al., 2012). For example, researchers have found that specific SNSs activities (such as posting updates frequently, accepting ex-partners as friends, or following strangers) were more consequential for mental health than the total amount of time users spent on SNSs (Wright et al., 2013). This could be because SNSs promote an altered impression of users' physical appearance, intelligence, moral integrity, and educational level (Pantic, 2014). It is plausible that people living with mental illness and/or negative traits may

prefer to use SNSs for communication to mask their true identity and garner more support than they could possibly receive in a face-to-face situation.

Neuroticism

Certain personality traits may increase the risk of developing Internet addiction (Kuss et al., 2014). Individuals high in neuroticism are more sensitive to threat and are more prone to experiencing negative affect (Costa & McCrae, 1997), even in neutral conditions (Abbasi, 2016). They also experience feelings of loneliness (Correa et al., 2010), garner low social support (Swickert et al., 2002), and fear rejection (Malone et al., 2012). Additionally, individuals high in neuroticism are prone to feeling self-conscious and socially anxious (Trapnell & Campbell, 1999). Social anxiety in and of itself is indirectly significantly linked with sofalizing (Tosuntaş et al., 2020). Individuals high in neuroticism are reluctant to share personal information in a face-to-face situation (Orchard & Fullwood, 2010). Nevertheless, they tend to reveal more about their hidden selves and promote their ideal selves online (Seidman, 2013) to seek validation, attract social support, and improve mood (Błachnio et al., 2016; Qiu et al., 2012). Researchers argued that individuals who experience discomfort and stress are motivated to use SNSs to disconnect with their negative feelings and enhance their mood (Koc & Gulyagci, 2013). Nevertheless, some scholars have found that Facebook activity causes a deterioration in mood immediately after Facebook use (Sagioglou & Greitemeyer, 2014).

Interestingly, online friends can usually predict many of user's personality traits (such as extraversion, agreeableness, conscientiousness, and openness); however, they are unable to detect neurotic traits (Back et al., 2010). This could be because individuals high in neuroticism are likely to disclose more positive than negative emotional experiences, which may cause others to hold a positive impression of their emotional well-being (Qiu et al., 2012). Additionally,

neurotic traits such as defensiveness, poor impulse control, contempt, hypersensitivity to criticism, and feelings of social inferiority are linked with poor marital adjustment (Nemechek & Olson, 1999; Abbasi, 2017d). Since individuals high in neuroticism are more likely to receive higher social and emotional support online, than in a real-world situation, they are prone to spending excessive time on SNSs (Blachnio et al., 2016). This over-engagement with social media could lead neurotics to SNSs addiction.

Age

Emerging adults (18 to 24 years) are the primary SNSs audience (Duggan et al., 2015). Adolescents and emerging adults are prone to developing habitual SNSs interactions, which can escalate into addiction through neural sensitisation and reduction in weighing the potential long-term harms of SNSs behavioural addiction (Błachnio et al., 2015; Turel & Serenko, 2012). Young individuals are more likely to become addicted to the Internet (Kuss et al., 2013) and technology (Ferraro et al., 2007), and are more susceptible to engaging in negative online behaviours because they tend to take risks and disclose more freely in online environments than in face-to-face situations (Gray, 2016). Young users prefer certain social media platforms over others. For example, 41% of US teens say that Snapchat is their preferred social media platform (Omnicoreagency, 2020), which has reached 90% of all 13-24-year-olds globally and 75% of all 13-34-year-olds in the US (Zephoria, 2020b).

Chapter 5

Theoretical Approaches

Multiple theories can explain the underlying connection between SNSs use and romantic relationship outcomes. Proponents of evolutionary theories of mate selection claim that both men and women are inclined towards physically attractive extra-dyadic partners (Haselton & Gangestad, 2006). For women, physically attractive men are preferred because attractiveness is considered a sign of high genetic fitness (Pillsworth et al., 2004); whereas, men prefer physically attractive women because attractiveness is considered a sign of their health and fertility (Singh, 1993). Based on this evolutionary stance, in the age of social media, partners may be more inclined to spend extended time on SNSs where they can virtually summon attractive 'friends' with a mere click.

