

**Attachment Insecurity as a Contributing
Factor to Common Behaviours Seen in Online Dating**

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Dedication

This capstone research paper could not have been accomplished without the support of my parents, friends, colleagues, and of course my own perseverance and love of knowledge. My personal life experiences and struggles, especially in love and relationships, have contributed significantly to my understanding of and curiosity in exploring this topic and myself more deeply. Through these painful experiences, has come growth, strength, and insights that have blossomed through this work and onto these pages. This research is dedicated to anyone who is a seeker of their authenticity and who strives to understand themselves and others more deeply.

*“There is only one way to learn...It’s through action. Everything you need to know you have learned through your journey.” Paulo Ceolho *The Alchemist**

Attachment Insecurity as a Contributing Factor to Common Behaviours Seen in Online Dating

In the past two decades there has been a significant shift in the dating and courting practices among adults in Canada and the United States (Rodriquez-Garcia et al., 2020). Online and app-based dating are now one of the primary methods by which individuals seek and initiate intimate relationships (Wiederhold, 2021). The utilization of media platforms for the purposes of matrimony has a long history, starting as early as the 1700s with newspaper advertisements (Toma, 2015). This practice continues, albeit infrequently, today in the form of personal ads. As technological advances have emerged, so too have the platforms used to match with potential partners. In the 1980s, cassette tapes recorded prospective matches, which could be rented through agencies (Toma, 2015). With the advent of the internet, online dating emerged in the form of chat rooms and other similar platforms. However, the practice was relatively uncommon and viewed as a crutch for desperate individuals unable to attract mates in traditional ways. Since the mid 2000s, with the emergence of social media and smart phones, online dating has lost its stigma and has become the second most popular way of meeting potential partners, second only to encounters through friends (Toma, 2015). A 2019 survey exemplifies its growing popularity and reports that approximately 36% of Canadians have used dating apps (E Harmony Editorial Team, 2021).

The COVID-19 pandemic resulted in a significant surge in online dating, as social gatherings and opportunities to meet face-to-face were restricted, thus making it a socially acceptable and necessary way of meeting potential partners. To illustrate this point, in March of 2020, Tinder reported a record 3 billion swipes in a single day, OkCupid saw a 700% increase in subscriptions, and video calls on Bumble increased by 70% (Fortune Editors,

2021). The popularity of online dating is not solely driven by the pandemic through necessity, however; users enjoy a larger and more refined dating pool as it provides a platform with a multitude of tailored options, locations, and preferences that traditional face-to-face encounters do not (Wiederhold, 2021). In addition, they provide virtual interactions which many users report as an appealing way of vetting potential partners before investing a significant amount of time and energy into the relationship (Wiederhold, 2021).

Although there are many benefits to online dating, recent survey data suggests that almost half of Americans are dissatisfied with their current dating experience and are finding it more challenging than 10 years ago to meet prospective partners, despite the increased availability of potential mates (Barroso, 2020). A recent study by Selterman and Gideon (2022) found that participants ($n = 793$) looked unfavourably upon dating apps.

Accompanying this dissatisfaction are the growing number of perceived negative behavioural trends associated with online dating including breadcrumbing, ghosting, struggling with an abundance of choice, and electronic intrusion. Much of the literature on these trends focuses on the psychological implications of these behaviours toward the recipient and pathologizing the intentions of those who conduct these behaviours.

Interestingly, research suggests that online dating is used more commonly among individuals with attachment insecurity compared to their secure counterparts (Blackhart et al., 2014; Chin et al., 2019; Timmermans & Alexopoulos, 2020). Individuals with attachment insecurity, including anxious and avoidant tendencies, struggle with effective communication and are more likely to be divorced or report as single (McNelis & Segrin, 2019). There exists a gap in the literature pertaining to the correlation between attachment insecurity and the above behaviours in modern dating. As such, this capstone will explore these behavioural

trends through the lens of attachment theory and aims to answer the research question: “How does insecure attachment contribute to the modern dating trends of breadcrumbing, ghosting, struggling with an abundance of choice, and electronic intrusion?” In addition, this capstone will describe implications and recommendations for counselling psychologists who may encounter clients who are experiencing or contributing to these behaviours.

Attachment Theory

This section will provide an overview of attachment theory as a framework to explore and conceptualize the modern dating behaviours of breadcrumbing, ghosting, struggling with an abundance of choice, and electronic intrusion.

Attachment theory posits that individuals develop one of four primary attachment styles during childhood with their caregivers which plays a pivotal role in intimate partner bonding, sexual expression, and the success of long-term relationships (Bowlby, 1969; Hazan & Shaver, 1987; Levine & Heller, 2011). Bowlby (1969) proposed that infants are inherently primed to bond with caregivers to ensure their safety and survival. Ainsworth et al. (1978) further expanded on Bowlby’s initial work and categorized children into three groups: secure, anxious, and avoidant. When infants receive consistent nurturing and connection from their caregiver, they form a secure attachment which allows them to feel safe and reassured. However, if the child experiences emotional and/or physical neglect, they may learn to avoid connection with their caregiver and turn inward for comfort, resulting in avoidant attachment. Anxious attachment results from inconsistent responses to a child’s needs and is characterized by the child seeking constant reassurance and love from their caregiver (Ainsworth et al., 1978). Main and Solomon (1986) later added a fourth category, disorganized attachment, characterized by a combination of anxious and avoidant tendencies resulting from trauma and fear of the caregiver,

though due to the limited research in the area, this capstone will not address disorganized attachment as one of the four attachment styles.

As children move into adulthood, the attachment style that they developed with their primary caregivers often follows them into their intimate partner relationships. However, there is debate about whether attachment style is static or malleable over time through new relational experiences (Jones et al., 2018). Nonetheless, the primary attachment styles in adult relationship include anxious, avoidant, secure, and disorganized. Seminal work by Hazan and Shazer (1987) estimated that approximately 56% of individuals are secure, 19% anxious, and 25% avoidant. Interestingly, these two attachment styles are often attracted to one another as intimate partners which often results in triggering each other's insecurities (Levine & Heller, 2011).

For the purposes of this capstone, I will describe anxious and avoidant attachment. In adulthood, individuals with anxious attachment tend to be highly sensitive to rejection, experience jealousy, and may struggle with setting boundaries emotionally and sexually to fill their need for closeness and connection with others (Levine & Heller, 2011). They are often seen as clingy, needy, and emotionally over-invested in relationships (Levine & Heller, 2011). On the other end of the spectrum, avoidantly attached individuals often fear intimacy and close connection and may appear aloof or distant in intimate partner relationships.

Attachment style is a strong predictor of relationship status. Unfortunately, individuals with attachment insecurity are more likely to be divorced and have higher single status rates compared to their secure counterparts (McNelis & Segrin, 2019). Communication plays a pivotal role in the success of a relationship. Constructive and positive dialogue is one of the strongest predictors of relationship satisfaction and leads to deeper intimacy and connection

(Domingue & Mollen, 2009). Unfortunately, individuals with attachment insecurity struggle with communication and conflict resolution. It has been found that anxiously attached individuals are more likely to use criticism, perceive more conflict, escalate relational conflict, and experience lower relational quality (Campbell et al., 2005; Cooper et al., 2018). Those with a higher avoidant attachment style tend to be emotionally distant, have dull social responsiveness (Bradford et al., 2002; Fraley et al., 2006), participate less in support-seeking and disclosure, create relational distance, and are extremely self-reliant (Mikulincer & Shaver, 2012). Perhaps then, this explains why more individuals with attachment insecurity frequent online dating platforms (Chin et al., 2019), and therefore may be contributing to the growing negative behavioural trends seen in online dating.

Attachment Orientation and Online Dating

The correlation between attachment insecurity and single status might be used to explain why so many individuals using online dating sites are insecurely attached. A handful of studies have emerged examining the correlation between attachment orientation and dating app usage (Blackhart et al., 2014; Chin et al., 2019; Timmermans & Alexopoulos, 2020). At the onset of research in the field, Blackhart et al. (2014) found no correlation in attachment orientation and online dating use. However, their research did find a significant positive correlation between rejection sensitivity and usage of online dating. Arguably, rejection sensitivity and anxious attachment may be difficult to differentiate from one another. Furthermore, I would argue that online dating was only in its infancy and reserved for more serious dating. However, more recent studies have found that anxiously attached individuals more frequently use dating apps compared to their secure counterparts, and that avoidant attachment is negatively correlated with online dating usage (Chin et al., 2019; Timmermans & Alexopoulos, 2020). Unfortunately, there are no

studies examining the percentage of users based on attachment orientation. However, given that anxious attachment is positively correlated with online dating usage, that anxious and avoidant attachment is predictive of divorce and single status (McNelis & Segrin, 2019), and that approximately 20% of individuals are anxiously attached (Hazan & Shazer, 1987), one can assume that there are a significant number of anxious users on online dating platforms.

Chin et al. (2019) further explored which platforms individuals used based on attachment orientation. Their study found that attachment anxiety is more predictive of using dating apps such as Tinder and Plenty of Fish, which are associated with casual sexual encounters. Furthermore, avoidant individuals are more likely to use OKCupid, which is associated with serious dating. Timmermans and Alexopoulos (2020) further examined the likelihood of meeting face-to-face after initial contact online through an attachment perspective. They found that in person meetings decreased with increased levels of anxious and avoidant attachment. In addition, those high on anxious attachment were also less likely to seek out serious connections and more likely to report casual sex encounters and flirtation as their primary motives for online dating.

The use of dating sites for casual sexual encounters and less face-to-face encounters is an interesting finding that seems to contradict the notion that anxiously attached individuals seek connection and closeness (Levine & Heller, 2011). Timmermans and Alexopoulos (2020) hypothesize that a fear of rejection may be inhibiting the ability of the anxious user to form the long-term bond they desire. They also hypothesized that anxiously attached individuals may be displaying signs of neediness during the online communication phase which may negate the potential of a face-to-face meeting. Toma (2022) further conceptualizes, through the social compensation hypothesis, that psychosocial vulnerabilities including anxiety and depression, rejection sensitivity, and attachment insecurity (anxious and avoidant) may cause individuals to

shift their dating strategy online to compensate for their difficulty with face-to-face interactions. Therefore, online dating may provide insecure users more perceived control in their dating endeavours, through careful and selective display of photos and qualities, more control in initial conversation compared to face-to-face, increased choice, and the obscuring of rejection. To the latter point, rejection sensitive individuals may get a boost when they match a potential partner and may avoid blatant rejection as sites do not explicitly tell users they did not match with a desired partner, which may be more in line with real life encounters.

Self-Positioning Statement

Throughout the capstone process, I must recognize that my bias and previous experience may unconsciously cause me to report research that confirms my bias or eliminate research that goes against my previously held beliefs. The following section will describe my personal and professional experience and bias with online dating and attachment theory.

As an unmarried 34-year-old heterosexual female in Canada, I have experienced dating using traditional face-to-face and modern online methods. I can see the benefits and drawbacks of each method; however, I prefer traditional forms of dating. In my 20s, prior to online dating, the pool of available partners was much smaller, and I had to rely on meeting men at school, bars, and sporting events. As a result, I was less selective with dating partners and moved toward exclusivity sooner than I do today, sacrificing compatibility on several occasions. Although my selectivity has coincided with the rise in online dating, I also recognize that it could be the result of maturity rather than a cultural shift in dating practices.

Keeping with the themes of the capstone, breadcrumbing, ghosting, navigating an abundance of choice, and electronic intrusion, I will admit that I have been either the recipient or instigator of each of these common behavioural trends. Although, online dating has solved

the problem of relying on chance meetings to meet potential partners, it is my personal experience that it provides relationship seekers with the illusion of unlimited possibility. Although this may seem like a benefit, I feel that it creates an environment of uncertainty, confusion, and fear of commitment, which may facilitate the rise in singledom and the current hook up culture we find ourselves in (Garcia et al., 2012). To navigate choice and mitigate possible rejection, I have gone on dates with more than one person at a time, which resulted in confusion and inauthentic behaviour. I have ended casual relationships with individuals electronically by cutting off communication (ghosting). I have periodically reached out to individuals without pursuing them seriously (breadcrumbing). Lastly, I have become fixated on a dating partner's social media and monitored their frequency of communication with me (electronic intrusion). Prior to online dating, I rarely engaged in or experienced these types of behaviours.

In recent years, I have attracted partners who initially seem interested in pursuing me, ask for second and third dates, but then suddenly disengage without communicating why. As a result, I have felt frustrated, disappointed, and questioned my own self-worth. I can only assume that the plethora of options makes it difficult to settle on one. Of course, I must also recognize there are societal factors such as the cultural value on independence, focus on career, and the dissolution of the nuclear family that may also be playing a pivotal role in my experience.

Prior to undertaking this research, I must also disclose my personal experience with identifying as an anxiously attached individual. After a series of failed relationships, I embarked on a healing journey and discovered attachment theory which fundamentally changed how I view myself, my experiences, and the dynamics within my intimate partner

relationships. I enrolled into this master's program hoping to expand my knowledge on attachment theory and focus some of my research papers on how to heal anxious attachment. I now view all relational dynamics and problems through an attachment lens, which may prevent me from seeing other possible aetiologies.

I recognize that I have a significant bias toward how individuals express their anxious attachment in relationships and during the dating period. I must be mindful that not all experiences of anxious attachment will be the same and that research may not reflect my personal experiences. My own experience with attachment styles leads me to believe that it is not static, and that it can change in relationship to someone else's attachment style. For example, I have found myself very anxious in relationships with highly avoidant partners, more secure with secure partners, and avoidant with highly anxious partners. This may not be the case for others, and I must not allow my own personal experience to bias the results I uncover in the research process.

Although I am concerned that behaviours such as ghosting and breadcrumbing may perpetuate anxious attachment symptoms including fear of rejection and low self-worth, I also recognize that it may provide benefits. My personal experiences with online dating have not been all bad. I will admit that my fear of rejection has almost been eliminated and my previously high expectations of relationships have been lowered since joining online dating. Whether this is the result of my experience with online dating, or due to maturity, I do not know. Despite these benefits, I am now wary of investing time and energy into a single individual online, knowing that the probability of being ghosted or breadcrumbing is high.

Disclosure of my personal bias has been an important first step, however, it is an ongoing process. As I progress through the research, I will continue to check my bias. I plan

to employ the use of a journal where I can bracket my countertransference, bias, and previous experiences; a technique used in phenomenological qualitative research (Creswell & Poth, 2017). Phenomenological researchers recognize that bias exists within research and attempt to mitigate it by keeping track of countertransference and bias throughout the research process (Creswell & Poth, 2017). Lastly, I must recognize that this is an exploration of current literature and not an attempt to confirm my bias. To remain aligned with this objective, I will not consciously omit research that does not align with my previously held beliefs and experiences, or overly represent research that feeds the working narrative of my beliefs and biases.

Definition of Terms

Breadcrumbing: The act of providing inconsistent communication to a dating partner in the form of intense bursts of communication followed by periods of no communication.

Ghosting: A dissolution strategy by which an individual breaks all communication with no explanation.

Electronic Intrusion: The act of using social media and electronic media to excessively communicate, track whereabouts, and monitor activity of a dating partner.