Proponents of the hyper-personal communication framework (Walther, 1996) contend that absence of nonverbal cues, in computer-mediated communications, render users more likely to make uninhibited emotional disclosures, which lead them to form 'hyper-personal' relationships. Essentially, users disclose their intimate feelings much earlier in a developing relationship online than they would in a face-to-face situation (Walther, 1996). Proponents of the social disinhibition effect (Suler, 2005) hold that individuals are often more disinhibited in an online environment than in a face-to-face environment. Hence, they are more willing to make intimate disclosures. The social penetration theory (Altman & Taylor, 1973) contends that intimacy and self-disclosure are two crucial components of relationship development. Emotional disclosures solicit reciprocation and precede relationship development. In the virtual environment, intimate relationships are formed relatively quickly due to uninhibited disclosures and even committed partners use SNSs for sexual gratification, which could adversely affect

their primary romantic relationship (Carter, 2016; Helsper & Whitty, 2010; Kiruhi et al., 2018; Walther, 1996).

Furthermore, cultivation theory (originally developed with users of television in mind; Morgan & Shanahan, 2010) may also explain how the idealised images of online 'friends' may disillusion partners from their primary relationship. In the context of SNSs, cultivation may take place when partners engage in SNSs activities (Stein et al., 2019) and then internalise unrealistic beliefs and norms based on the idealised presentation of their friends' virtual lives (Reizer & Hetsroni, 2014). Valenzuela and colleagues (2014) proposed that SNSs can influence romantic relationships through two routes. The first is the 'self-selection route', where partners in a troubled relationship use excessive SNSs. The second is the 'negative effect route', which argues that SNSs use lowers relationship satisfaction by facilitating connection with potential partners (including past partners), promoting excessive SNSs use, and triggering situations that can threaten the primary romantic relationship (Valenzuela et al., 2014). Finally, proponents of the investment model of commitment (Rusbult, 1980) argue that, aside from mutual satisfaction and absence of alternatives, investment size (or mutual ties) is the binding force behind coupledom. Committed partners are more inclined to invest in their relationship (emotionally, physically, financially), and are more likely to dismiss romantic alternatives (Johnson & Rusbult, 1989). Hence, greater investments translate into higher commitment.

Similarly, multiple theoretical perspectives could explain the basis of SNSs addiction. For example, the social skill model (Caplan, 2005) suggests that people who lack social skills feel less threatened in an online environment. Therefore, they prefer

online interactions instead of face-to-face interactions. Furthermore, according to the proponents

of the cognitive behavioural model (Davis, 2001), some SNSs users possess maladaptive

cognitions that are intensified by social isolation and/or lack of peer support, which eventually

lead them to develop maladaptive compulsive behaviours.

Chapter 6

Aims and Objectives

It has previously been established that partners who dismiss romantic alternatives in favour of their primary relationship espouse high levels of commitment (Johnson & Rusbult, 1989). Interestingly, this pattern is not seen in college students. For example, college students who reported to be in a committed relationship also reported comparable numbers of SNSs romantic alternatives when compared with their single counterparts (Dibble & Drouin, 2014; Dibble et al., 2015; Dibble et al., 2018). Generally, college students have access to a large number of available alternatives (Vennum et al., 2017) and have fewer barriers (such as children, social stigma, financial dependence) to leaving their primary partner. College students are also less likely to be married, therefore, they may not face additional hurdles to engage in and maintain alternative relationships such as cohabitation and time constraints (Dibble et al., 2018). College students are also identified as an at-risk population for Internet addiction (Widyanto & Griffiths, 2006) because of their Internet literacy (Leung & Lee, 2012), unlimited Internet access, flexible schedules, and absence of parental interference (Kuss et al., 2013).

Most college-age participants are drawn from introductory classes populated by first-year college students who have just left their family and friends to go to the university/college. As a result, they may have relatively high levels of depression, which is known to inhibit effective self-regulation (Larose & Eastin, 2004). Therefore, the experiences of college students may not fully reflect the experiences of older SNSs users, yet they have been the focus of most SNSs research (Dibble & Drouin, 2014; Drouin et al., 2014; Dibble et al., 2015, 2018). To include a more diversified SNSs user population

and cover this gap in the literature, I devised new research to explore the association of SNSs addiction with various factors such as commitment, SNSs-related infidelity behaviours, marital disaffection, age, mental illness, and neuroticism. The overarching hypotheses were that Facebook intrusion/SNSs addiction will be positively linked to the total number of social media subscriptions, romantic disengagement, SNSs infidelity, negative affect, mental illness, and neuroticism. Also, SNSs addiction will be negatively linked with age, commitment, marital adjustment, and relationship satisfaction.