Literature Search Methods

A search of the literature was conducted using City University's online library and search engines including Google Scholar using several key search terms. These included: online dating, mobile dating, trends in online dating, ghosting, breadcrumbing, psychological implications of online dating, mental health and online dating, attachment theory and online dating, attachment style and online dating, dating and attachment style, anxious attachment and breadcrumbing, insecure attachment and breadcrumbing, insecure attachment and ghosting, insecure attachment

and electronic intrusion, anxiety and online intrusion, motives for ghosting, motives for breadcrumbing, motives for electronic intrusion, etc. I included articles that pertained to daters' experiences with online dating, and researched topics including breadcrumbing, ghosting, electronic intrusion, and choice abundance. I also included articles that discussed the psychological implications of online dating. I excluded articles whose research focused primarily on teenagers, though I did leave in one article whose research participants were teenagers, because it highlighted the implications of electronic intrusion.

The literature reviewed includes quantitative, qualitative, and mixed methods research. Some literature conducted primary research while others were reviews of other similar research on the topic. Several themes emerged from the literature that help to address my research question. These include breadcrumbing, ghosting, choice abundance, and electronic intrusion. A summary of the articles reviewed in this capstone is provided in the Appendix.

Literature Review

This literature review focuses on heterosexual men and women aged 18–45. I chose this age range for two reasons. Firstly, it has significance for me personally, as I am between this age range and also navigating the dating world. Secondly, much of the literature on online dating encompasses this range because there are typically more people in this age range in the courting process. Qualitative and quantitative peer reviewed literature will be the primary source of data. However, because this is a novel topic and social media offers social science researchers rich forms of data (Felt, 2016), this capstone will also draw on grey literature to highlight the prevalence and implications expressed by users. Grey literature refers to the literature that is produced outside of traditional academic settings and publications (Simon Fraser University, 2022). In addition, due to the limited and novel research on the topic, some

literature will be extrapolated from sources outside of the North American context. For the purposes of this literature review, insecure attachment refers only to individuals with either an anxious or avoidant attachment style. Due to limited research, I will not be including disorganized attachment as part of this literature review.

A review of the literature has revealed four themes that describe the behaviours commonly associated with online dating including breadcrumbing, ghosting, navigating an abundance of choice, and electronic intrusion. This literature review describes these behaviours in greater detail, provides the motivating factors for enacting these behaviours, describes the psychological implications they have on the recipients, and explores, using attachment theory, how insecure attachment (anxious and avoidant attachment) may be contributing to these behaviours.

Breadcrumbing

The literature points to the emergence of breadcrumbing as one of the new behaviours associated with online dating (Navarro et al., 2020b). The term *breadcrumbing* comes from the tale of Hansel and Gretel whereby the children left breadcrumbs along a path to find their way home (Rodriquez-Garcia et al., 2020). According to Urban Dictionary (2021) breadcrumbing is defined as “the act of sending out flirtatious, but non-committal text messages (ie. “breadcrumbs”), in order to lure a sexual partner without expending much effort.” Contact from the breadcrumber may look like sporadic texting, micro communication such as “likes” or “emojis” on social media platforms, and flirtatious messages which gives the receiver the illusion that the relationship is progressing, followed by periods of no contact. Although inconsistent communication occurred prior to online dating, its prevalence is now much higher and has

become a modern behaviour, especially during the initial stages of a relationship (Navarro et al., 2020b).

According to Navarro et al. (2020b) very few published articles have researched the concept of breadcrumbing. A search of the literature revealed only three articles pertaining to the phenomenon (Navarro et al., 2020a, 2020b; Rodriguez-Garcia et al., 2020). However, mainstream social media and online websites are rife with content offering insight and advice on how to deal with the behaviour (e.g., Schwartz, 2022) which reflects the magnitude of the problem. Indeed, early research suggests that the prevalence of breadcrumbing is significant. Research by Navarro et al. (2020a) out of Spain found that 35.6% of young adults were the recipient of breadcrumbing and 36.7% initiated breadcrumbing toward others at least once within the previous year. Their study further asserts that being the initiator and recipient of breadcrumbing increases with younger age (18–25 years old), identifying as a member of the LGBTQ community, and being single. Interestingly, the study found no difference in breadcrumbing prevalence between male and female genders as breadcrumb initiators.

Psychological and Emotional Consequences of Breadcrumbing

How individuals form and conduct relationships has implications for their health, mental wellbeing, longevity, and happiness (Navarro et al., 2020b). Potentially hurtful behaviours such as breadcrumbing may contribute to negative consequences. To date, Navarro et al. (2020b) have conducted the first and only research on the psychological implications of breadcrumbing. Their study, which administered an online cross-sectional survey to young adults (mean age 29.64) in Spain found that those identifying as breadcrumbing victims (3 or more events in the previous year) were the least satisfied with life and experienced more loneliness and helplessness

compared to the control group. Although preliminary in nature, these findings suggest that breadcrumbing may have real world psychological implications for the recipients.

The decreased life satisfaction, loneliness, and helplessness experienced by the recipients of breadcrumbing, may be in part due to feelings of addiction elicited by breadcrumbing. Although no formal studies have been conducted on breadcrumbing as a catalyst for addiction, breadcrumbing can create an environment of intermittent reward, synonymous with the underlying mechanisms associated with gambling addiction (Walker, 2021). Support for this theory was found in Navarro et al.'s (2020b) study. They argue that breadcrumbing may be associated with dissatisfaction with life, loneliness, and helplessness because of the reward system activation that breadcrumbing may provide. Mainstream media also suggests that inconsistent communication, as displayed by periods of no contact followed by bursts of communication can be likened to a slot machine (Walker, 2021). Dopamine surges in the recipient's brain when communication is received, which can make it challenging to cut off communication altogether with a breadcrumber. Periods of no contact may be associated with negative emotions, feelings of uncertainty, and low moods, while periods of contact are associated with relief, elevated moods, and a renewed sense of direction for the relationship (Walker, 2021).

Motivating Factors for Breadcrumbing

There is a lack of research on the motivations and intentions of individuals who breadcrumb. Mainstream media suggests that breadcrumbing is an intentional, malicious act perpetrated by individuals with narcissistic tendencies to feed their ego and build self-esteem (Loggins, 2022). A google search suggests that breadcrumbers tend to have low self-esteem, emotional difficulties, and possibly narcissistic tendencies, have difficulty letting go of

relationships, and may fear hurting others through formal rejection. Therefore, the breadcrumb may provide inconsistent communication in the hopes that the recipient will pick up on their lack of interest (Loggins, 2022).

Indeed, it is evident that experiencing breadcrumbing may be hurtful, addictive, and potentially damaging to recipients' emotional wellbeing. Unfortunately, a search of the literature could not find any empirical research investigating the motivations behind breadcrumbing. However, Rodriquez-Garcia et al. (2020) are quick to pathologize the behaviour and assert that those who enact breadcrumbing are doing so intentionally and maliciously to feed their egos, boost their self-esteem, and may be narcissistic. They take a stance of victim/perpetrator to justify the development of a Breadcrumbing in Affective-Sexual Relationship scale designed to screen for the behaviour among youth. They base their stance on opinions cited in mainstream online sources who see breadcrumbing as emotionally abusive and malicious. Despite the harmful effects of breadcrumbing, Navarro et al. (2020b) suggest that many individuals in their study reported being both the receiver and initiator of breadcrumbing. This suggests that although the behaviour is hurtful, it is possibly an adaptive strategy, may serve a purpose, and may be not as intentionally malicious as mainstream media suggests. Therefore, before pathologizing the behaviour, it is important to first understand the intentions and underlying mechanisms at play which result in the use of breadcrumbing.

Avoidant Attachment and Breadcrumbing Behaviour

As previously described, it is suggested that breadcrumbing is a deliberate attempt to keep potential partners engaged, is often malicious, and is designed to feed the ego of potentially narcissistic individuals (Rodriquez-Garcia et al., 2020). However, looking at breadcrumbing through an attachment lens, I would also argue that breadcrumbing may be a consequence of an

insecure attachment style. I could not find any literature studying the link between breadcrumbing use and attachment style. However, there exists grey literature in the form of mainstream media websites, including attachment coaches, who claim that breadcrumbing is a common communication strategy of an avoidantly attached individual, especially in the early stages of a relationship (MacWilliam, 2022). Although avoidantly attached individuals want intimacy and connection, they tend to keep potential romantic partners at an arms length where it feels safer. They may also be unsure about their desire for partnership and therefore engage in inconsistent communication, periods of increased connection followed by periods of no contact. Individuals with avoidant attachment have a fear of losing themselves and their independence in a relationship, which may make them prone to withdrawing connection when they sense the relationship is progressing too quickly or they perceive a potential partner requires more communication than is emotionally tolerated (MacWilliam, 2022; Personal Development School, 2020c).

Anxious Attachment and Breadcrumbing Behaviour

Another grey literature source, the Personal Development School (2020b) argues that avoidant attachment is not the only style that may perpetuate breadcrumbing as a communication strategy in the early stages of a relationship. The Personal Development School (2020b) teaches that breadcrumbing may be an intentional protest behaviour in the early stages of a relationship for the anxiously attached individual to try to attract the attention of a potential partner. They may send a message and then withdraw communication to elicit a chase response from the recipient. Additionally, individuals who are anxiously attached may fear rejection so much, worry about pushing their potential partners away, and have concern about being perceived as needy, that they avoid communication entirely or reach out periodically when they gain the

courage (Personal Development School, 2020b). This would be especially true for anxiously attached individuals who have a level of understanding about their attachment style and may be trying to do the opposite of their natural tendencies to appear laid back in the early stages of a relationship (Personal Development School, 2020b).

Ghosting

The second theme that will be discussed as a modern behaviour trend seen in online dating is ghosting. Ghosting refers to a relationship dissolution strategy in which an individual cuts off all communication either suddenly or gradually with a potential or real partner without an explanation (LeFebvre et al., 2019). Ghosting can be conceptualized as a non direct and implicit form of relationship breakdown by which the initiator does not offer the recipient an explanation for the breakup and avoids intimate and vulnerable communication (LeFebvre et al., 2019). Overall, ghosting is seen more commonly in casual and early-stage relationships, due to less emotional involvement (LeFebvre et al., 2019). Research suggests that ghosting can take two forms, a sudden drop in all communication or a gradual fade of communication. Although ghosting may have taken on a modern name, it is not an entirely new phenomenon. Some suggest that ghosting is a new term for what was previously known as avoidance (LeFebvre et al., 2019). Nonetheless, ghosting has intensified since the advent of online dating and has become a modern behaviour that many conduct and experience (LeFebvre et al., 2019; Navarro et al., 2020a; Navarro et al., 2021; Powell et al., 2021; Thomas & Dubar, 2021; Timmermans et al., 2021).

Ghosting Prevalence

Overall, the literature and mainstream media suggest that ghosting is a common behaviour seen in modern dating (LeFebvre et al., 2019; Navarro et al., 2020a, 2020b; Navarro et al., 2021; Powell et al., 2021; Thomas & Dubar, 2021; Timmermans et al., 2021). Prevalence

rates range from 25.3% (LeFebvre et al., 2019) to 47% (Powell et al., 2021) for those who have been the recipient of ghosting, and 28.3% (LeFebvre et al., 2019) to 38.9% (Powell et al., 2021) of individuals reporting using ghosting as a dissolution strategy. The literature also supports the notion that most individuals who have been ghosted have also enacted the behaviour (LeFebvre et al., 2019; Navarro et al., 2020a, 2020b; Powell et al., 2021; Thomas & Dubar, 2021).

Motivating Factors for Ghosting

The literature points to several motivating factors associated with the use of ghosting, including relational factors and individual characteristics. Overall, ghosting is conceptualized by many as the most efficient way to alleviate an emotionally challenging situation (LeFebvre et al., 2019; Navarro et al., 2021; Thomas & Dubar, 2021; Timmermans et al., 2021). Thomas and Dubar's (2021) qualitative study of young adults' experiences with ghosting suggests avoidance of conflict, an inability to express feelings, and feeling indifferent or unattracted toward the recipient as primary driving forces for enacting ghosting. Although LeFebvre et al. (2019) reported similar findings, their research also suggests that ghosting is seen as justifiable in cases of safety or when attempting to display strong boundaries in response to negative interactions with recipients. Ghosting can also be seen as justified depending on the length and intensity of the connection. For example, shorter, online only, and superficial interactions result in more ghosting (LeFebvre et al., 2019; Timmermans et al., 2021). In line with the previous research, Timmermans et al. (2021) found that participants enacted ghosting when the recipient showed signs of falling in love too quickly or displayed characteristics of commitment issues. This finding suggests implications for attachment style and may be highlighting relational dynamics between anxious and avoidant attachment styles. Furthermore, there may be a protective strategy for the recipient. Participants in Timmermans et al.'s study initiated ghosting because they

recognized they themselves were not emotionally ready to date. Thomas and Dubar (2021) found similar findings in their research. Thirty percent of their participants reported wanting to protect the recipient from hurt feelings by avoiding blatant rejection through a conversation.

There appears to be characteristic differences among those who view ghosting as an appropriate relationship dissolution strategy and those who do not. Research by Freedman et al. (2019) examined ghosting through the lens of destiny and growth mindsets. Individuals who believe in destiny or “the one” are more apt to view ghosting as an appropriate dissolution strategy. Those who believe in the growth mindset, whereby relationships can develop through communication over time view ghosting as inappropriate. This suggests that individuals with the growth mindset may place higher value on building relationships through intimate connection and vulnerability and therefore expect that relationship dissolution also has the same level of intimacy and emotional vulnerability compared to their destiny minded counterparts.

Despite the multitude of relational and individual factors contributing to ghosting, one study in the literature suggests that ghosting may simply be a learned behaviour, accelerating at a rapid pace since the proliferation of online dating. The study by Navarro et al. (2021) conceptualized the motivations for ghosting through the lens of social cognitive theory, whereby actions are predicted by mental processes such as feelings and thoughts and that individuals learn behaviours through modeling others. Their research concluded that having been a recipient of ghosting is associated with initiating the act toward someone else, which supports the social cognitive learning theory. In essence, although it is a painful experience to be ghosted, it may also be perceived as beneficial and therefore taken up as a dissolution strategy moving forward.

Psychological and Emotional Consequences of Ghosting

Relationship dissolution strategies impact how individuals cope with the breakup and process the loss. Any relationship dissolution often results in emotional and physical reactions (Timmermans et al., 2021). Ghosting can be a painful experience, leaving the recipient confused and undervalued (Thomas & Dubar, 2021; Timmermans et al., 2021). This confusion is reflected in popular media, YouTube videos, and Instagram reels that have been dedicated to exploring this phenomenon and speculating on why it occurs. There exists some literature examining the psychological implications of experiencing ghosting (Powell et al., 2021; Thomas & Dubar, 2021; Timmermans et al., 2021). LeFebvre et al. (2019) assert that ghosting can be conceptualized as an ambiguous loss in which an individual does not have closure and is left wondering what happened. Sudden and ambiguous loss has the potential to halt the grief process (LeFebvre et al., 2019) and leaves the recipient feeling hurt, angry, shameful, and disappointed (Timmerman et al., 2021). For some, it provokes concern for the safety of the ghoster; fearing that something bad happened to them to explain their sudden absence. Thomas and Dubar (2021) reported similar findings, with participants reporting a lack of closure following the experience of ghosting. This may result in feelings of powerlessness and lack of control as posited by LeFebvre et al. (2019).