Chapter 7

Methodological Considerations

Prior to my studies, I examined the existing literature on social media research. Most of the existing quantitative research on social media included self-report measures (Drouin et al., 2014; Dibble & Drouin, 2014; Dibble et al., 2014, 2015). Due to the Institutional Review Board (IRB) related legal issues, I could not experimentally study the 'cause and effect relationship' between SNSs abuse and romantic relationship outcomes. Considering this restriction, I conducted three online cross-sectional studies. Cross-sectional research design enables the measurement of all variables of interest simultaneously. For each of the three studies, separate surveys were administered one after the other. The target population included adult social media users (18 years and older). Data were collected from partners all over the world. Papers four, five, and seven reported findings based on mostly US sample (76% or over). However, the analyses reported in paper three, six and eight were restricted to US sample only per the suggestions of the reviewers (to minimize the cross-cultural confounds). All participants completed the study online, which was comprised of demographic questionnaires and multiple scales that measured SNSs addiction, neuroticism, and various romantic relationship variables (such as relationship commitment, relationship satisfaction, SNSs-related infidelity behaviours, quality of alternatives, and marital disaffection). Previous researchers have indicated that individuals identify potential alternatives more readily from their SNSs friends' list than from memory (Drouin et al., 2015). Therefore, participants in the second and third study were asked to check their SNSs friends' list, as

a memory primer, and accurately report the number of potential partners they would consider having a committed or sexual relationship with, if they were single.

Each survey was prepared on SurveyMonkey® and a unique link to each study was posted on San Jose State University's official research webpage, Amazon Turk (MTurk), and certain SNSs (Facebook, Twitter, WhatsApp, and LinkedIn). Researchers have lately voiced their concerns regarding the seriousness of MTurk participants and the quality of data collected from them (Aruguete et al., 2019). Some researchers consider MTurk data to be unreliable and of low quality because, in some cases, it has failed to replicate well-established findings (Chmielewski & Kucker, 2019). In contrast, others have indicated that MTurk can be used to collect high-quality data quickly and inexpensively (Buhrmester et al., 2018). Buhrmester and colleagues (2018) also argued that participants recruited through MTurk are slightly more demographically diverse than typical Internet samples, and are remarkably more diverse than the typical US college participants. Despite this controversy, results from the MTurk data continue to be published in American Psychological Association Journals (e.g. Seidman et al., 2019). I also used MTurk along with other platforms to collect responses. As a precaution, I added attention-check questions to ensure high quality data per the recommendation of researchers concerned with MTurk data quality (Aust et al., 2013). It is noteworthy that my findings corroborated established findings. For example, my research confirmed that neuroticism is positively linked with negative affect (Costa & McCrae, 1997) and SNSs addiction is inversely linked with age and commitment (Blachnio et al., 2015; Kuss & Griffiths, 2011; Kuss et al., 2013; Drouin et al., 2014, 2015).

Data from three studies were analysed and reported separately in six papers. Findings from the first study were reported in papers three and seven, findings from the second study were

reported in paper four, and findings from the third study were reported in papers five, six and eight. In each paper, I analysed a separate set of variables concerning Facebook intrusion/SNSs addiction and its relationship with romantic relationship variables, mental health, age, and neuroticism as they existed in SNSs users' population at a single point in time.

Reflexivity

I have been interested in observing people in their natural settings. Social media offers an opportunity to virtually monitor users discreetly. However, the persona represented on social media is overly glossed. I worked under the assumption that when users are asked to anonymously report their SNSs behaviors, they would report their behaviors honestly due to anonymity. I adopted a primarily empiricist approach because that was the approach to psychology within which I had been trained. On reflection, I acknowledge that, this approach leaves certain questions unanswered (e.g. about causality). Therefore, the famous 'chicken and egg problem' in the context of social media use and relationship outcomes remains undetermined. For example, it is unclear whether relationship problems cause partners to spend excessive time on social media or vice versa, or both? Partners themselves are in the best place to answer what behaviors precede interpersonal conflicts. Therefore, interviews could shed insights into SNSs behaviors that are at the root of relationship problems.

It is noteworthy that, during my research, I was not enrolled in a traditional PhD program. Fortunately, my research proposal was reviewed by a faculty member at my graduating university and with her help, I was able to get it approved from the IRB. I conducted the first study online and reported the findings in the first research article. The

feedback I received from the peer reviewers helped me reflect on the limitations of my research. I also sought advice from other researchers on how to address the limitations of my research. Taking guidance from all available sources, I addressed the limitations of the first study in the second study and continued to improve the second study in the third study. I also added qualitative questions to gain partner's perspectives on the link between social media abuse and romantic relationship outcomes. However, the responses were not analysable due to the inadequate inter-rater reliability following coding of the data. In hindsight, I would conduct a structural clinical interview with both partners included to determine the cause of relationship problems linked with SNSs use. Also, interviewing partners who report high SNSs addiction scores and greater SNSs infidelity behaviours could give clarity on what triggers SNSs over-engagement. Lastly, the cause of the predilection of mentally ill towards SNS addiction and SNSs infidelity could be deciphered in a structural interview.

My analyses were restricted to heterosexual partners because they formed the majority of my sample. Consequently, the results cannot be generalised to partners with gay and lesbian sexual orientations. I adopted a heteronormative world-view, which led to some weaknesses in generalisability. My approach was based on the material already in the literature. For example, some of the questionnaires I used are mostly based in a heteronormative world-view. The Social Media Infidelity-Related Behaviours Scale, which was used in the third study, makes assumptions about the normality of exclusive heterosexual dyadic relationships. It also makes assumptions about the acceptable behaviours of romantic relationship partners. For example, one assumption is that 'partners shouldn't interact with old romantic partners', which may not be true for all types of relationships. Also, the general concept of 'internet infidelity' could be seen as stigmatizing people who are not in exclusive dyadic relationships – some people may be in

relationships where flirting with others online is acceptable and even expected. For example, for people in open or polyamorous relationships, such as in consensual non-monogamous (CNM) relationship, exclusivity is not expected and partners mutually agree to permit extra-dyadic romantic and/or sexual encounters (Abbasi & AlGhamdi, 2017a). Therefore, in CNM relationship, the satisfaction with the relationship may not be affected because of the mutual agreement. It is noteworthy that CNM relationships are not common. One study found that only 5% of 2,395 partners reported to be in a CNM relationship, which mostly included males with non-heterosexual partners (Rubin et al., 2014). It is plausible that CNM relationships are more prevalent in gay men. Apparently, different attitudes towards exclusivity may confound the results if the analyses regarding infidelity, relationship satisfaction, or relationship commitment included partners with all sexual-orientations. To avoid confounding my results, I restricted my analyses to hetero-sexual partners. Therefore, my research findings cannot be generalized to gay and lesbian population. In my future research, I would ask a question regarding the CNM relationship and would examine partners with all sexual orientations to see if my findings hold up for all partnerships.

Chapter 8

Discussion

The ubiquity of computer mediated communication underscores the importance of examining the long-term effects of virtual interactions on romantic relationships. Based on my literature review, I had learnt that there is an association between romantic relationships troubles and SNSs addiction and also that certain SNSs behaviours threaten the romantic relationship. I sought to examine this association and also explored factors that could possibly protect partners against relationship troubles, albeit their SNSs addiction. For this, I examined personal factors (e.g., personality, age, gender, relationship status, affect, mental illness), interpersonal factors (such as commitment, marital adjustment, relationship satisfaction, romantic disengagement), and SNSs related behaviours (such as SNS infidelity, adding ex-partners, comparing partners with alternatives, interaction with alternatives). My main hypotheses were that Facebook addiction/SNS addiction will be linked with low commitment, low relationship satisfaction, low marital adjustment, high romantic disengagement, negative affect, neuroticism, and age. It is noteworthy that some of the ideas developed over time as my research developed. I tested my hypotheses using Pearson's bi-variate correlations and regression models. Once the null-hypotheses were rejected, I tested mediation and moderation models to find the possible mediators and moderators of the hypothesized relationships.

Acknowledging that merely thinking about online romantic alternatives lowers relationship satisfaction and commitment (Drouin et al., 2015), I sought to examine how uncontrolled SNSs use could be connected with adverse romantic relationship outcomes. My research adopted an empiricist or positivist position, which views reality as objective, universal, and quantifiable (Darlaston, 2007), I sought to examine how uncontrolled SNSs use could be

connected with adverse romantic relationship outcomes. Under the implicit premise that reality is the same for everyone and can be discovered objectively using replicable empirical research design (Negri et al., 2019), I isolated my variables of interest and tested my hypotheses using quantitative measures. Under the premise that the experimenter's subjectivity or the situations in which the research is conducted should not influence the results (Negri et al., 2019), I confirmed the stability and predictability of previous results. For example, I confirmed earlier findings that Facebook addiction is connected with low commitment (Drouin et al., 2014). Using this epistemological framework, I also advanced the scientific knowledge by showing that general SNSs addiction is connected with low commitment (not only Facebook addiction). The findings reported here do not imply 'cause and effect' relationship because the studies were based on self-report surveys with no manipulations. Accordingly, only casual, not causal, relationships between variables are reported here.