Not only are there immediate psychological consequences of experiencing ghosting, but it may have implication for long-term mental health and the initiation and maintenance of future relationships. Timmermans et al. (2021) suggest that such consequences include lowered self-esteem, decreased trust in others and the world, and even the precipitation of depression and panic attacks. One hundred percent of participants in Thomas and Dubar's (2021) study used language that suggested a lower self-worth and self-criticism related to the experience of being

ghosted. Their research also suggests that many participants reported feeling devalued and resulted in an unwillingness to be vulnerable in future relationships.

In contrast to the negative consequences, some research found that, for some, resiliency may result from the experience of ghosting, which would suggest an ability to find strength in coping with such a deep rejection and lack of closure (Thomas & Dubar, 2021). While much of the research examines the psychological consequences of the recipient, Thomas and Dubar (2021) also examined the effects on the initiator of ghosting. Their study found that initiators experienced some guilt, mainly about the possible awkwardness of a future face-to-face meeting, rather than empathy for the non-initiator.

Attachment Style and Ghosting Behaviour

While much of the literature points to emotional immaturity, avoidance of conflict, and even social learning as an explanation for ghosting, attachment style may also play a role. A search of the literature found only two recent studies that either conceptualized (Thomas & Dubar, 2021) or researched the association between ghosting and attachment style (Powell et al., 2021). While Thomas and Dubar (2021) highlight the possibility of a connection between attachment style and ghosting, they do not investigate the trend within their research. However, there exists grey literature, in the form of online attachment therapists and coaches that can provide for a richer exploration of the insecure attachment styles, anxious and avoidant, and ghosting behaviour.

Avoidant Attachment and Ghosting Behaviour. Although the academic literature on avoidant attachment and ghosting is sparse and, in its infancy, earlier academic research by Collins and Gillath (2012) found that individuals with avoidant attachment are more likely to use technology to end a relationship over face-to-face communication. Powell et al. (2021) agree and

found that individuals who enacted ghosting were more likely to be avoidantly attached. The correlation of avoidance and enacting ghosting is also unsurprising given that avoidantly attached individuals struggle with being emotionally vulnerable and often create distance with others, especially if the relationship is progressing or becoming too emotionally and/or physically close (Personal Development School, 2020c). Grey literature, from The Personal Development School (2020c), describes that avoidant individuals may choose to ghost a potential dating partner if their fears around being in a relationship are triggered within the dynamic. This may include discussions about commitment early on, or perceiving criticism from the potential partner, which confirms their beliefs that they are defective and incapable of relationships. However, they do so because avoidants tend to be conflict averse, do not have the communication skills, and fear not knowing what to say to properly end the relationship. They may also feel that they do not owe an explanation to anyone, manifested from their childhood experiences of not having their needs met and therefore project the belief of self-reliance onto their potential partner.

Anxious Attachment and Ghosting Behaviour. Anxious attachment and ghosting behaviour was conceptualized and mentioned in only two academic journals. Thomas and Dubar (2021) did not investigate the link but raised concerns about how experiencing ghosting may negatively impact and even shift attachment in romantic relationships and advocate for more research into the subject. Concerns raised by Thomas and Dubar may indeed have some merit. An exploratory analysis conducted by Powell et al. (2021) of attachment and ghosting experience found that individuals who had experienced ghosting reported higher levels of anxiety compared to those who had never been ghosted.

Although this association is interesting, the cross-sectional nature of the design makes it difficult to assert causality. Did ghosting contribute to the development of anxiousness or were those individuals already anxiously attached and therefore have already had higher levels of anxiety, which increased the likelihood of being ghosted? Supporting my claim is the previously mentioned research by Timmermans et al. (2021) which suggests that a potential partner “falling in love too fast” (p. 791) is a motivating factor for someone enacting ghosting. According to Levine and Heller (2011), overinvestment in relationships is characteristic of anxious attachment and may be especially triggering for those with avoidant attachment, thus increasing the likelihood of being ghosted when the avoidant is unsure how to navigate conflict. This assertion may also be supported in earlier research examining dissolution strategies and attachment style which found that anxiously attached individuals are more likely to receive breakups through mediated methods such as technology (Weisskrich & Delevi, 2013).

Although it appears that anxiously attached individuals may more often be the recipients of ghosting, they also enact ghosting themselves at times. According to the grey literature from the Personal Development School (2020a), anxiously attached individuals are the least likely to enact ghosting, however, when they do so it is because they fear the abandonment associated with the relationship dissolution conversation. Even if the anxiously attached individual is not interested in an individual, they also fear closing the door completely because it may trigger feelings of abandonment and being alone, or due to fear that another possible connection will not work out and want the option of returning. They may also ghost because they do not trust their ability to set boundaries and close a relationship completely, leaving themselves open for being persuaded by the recipient to stay in the relationship.

Difficulty Navigating an Abundance of Choice

Difficulty navigating an abundance of choice is another emerging trend within modern online dating and may be particularly challenging for those with insecure attachment. Online dating offers its users a plethora of partner options and dating apps market this as an improvement on traditional dating. However, research by D'Angelo and Toma (2017), Pronk and Denissen (2020), Lenton et al. (2010), and Schwartz and Velotta (2018) argue that the vast number of available partners may have implications for mate selection and choice satisfaction.

To illustrate this point, economic research has well established that consumers enjoy the option of having more choice. However, they are often less satisfied with their purchases and are less likely to make a choice if they are offered a large array of options versus a smaller one (Iyengar & Lepper, 2000). Arguably, the purchase of consumer goods can be likened to selecting a partner. Similarly to consumer goods, when searching for a mate people enjoy more choice and think that finding a suitable partner should increase with more available options. However, as Pronk and Denissen (2020) point out, the rise in online dating coincides with a rise in singledom. According to the United Nations (2020), the number of 45–49-year-old women who have never married has increased from 6.2% in 1990 to 10.8% in 2010. That number is expected to rise to 25% by the time today's youth reach middle age (DePaulo, 2019). Although there are multiple factors that could account for this sharp increase, Pronk and Denissen hypothesize that the sheer volume of available partners present in online dating creates the existence of a rejection mindset, which may in part help to explain the paradox between availability and singlehood. The authors conducted a series of three studies which revealed that as participants are presented with more hypothetical options, they gradually become more rejecting of partners. Interestingly, women become more rejecting than men as more options became available. Not only were they

more rejecting of potential partners, but they were also less satisfied with their choice when they did make one, which counters the common belief that being more selective will afford you satisfaction with your chosen mate.

The paradox between more choice and less satisfaction may be explained through an evolutionary perspective. Lenton et al. (2010) contend that, until the advent of online dating, humans have never been presented with potentially endless options for mate selection. They argue that online dating removes mate selection from the natural world, which eliminates face-to-face social cues and places increased cognitive demand on the process of vetting potential partners. The authors hypothesize that too many options create cognitive overload, especially for those who do not know exactly what they are looking for in a potential partner. Those who were provided with 20 versus six options showed indications of memory confusion related to potential partners, although they did not show any difference in regret or satisfaction levels with their choice.