Papers one and two were literature reviews that synthesized the existing research as well as the therapeutic options available to those facing relationship issues linked to their social media use. In the first paper, I narrowed my research to studies related to Facebook use because it still has the largest user population, even more than the largest country on Earth (Stenovec, 2015). During my research, I realized that SNSs are increasingly becoming population specific and develop competing features to attract the most traffic. Therefore, my second literature review encompassed research conducted on all social mediums grouped under the umbrella of social networking sites and applications. My third paper followed my first literature review and was based only on Facebook. Data included in this paper were from 417 unmarried Facebook users who

were in a committed heterosexual relationship (female=303) between the ages of 18 and 63 (*M*=22.39, *SD*=7.48) without any mental illness diagnosis. The results showed that romantic disaffection was positively linked to Facebook addiction in committed partners and that partners' levels of relationship commitment did not protect them from Facebook addiction. It is not clear whether romantically disengaged partners take respite in SNSs to find emotional solace (self-selection hypothesis; Valenzuela et al., 2014) or if virtual interactions with perceived romantic alternatives fuel relationship disengagement with the significant other (negative effect hypothesis; Valenzuela et al., 2014). Nevertheless, researchers have argued that disconnected partners use Facebook as a coping mechanism (Sheldon et al., 2011). If partners are turning to Facebook to find an emotional connection, then it is possible that their desire to mend their relationship with their significant other is diminished. It is noteworthy that romantic disengagement is not a death sentence for coupledom as many disengaged marriages survive due to religious beliefs, children, finances, and/or social backlash (Abbasi & AlGhamadi, 2017c). As mentioned before, comparing primary partner with the virtual alternative partners may lead partners to go through a cultivation process, which could sow dissatisfaction in the primary relationship. This study made a unique contribution to the SNSs literature by reporting that Facebook addiction is linked to romantic disengagement. It also clarified that merely being in a committed relationship or experiencing high commitment is not enough to protect partners against Facebook addiction. Hence, even committed partners should be cautious about their virtual interactions.

For paper four, I included data from 252 heterosexual partners (married or committed; female=167) between the ages of 18 and 73 (*M*=28.27, *SD*=12.02) who were without a mental illness diagnosis. The results showed that among married or committed partners, general SNSs

addiction (rather than just Facebook addiction) is negatively linked to relationship commitment. Previous researchers have suggested that SNSs addiction is negatively linked with marital satisfaction and positively linked with increased divorce rates (Valenzuela et al., 2014). The connection of SNSs addiction to low commitment as well as relationship dissatisfaction could be explained by the habit motive (Valentine, 2012). Habits are linked to 'ritualistic gratifications' and represent a form of automaticity. That is, a behavioural pattern is triggered by an environmental stimulus and is performed without active consideration (Larose et al., 2003). In this context, it is plausible that romantic alternatives act as environmental stimuli that compel some users to automatically spend extended time online without considering the repercussions of their SNSs activities. In line with previous researchers who had found that young users were more likely to become addicted to Facebook (Kuss & Griffiths, 2011), I also found a significant inverse relationship between age and SNSs addiction. Moreover, not only have earlier findings regarding the connection between Facebook addiction and low commitment (Drouin et al., 2014) been confirmed by this study, these findings have been extended to show that general SNSs addiction (not just Facebook addiction) is connected with low commitment. Additionally, the current findings also indicated that younger partners had significantly more social media accounts, which could have also contributed to the higher levels of SNSs addiction observed in this study. Authors of an earlier study reported that most social media users had integrated two or more SNSs into their daily activities (Davenport et al., 2014); however, the current paper reports that 49.2% (majority) of users had four to six SNS accounts, 25% had one to three SNS accounts, and 25.8% had more than seven SNS accounts. This study reported a remarkable increase

in the number of SNSs accounts that users have subscribed to since the 2014 study.

For paper five, I included data from 578 committed and casually dating partners (female=378) between the ages of 18 and 82 (*M*=29.15, *SD*=12.04). I further divided partners into two groups based on their relationship status, that is, committed (*n*=330, female=215) or dating (*n*=248, female=163). The results showed that the dating group, compared to the committed group, had significantly higher levels of SNSs addiction, lower levels of commitment, and a significantly higher quality of available romantic alternatives (especially sexual alternatives). This confirmed earlier findings that low commitment is linked with Facebook addiction (Drouin et al., 2014) as well as SNSs addiction (Abbasi, 2018a; paper four). However, there was no difference in SNSs-related infidelity behaviours and relationship satisfaction between the two groups. There was also a significant between-group difference in the number of sexual alternatives, but not in the number of committed alternatives. That is, the dating group reported a significantly higher number of sexual alternatives than the committed group. Interestingly, Dibble and Drouin (2014) did not find a significant difference in the number of romantic alternatives based on the current relationship status (single vs coupled) in a sample of undergraduate students. These contradictory findings could be explained by looking at the age and cohabitation status of partners in both studies. For instance, in the current study, 99% of the partners in the committed group reported living together and were significantly older than the dating partners. It is plausible that cohabiting makes it harder for partners to engage in extra-dyadic sexual relationships. Interestingly, the cohabiting status only appeared to protect against interest in sexual partners but not against interest in committed partners.

Since, time is not expandable (Nie & Hillygus, 2002), it is plausible that when partners engage in SNSs interactions with 'friends', they displace the time that could be spent with their

primary partner. In essence, relationship status (committed or dating) was linked to the quality of available alternatives, number of sexual alternatives, SNSs addiction, and commitment. However, relationship status was neither linked to relationship satisfaction nor SNSs-related infidelity behaviours. In my earlier study (presented in paper four), I reported that the majority of committed or married partners had four to six SNSs accounts. In this study, I extended those findings and reported that romantic partners, irrespective of whether they are committed or casually dating, reported an average of five accounts.

For paper six, I included data from 365 heterosexual partners (married, committed, and dating; female=242) between the ages of 18 and 73 (*M*=27.94, *SD*=11.67) who lived in the USA and reported no mental illness. I reported that SNSs addiction predicted SNSs-related infidelity behaviours and age moderated the strength of this relationship. That is, participants who reported SNSs addiction also reported significantly greater SNSs-related infidelity behaviours and their age moderated the link between SNSs addiction and SNSs-related infidelity behaviours. In this study, I not only confirmed earlier studies where it was shown that age is inversely related with SNSs addiction (Abbasi, 2018a; Andreassen et al., 2016; Kuss et al., 2013; Kuss & Griffiths, 2017) and Facebook addiction (Blachnio et al., 2015) but also added that younger partners are susceptible to SNSs-related infidelity behaviours. It is noteworthy that, in my previous study (paper 4), I reported that age is negatively related to SNSs addiction in married or committed partners. In this study, I extended those findings and report that age is negatively related to SNSs addiction in married, committed, and dating partners.

For paper seven, we included data from romantic partners (married, committed,

dating) (*N*=742; female=474) who were between the ages of 18 and 74 (*M*=27.44, *SD*=10.49). The results confirmed established findings that neuroticism is linked with negative affect (Costa & McCrae, 1997) and added that Facebook addiction partially mediates the link between neuroticism and negative affect. A combination of social skills model (Caplan, 2005), cognitive behavioural model (Davis, 2001), and social disinhibition effect (Suler, 2005) may explain the prevalence of SNSs addiction in individuals who are high in neuroticism. For example, maladaptive cognitions and negative emotions experienced by some users could be intensified by social isolation. In such cases, seeking online connections could result in disinhibited SNSs use. Furthermore, one of the motivations for using SNSs is to improve mood (Koc & Gulyagci, 2013); ironically, however, researchers have reported that Facebook activity is linked with an increase in negative affect as well as lower personal and relationship well-being (Sagioglou & Greitemeyer, 2014). This paper reported that, in the modern times, Facebook addiction is another pathway to negative affect for people who are high in neuroticism.

In the previous papers, I examined the link between SNSs addiction and various factors such as commitment, SNSs-related infidelity behaviours, relationship satisfaction, and quality of romantic alternatives in partners who did not report a clinical mental illness diagnosis. In paper eight, we included data from 243 cohabiting heterosexual partners (female=177) between the ages of 18 and 73 *(M*=35.92 years, *SD*=10.66) who lived in the US and self-reported a clinical mental illness diagnosis. The participants were divided into two groups (diagnosis or non-diagnosis). We found a positive relationship between mental illness and SNSs addiction. Moreover, SNSs-related infidelity behaviours partially mediated the relationship between mental illness and SNSs addiction. It could be that users living with a mental illness have a propensity for SNSs-related infidelity behaviours, which could contribute to their SNSs addiction. These

findings do not point to a causal relationship. A recent study found that social media addiction

was inversely linked with the students' mental health and academic performance (Hou et al.,

2019). In this study, self-esteem surfaced as a mediator in the relationship between social media

addiction and mental health. This could be because social media habits and depression, both,

undermine self-regulation, which in turn could lead to an increase in Internet use (Larose et al.,

2003).