Although Lenton et al. (2010) found no significant difference in regret and satisfaction levels among participants between small and large pools of partners, an earlier study by D' Angelo and Toma (2017) offers different findings. Their findings suggest that there may be a time lag between choice and regret, which was not studied by Lenton et al. D' Angelo and Toma conducted their study of partner selection satisfaction and regret based on the theoretical premise of choice overload and decision reversibility frameworks. Their participants were provided with a choice to reverse their selection of a mate. Overall, those choosing from the larger pool (24) vs the small pool (6) and who had the option to reverse their choice were the least satisfied with their original choice. Having the ability to reverse a choice triggers a justification process, whereby it is more difficult to justify a choice when there are other options. Individuals can

create alternative stories and evaluative thoughts about the potential upsides of the discarded options (D'Angelo & Toma, 2017). Arguably, the online dating environment provides users with the notion that you can always shop around again for another mate if not satisfied with the current option.

Insecure Attachment and Difficulty Navigating Abundance of Choice

For the insecurely attached individual the abundance of choice may have even greater implications. Each of the articles above describe that choice becomes more difficult for people without well-articulated desires in a mate. I would argue that individuals who have well-articulated desires in a mate would reflect a more secure attachment style, whereby they understand themselves, their wants, and their needs in a partnership. Individuals with anxious attachment struggle with knowing themselves and often put the desires of another person ahead of their own. Additionally, they tend to be more preoccupied with whether the other person likes them rather than if they desire the potential partner themselves. This arises from rejection sensitivity, where they will often overlook their own wants and desires in order to maintain a connection (Personal Development School, 2020a). Therefore, the anxious individual may find it difficult to choose a partner altogether given the plethora of available options.

Shorey (2019) argues that the abundance of choice that online dating provides may be attractive for individuals who are anxiously attached because they can avoid their own insecurities and true emotional intimacy. He argues that in the era of pre-online dating, individuals were forced to grow their connection, face their emotional challenges, and be more vulnerable in order to blossom a connection, knowing that finding another one may be more challenging. Today, with the advent of online dating, individuals with anxious attachment may be more inclined to go back online to seek reassurance and validation from others rather than

directly ask for it or self-soothing when they detect a possible rejection cue from someone they are dating. Shorey's clinical observations may be validated through empirical research. Research by Timmermans and Alexopoulos (2020) demonstrated that individuals high on anxious attachment scores were more likely to use dating apps to flirt, have casual sexual encounters, and gain social approval even when in a romantic relationship. Drouin et al. (2014) also suggest that anxiously attached individuals are more likely to add romantic interests on Facebook even while in a relationship, suggesting that they are lining up potential partners should the relationship not work out.

Electronic Intrusion

Digital technology, social media, and instant messaging through smart phones make it easy to connect with and survey the whereabouts and online activity of friends, family, partners, and romantic interests. A new trend since the advent of the digital era, electronic intrusion, is relevant in the context of online dating and may be perpetrated more heavily by insecurely attached individuals. Electronic intrusion in the context of dating is defined as “intruding into the online privacy of a dating partner, monitoring a partner's whereabouts and activities, and pressuring a partner for constant contact” (Reed et al., 2016, p. 259).

Insecure Attachment and Electronic Intrusion

Individuals with attachment insecurity, especially those with anxious attachment may be contributing to the growing trend of electronic intrusion. Having the ability to track whereabouts, observe read messages, and active status through social media may be even more problematic for anxiously attached individuals, who are particularly prone to anxiety and jealousy. Individuals with attachment anxiety fear the loss of their partner, especially when separated. They have a need for continuous communication, reassurance, and validation (Levine & Heller, 2011). Reed

et al. (2016) found that anxiously attached teenage boys and girls, within the dating context, were more likely to engage in the behaviour compared to their secure and avoidant counterparts. Reed et al. concluded that online surveillance offers the anxiously attached users a two-pronged outcome; it can be a trigger for attachment anxiety and a form of reassurance. For example, one may feel anxiety and fear rejection when their partner does not respond to a text but has been active online since sending the message. Conversely, one may get a sense of relief from anxiety when they can observe that their partner's location aligns with where they say they are. The COVID-19 pandemic may play a role in the frequency of electronic intrusion. Ligman et al. (2021) argue that with the sharp rise in dating apps since the COVID-19 pandemic, electronic intrusion may be particularly important to study. Their study suggests that electronic intrusion is more common in couples and dating partners where there is jealousy and uncertainty about the future of the relationship.

Gibson (2020), an online based attachment therapist, suggests that there are four reasons why social media and digital technology may affect the anxiously attached individual more than any other. Firstly, she suggests that anxiously attached people see sharing, liking, and commenting about them on social media as signs of investment. Secondly, they judge how close the relationship is by how much social media interaction there is. Thirdly, they monitor potential or real partners social media activity for likes and comments on others' pictures and often become jealous or insecure about this activity. Fourthly, they may struggle with continuous checking of social media platforms after a breakup which may make it difficult to move on and trigger anxiety and rejection wounds. Each of these electronic intrusion tactics are an attempt for the anxiously attached individual to gain certainty, reassurance, or validation when anxiety or

fears of rejection are triggered. Unfortunately, they often result in the opposite outcome and perpetuate anxious attachment.

While the above research pertains to the use of social media platforms as a primary method of electronic intrusion, I would argue that online dating apps may also be used by the anxiously attached individual in the same manner. Dating apps are arguably a form of social media, with the ability to communicate, share photos, descriptions, and even video chat. Unfortunately, no literature was found pertaining to the use of dating apps to commit electronic intrusion, or that they perpetuate attachment anxiety through the ability to surveil. However, similar to other popular social media platforms, there are features that allow for intrusion including GPS location. Users are provided with potential matches based on preferred distance. However, these sites also continuously display the distance from the match. Even after taking communication off the app and into texting, the ability to monitor location and track active status remains as long as both are actively using the accounts. For example, opening a match's profile will reveal how far away they are in kilometer range from your current location. Anxiously attached individuals are adept at recognizing patterns, developed through their need for hypervigilance as children (Levine & Heller, 2011). Over time, users can detect patterns in whereabouts and a general sense of location. This can act as a source of anxiety, if for example, your potential match tells you they are home, but their distance reflects otherwise.

This also offers another point of discussion around attachment insecurity. Prior to the advent of online dating, there was no ability to track the whereabouts or dating status of potential partners, which may have made the uncertainty of this stage easier to navigate. However, with online dating, if an individual's location is still displaying, it means that they are opening the app and potentially communicating with others. This may perpetuate attachment anxiety and induce

jealousy and insecurity in the early stages of a relationship when dating others is common, especially before discussing exclusivity.

Summary of Findings

The findings from the literature suggest that attachment insecurity plays a role in the modern dating trends of online dating including breadcrumbing, ghosting, navigating an abundance of choice, and electronic intrusion. Each of these behaviours and trends has the potential to impact the psychological well-being of both the recipient and the initiator (Navarro et al., 2020a, 2020b; Schwartz, 2022). The COVID-19 pandemic, which resulted in a significant increase in the use of online dating, has only increased the frequency of modern dating trends.

Although breadcrumbing has been pathologized in mainstream media and in the literature to some extent, the motivations of breadcrumbers has not been empirically studied and therefore it is difficult to assert that everyone who breadcrumb is malicious and intentionally leading on the recipient. Online attachment coaches and therapists suggest that breadcrumbing may be a strategy employed by insecurely attached individuals as a communication style that reflects uncertainty, fear of rejection, fear of letting go of a connection, or an attempt to keep potential partners at an emotional distance (Personal Development School, 2020b). It may also be manifested as a result of communication and cognitive overload due to navigating an abundance of choice.