Chapter 9

Limitations and Future Direction

Limitations of the current research should be considered when interpreting the findings. Firstly, my literature reviews were more narrative rather than systematic in their approach. In hindsight, I would like to have done a rigorous systematic literature review. Secondly, all of my research studies were based on self-report scales, which are generally less reliable and limited in scope due to social desirability biases. Self-report measures alone cannot be used as a sole criterion to determine SNSs addiction or mental illness diagnosis. The participants in my studies were at varying levels of problematic SNSs use spectrum, which was based on their scores on modified Facebook intrusion scale. High scores indicated that participants were over-engaged to the extent that their daily functioning was affected, but none of the participants were clinically diagnosed with 'SNS addiction'. All three studies reported here were cross-sectional. That is, the risk factors and outcome variables were measured simultaneously once for each study. Due to the study design, I could not measure fluctuations in SNSs addiction or other relationship variables over time. Also, because I did not require both partners to participate in the studies, I could not explore couple-level processes. Therefore, only the actor effect (and not partner effect) is reported here. Furthermore, some of the analyses only included participants who were cohabiting or those who reported no clinical diagnoses of mental illness, or those who identified as heterosexual. Based on the specific inclusion/exclusion criteria, each paper has a specific limitations section. In my sample, less than 1% of partners reported to be lesbian, gay, bisexual and transgender (LGBT). It is plausible that partners may have under-reported their LGBT sexuality due to social desirability biases. Therefore, in future studies, researchers can add a question regarding the gender of the romantic partner along with the participant's gender. The

comparison of responses related to participant's gender, romantic partner's gender, and sexual orientation can uncover any discrepancy in self-reporting. Although, inclusion of heterosexual partners in my studies limited generalizability. Nevertheless, the general methodology and underlying heteronormative assumptions about sexual/romantic norms may have reduced generalizability, irrespective of the inclusion of LGBT couples.

The studies described above provide an initial assessment concerning the link between SNSs addiction, neuroticism, mental illness, and romantic relationship variables. Due to the experimental design, I could not examine the cause and effect relationship, which could be addressed using qualitative methods. Other methodological approaches (e.g., intervention) may give richer insights into how relationship health could be restored. For example, one study found that there is a causal relationship between Facebook use and adverse emotional experiences such that quitting Facebook for one week caused positive effects on users' life satisfaction and emotions (Tromholt, 2016). Following their lead, researchers can explore if couples whose relationships are threatened by SNSs use can also benefit by quitting social media. Additionally, a repeated-measures study could be conducted to measure SNSs use and relationship constructs at base level with a repeat assessment after manipulating factors that do not jeopardize users' personal or relationship well-being. Comparison of both scores could give an insight into the direction of the relationship. For social media factors that cannot be manipulated due to the potential risk to the primary relationship, a longitudinal study could be devised to measure SNSs usage, SNSs behaviours, and relationship outcomes at different stages of the romantic relationship.

Future research can also include both partners because the assessment of

relationship health by one partner could be biased. Researchers could ask each participant to

report his/her individual SNSs usage as well as their partner's SNSs usage. Additionally,

researchers could use a follow up structured interview to explore which SNSs activities are

deemed as the most problematic to the romantic relationship. More importantly, I didn't assess

the underlying motivations for social media use, which can be found using diary studies. For

example, participants can be asked to write the motivation behind each of their social media

login. Researchers can distinguish between innocuous motivations ('wanting to stay in the loop,

checking on friends, getting news, craving company) and more troublesome motivations ('spying

on ex-partner, monitoring profile of a potential partner, procrastinating, gossiping, stalking).

These motivations can give an insight into the mind of users. Researchers can then determine if

there is a link between motivations, SNSs behaviors, and relationship outcomes through a

qualitative study (structured interview). Finally, for populations living with mental illness, future

studies could supplement self-report scales with a structured clinical interview to determine

which particular mental illnesses put individuals at a higher risk of SNSs addiction and SNSs-

related infidelity behaviours.

Chapter 10

Practical Implications

Despite the aforementioned limitations, the present research has extended the SNSs literature and has successfully contributed to the existing knowledge. The present research suggested that SNSs addiction is linked to low commitment, romantic disengagement, and SNSs-related infidelity bahaviours. Also, it was found that certain personal factors (age, gender, neuroticism, negative affect, and mental illness) may predispose individuals to develop SNSs addiction. Acknowledging that SNSs addiction is emerging as a major mental health concern (Wolniczak et al., 2013), the current findings have important implications for society as a whole. Based on the current findings, young partners, irrespective of their relationship status or commitment level, are prone to SNSs addiction and SNSs-related infidelity behaviours. Therefore, educational programs geared towards counselling young SNSs users can help ward off impending relationship troubles.

Researchers argue that Facebook has essentially merged into 'romantic relationship processes' (LeFebvre et al., 2015) by enabling communications in all phases of romantic relationship from initiation to escalation, maintenance, dissolution, and finally post-dissolution ex-partner monitoring (Smith & Duggan, 2013). Recognising that couples could face grave repercussions due to misusing SNSs, social media developers could add disclaimers to warn users about the impact of SNSs abuse on their lives. Facebook's owners may have finally taken heed to calls demanding that it separates dating from innocuous social interactions. In 2019, Facebook officially launched 'Facebook Dating' that allows users to make a dating profile and maintain a 'secret crush list' (desirable partners) that is separate from their Facebook friends' list. Users also have the option of integrating their Instagram profiles with their dating profiles to

keep all desirable partners in one place. Facebook Dating vouched not to match its subscribers with Facebook friends unless the subscribers themselves add their Facebook friends to their secret crush list. This adjustment might pave the way for further changes to the structure of SNSs, which is otherwise coded to promote compulsive use. SNSs applications have inbuilt features to track the amount of time each user spends daily in various SNSs activities. This information could be used to deliver automated warnings when users spend excessive time on SNSs. Because the primary romantic relationship bears the brunt of virtual friendships and uninhibited interactions, social media developers must collaborate with clinicians and researchers to develop programs that could promote appropriate use of SNSs and remove features that lure unsuspecting users into relationship-threatening situations.

Chapter 11

Conclusion

Contemporary citizens have witnessed phenomenal advancements in computer-mediated interactions. SNSs have simplified virtual interactions and provided unprecedented access to strangers cum instant friends. Overly glossed egocentric profiles of 'friends' can evoke dissatisfaction, envy, jealousy, social tension, and conflict within the primary romantic relationship. SNSs are set up to facilitate round-the-clock virtual interactions. Left unchecked, these interactions can lead to SNSs addiction and potentially affect the primary romantic relationship. It remains unclear whether this addiction precedes negative romantic relationship outcomes or vice versa. Irrespective of the route, it seems plausible that romantic relationship problems may emerge when partners compare their significant other and/or their life in general to the digital idyllic lives of their virtual SNSs connections. Additionally, if partners can meet their need to belong in an alternate relationship, their desire to emotionally reconnect with their significant other could be diminished. With surmounting divorce rates and an ever-growing virtual friends' list, the implications of SNSs addiction on partners' estrangement and infidelity must be explored so that effective measures can be devised to prevent dissatisfaction, disaffection, separation, and/or divorce.

The research detailed here is based on three independent studies. It was found that young age, relationship status, romantic disengagement, and low commitment were all linked with SNSs addiction. Additionally, partners in a dating relationship, as opposed to a committed relationship, reported a significantly higher quality of available alternatives (particularly sexual alternatives), despite showing no difference in their SNSs-related

infidelity behaviours or relationship satisfaction. Also, SNSs addiction and SNSs-related infidelity were positively related, and this relationship was moderated by age. As age increased, the connection between SNSs addiction and SNSs-related infidelity behaviours weakened. Furthermore, neuroticism was positively linked to both negative affect and Facebook addiction. Facebook addiction partially mediated the relationship between neuroticism and negative affect. Finally, a clinical diagnosis of mental illness surfaced as yet another factor linked with SNSs addiction. The relationship between mental illness diagnosis and SNSs addiction was partially mediated by SNSs-related infidelity behaviours. It is plausible that partners living with a mental illness, than those without a mental illness diagnosis, could be predisposed to SNSs addiction because they engage in more SNSs-related infidelity behaviours. In conclusion, the findings reported here have extended the existing SNSs literature. Recognizing that online socializing will continue to be the most popular mode of communication in the foreseeable future, SNSs developers, users, researchers, and therapists can use these findings to gain a better understanding of the connection between SNSs activities, SNSs behaviours, SNSs addiction, and relationship outcomes. Based on the new insights, therapists and researchers can encourage users to take proactive steps to avoid SNSs addiction and ward off relationship problems.

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