Ghosting as a relationship dissolution strategy is a common method by which individuals terminate a connection because it is the most efficient way of alleviating an emotionally challenging situation (Timmermans et al., 2021). However, the literature also suggests that ghosting is seen as an appropriate method when attempting to set a firm boundary with a disrespectful recipient (LeFebvre et al., 2019). Ghosting can be conceptualized as an ambiguous

or traumatic loss often leaving the recipient feeling hurt, confused, shameful, and disappointed (Timmermans et al., 2021), which may impact long-term mental health and result in lack of trust in future relationships (Thomas & Dubar, 2021). Although ghosting may be enacted by many individuals regardless of attachment style, the literature suggests that ghosting may be particularly appealing as a strategy for individuals who struggle with direct communication, being vulnerable, rejecting others, and those who would rather avoid conflict. Powell et al. (2021) suggest that avoidantly attached individuals are likely to enact ghosting and that those who experienced ghosting have higher levels of anxiety. Possible explanations for this include anxious individuals may be displaying neediness or overinvestment, and excessive emotionality which may precipitate ghosting so that the initiator does not have to deal with the perceived emotional response from a breakup (Collins & Gillath, 2012). Individuals with attachment insecurity tend to struggle with vulnerability, rejection, and avoidance of conflict (Powell et al., 2021; Thomas & Dubar, 2021).

Navigating an abundance of choice is a new phenomenon since the advent of online dating, where there is considerably more availability of potential partners. Perhaps coincidentally, the rise in singledom has also risen alongside the popularity of online dating (Pronk & Denissen, 2020). The correlation between choice and decision-making may be explained through the concept of choice paradox and cognitive overload when provided with too many choices, whereby too many options results in more rejection of partners, dissatisfaction and regret with the choice made, and the mindset that there are endless options to return to if needed (D'Angelo & Toma, 2017; Lenton et al., 2010). Navigating choice is described as even more difficult for individuals who do not have a clear understanding of their wants and needs in a partner. Individuals who are insecurely attached tend to struggle with understanding their

needs. Anxiously attached individuals often place their need for connection above all else, ignoring red flags and undesirable qualities. They also may choose to communicate with multiple partners in order to ward off the emotional pain of a possible rejection by one. It may be safer for them to scatter their emotional investment than to invest in one person who may hurt them. This can be afforded with the use of online dating. Ultimately though, this prevents them from being emotionally vulnerable and work through their insecurities (Shorey, 2019).

Electronic intrusion, which is the deliberate surveillance of potential partners through the use of social media, online dating apps, and texting is another modern dating trend that may be particularly popular among individuals with anxious attachment (Reed et al., 2016). Monitoring the whereabouts and social media activity of dating partners is common among anxiously attached individuals because it can temporarily relieve anxiety and offer reassurance and validation. However, it can also be a source of anxiety and prevents the anxiously attached individual from finding reassurance and validation directly from their partner or other areas of their life.

Given the above findings, the following section will discuss the implications for counselling psychology and provide recommendations for psychologists and therapists to use in practice with their clients.

Implications and Recommendations for Counselling Psychology

The following section applies the literature reviewed to the field of counselling psychology and provides recommendations for therapists working with clients who are dating and using dating apps as their primary method of seeking potential partners. This section is divided into therapist directed implications and psychotherapeutic interventions that therapists can use with clients who are navigating the modern dating world.

Implications for Counselling Psychology

Understanding the Language

As this literature discussed, dating and courting practices have changed significantly in the past 25 years. Many individuals aged 18–45 are taking to online dating to form connections and with hopes of finding their significant others. As such, it is imperative that the modern therapist remain current with modern dating practices and the trends that have emerged in response to this growing phenomenon.

In response to the growing popularity in online dating, there has been a shift in the language used to explain the behaviours and trends that have been born out of modern dating. Language is powerful and often is unique to certain cultures and subgroups. Those involved in modern dating have created an entirely new language to describe their lived experience and realities of online dating. The therapist armed with the same language as their clients may be able to explore more deeply and with greater ease relational problems presented by the client. Each of the themes presented in this literature review offer new language and terms that many therapists may not have been exposed to previously. Many clients may come to practice using slang and modern terms, which the therapist may not fully understand, let alone connect to the potential psychological implications that accompany them. Being grounded in the subculture's language offers the modern therapist with the tools to engage with clients and connect more deeply with them so that they feel understood and validated. Using and understanding similar language can be conceptualized to match and mirror the client, which according to Borelli et al. (2019) helps clients heard, understood, and validated for their lived experience and can create a stronger therapeutic alliance.

Reflect on Personal Biases

Regardless of the therapist's level of involvement and understanding of modern dating practices, it is imperative that they reflect on their biases and personal experiences of dating and courting practices. For therapists who may be older or who have never dated online, it is important to reflect on their personal views of how dating should transpire. This will help the therapist reduce the risk of countertransference toward the client and lessen the likelihood of passing judgment about the client's behaviours, responses, and views of online dating. Additionally, many of these trends in online dating including ghosting, breadcrumbing, and electronic intrusion have been highly pathologized in mainstream media. Therefore, it is imperative that therapists reflect on their own views of the behaviours and keep an open mind about the functionality and intentions of enacting such behaviours, especially as it relates to clients with anxious and avoidant tendencies.

Psychotherapeutic Interventions

The following section will describe some psychotherapeutic interventions that may be helpful for clients who are navigating modern dating. Particular attention will be given to those with insecure attachment and those dealing with the psychological implications of being the recipient of these modern dating trends.

Understanding Your Client's Attachment Style

The literature suggests a correlation between attachment insecurity and enacting the modern dating trends of breadcrumbing, ghosting, difficulty navigating an abundance of choice, and electronic intrusion. If therapists recognize in session that their clients are enacting modern behaviours or struggling with online dating, they may be primed to explore their clients early relational dynamics through an attachment theory lens. This may be first accomplished by

exploring the client's early and significant caregivers using a genogram and discussing relational dynamics, highlighting abandonment, rejection, neglect, or other behaviours that may trigger relational wounding. A search of Google revealed a new book for therapists geared toward genograms with an adaptation on attachment theory (DeMaria et al., 2020). Tools such as this one may be beneficial for therapists to use and may provide clues about how the client is relating and communicating within their dating relationships and what strategies they may be employing to get their needs for emotional connection met, as evidenced by their relational dynamics from childhood or formative years.

Another method the therapist may use to determine their client's attachment style is including the use of an attachment style questionnaire. While there are formal academic assessment tools, the use of grey literature is an appropriate and more accessible means for therapists working in the field. Dr. Diane Pool Heller, a specialist in attachment and early childhood trauma, has developed a free tool that clients and therapists can use to provide an idea of the client's attachment style on her website (Trauma Solutions, 2021). This tool will help to guide discussions about how the client is currently and previously feeling and relating in their intimate relationship and may provide an opening to discuss and normalize the behaviours experienced in online dating.

Processing Relational Trauma

At the root of insecure attachment is typically childhood or early relational trauma which precipitates a fear of rejection, need for closeness, reassurance, and validation for the anxious person and a fear of closeness, fear of loss of oneself, and the need for emotional distance for the avoidant individual (Levine & Heller, 2011). As such, significant improvement and a shift toward secure attachment can be achieved through processing and reauthoring early childhood

wounds. This can be achieved through a variety of trauma processing techniques and procedures, one of which includes eye movement desensitization and reprocess (EMDR). The theoretical framework of EMDR, adaptive information processing (AIP), developed by Shapiro (2018) contends that early experiences drive perceptions and responses in the future. Her theory is similar to the internal working model of attachment theory developed by Bowlby (1969) which posits that early childhood parental experiences provide a blueprint for relating in adult relationships. Research by Wesselman et al. (2012) and Civilotti et al. (2019) provide some evidence to suggest that individuals with attachment insecurity can move toward secure attachment and change their internal working model with the use of EMDR and processing early childhood relational wounding. Parnell (2013) wrote a book that tailors the EMDR protocol to attachment-related trauma, which is often more complex than single traumatic events. Therapists can use this book to tailor the EMDR protocol to their clients seeking to work through relational wounding.

Self-Compassion Work

Clients may come to therapy, especially those with insecure attachment, frustrated and/or shameful about their experiences with online dating. If clients recognize that they are enacting behaviours such as breadcrumbing, ghosting, having difficulty choosing one partner, or conducting electronic intrusion, it is important that the therapist first normalize these behaviours and see them as coping and adaptive strategies for the client to meet their relational needs. Although there should be discussion about how to find more adaptive strategies (which will be discussed next), it is important not to take a stance of pathologizing the behaviour as to limit the potential of perpetuating a shame and guilt cycle within the client.

To assess for self-compassion, the therapist can draw from the work of Kristin Neff (2022), who has developed a self-compassion scale. The scale uses 18 items used to measure six components of self-compassion. The six components of self-compassion, according to Neff, are increased self-kindness, common humanity, mindfulness, reduced self-judgment, isolation, and overidentification. Once it has been established that the client lacks self-compassion, the therapist can employ techniques from therapeutic modalities such as acceptance and commitment therapy (ACT).

ACT has been empirically researched as an effective modality to reduce shame and self-criticism for behaviours enacted by clients (Luoma & Platt, 2015). Because ACT has its foundations in cognitive diffusion, which is the concept of separating thoughts from self, it may help clients with insecure attachment, fears of closeness, and fears of rejection to reprogram their inner working models of self. This may be a particularly effective tool to help develop psychological flexibility for clients who struggle with rejection cues (anxious attachment) and uncomfortable feelings when closeness arises (avoidant) and help to redirect their attention to something of high value to themselves rather than feeding their insecurities by ruminating and marrying their fearful thoughts to narratives about themselves.

Boundary Work

Personal boundaries can be defined as “a dividing line that defines who you are as an individual and how you’ll interact with others” (Martin, 2021, p. 7). Boundaries teach others how one would like to be treated and how close, both emotionally and physically, one is willing to be with others (Martin, 2021). Boundaries can take many forms including, but not limited to, physical, emotional, and sexual. Each function to establish differentiation between what an individual is and is not and what they are willing to tolerate. Minuchin (1974) theorized that

interpersonal boundaries vary in permeability, from rigid to diffuse. Rigid boundaries do not allow for communication with others and create significant separateness between individuals and systems, while diffuse boundaries are very permeable and create confusion and lack of separateness between self and other. Minuchin further expanded that permeable boundaries can result in enmeshment whereby the actions of others immediately affect one's own emotional stability.

Setting healthy personal boundaries within relationships and during the dating phase may be particularly challenging for individuals with attachment insecurity. Unfortunately, I found limited formal academic research exploring the link between attachment style and boundary permeability. Early work by Macfie et al. (2015) established a link between role reversal in childhood with an inability to establish autonomy, the development of diffuse boundaries, preoccupation with relationships, and anxious attachment. Despite the lack of formal research, there is a growing body of grey literature examining the link between attachment insecurity and boundaries which will be explored below.

Individuals with an anxious attachment tend to be hyperfocused on meeting the needs of others, often sacrificing their own personal boundaries and needs for the sake of maintaining the relationship (Personal Development School, 2020a; Priebe, 2021; Robarge, 2017). They struggle with understanding themselves and may easily become enmeshed in a relationship dynamic, allowing their emotions and actions to be influenced by the actions of others. As a result, they can be conceptualized as having diffuse or permeable personal boundaries. In other words, they struggle to differentiate self from other (Personal Development School, 2020a; Priebe, 2021; Robarge, 2017). Lack of boundaries and fear of rejection tend to go hand in hand for the anxiously attached. As such, I would argue that individuals with an anxious attachment style may

tolerate behaviours such as ghosting and breadcrumbing from potential partners to maintain the connection, even if they consciously recognize the behaviour as painful and inappropriate. Often, the underlying motivation behind not setting a boundary around inappropriate behaviour is fear of pushing the other away and ultimately losing the connection. This reflects an individual's lack of self-worth and recognition that their needs have merit and they can be emotionally and physically okay even without the connection (Personal Development School, 2020a; Priebe, 2021; Robarge, 2017).

Those with anxious attachment also struggle with respecting the personal and emotional boundaries of others, especially when they perceive distance or rejection within the dynamic. This may look like continuous reaching out, showing up unannounced, and insisting on connection even when the other attempts to set a boundary. Unfortunately, this may manifest in creating even more distance within the dynamic, if the other perceives the behaviour as intrusive and disrespectful (Personal Development School, 2020a; Priebe, 2021; Robarge, 2017).

Individuals with an avoidant attachment style may display characteristics of rigid boundaries, manifesting as hyper-independence, emotional distance, lack of communication with other, and a separateness within relationships. They may struggle to allow others intimately close to them and may feel uncomfortable expressing their need for space, often resulting in cut off and rigid boundaries (Personal Development School, 2020a; Priebe, 2021; Robarge, 2017). If an anxiously attached individual happens to be dating an avoidant individual, a push-pull dynamic can ensue, whereby the approach and avoidance behaviours trigger fears within each party. This dynamic is termed the anxious/avoidant trap in Levine and Heller's (2011) book, *Attached*.

Therapists working with clients navigating the modern dating landscape should explore the concept of boundaries in intimate relationships. Learning about and practicing healthy

boundary setting may be particularly useful for the recipients and enactors of breadcrumbing, ghosting, and electronic intrusion. This can be done with a variety of techniques and exercises. I personally enjoy the exercise “toward and away.” The client places a string around their perceived personal boundary on the floor. The therapist then approaches the boundary until the client recognizes what distance feels most comfortable. The therapist can personify individuals in the client’s life to help the client discover how their relationships affect their need for space and closeness. The therapist can ask the client about body sensations, emotions, and feelings associated with the approach or distancing of the theoretical person, which help the client to recognize the somatic connection and sensations of personal and emotional boundaries (Ullrich, 2019).

As previously mentioned, permeable or rigid boundaries and fears of rejection often go hand in hand. Therefore, the therapist can work with the client to recognize their fears of rejection and abandonment wounds. These are often rooted in earlier experiences of perceived rejection from caregivers or important relational figures. Exploring these through the previously described relational trauma lens will be a good adjunct for boundary work.

Developing More Adaptive Coping Strategies

Therapists can help clients recognize that breadcrumbing, ghosting, electronic intrusion, and difficulty investing in a single partner may be coping strategies to obtain one’s relational needs. However, the therapist can also help clients shift toward more adaptive strategies that will encourage vulnerability, emotional connection, effective communication, and increased tolerance of uncomfortable feelings. The therapist may also help clients come up with strategies that offer self-soothing in times of anxiety. Examples of techniques that may be beneficial for clients include mindfulness, meditation, and focusing on high priority values. Mindfulness has been

empirically studied with significant effect to be a moderator for attachment insecurity and wellbeing, especially for the anxiously attached individual. It provides moment to moment awareness of thoughts, feelings, and emotions, and a deliberate shift toward nonjudgemental thinking (Davis et al., 2016). Clients may also be encouraged to lean into their fears and have direct and vulnerable conversations with potential partners rather than avoiding conflict or seeking reassurance through social media. Shorey (2019), a psychotherapist who works with attachment insecurity and helps clients navigate online dating, agrees that vulnerability and encouraging direct communication rather than avoiding difficult feelings helps clients to better understand themselves and learn that they can be vulnerable and ask for their needs to be met in ways that help reauthor and foster secure attachment.

Individuals with avoidant attachment are encouraged to recognize when their fear of closeness becomes activated and ask directly for space, rather than breadcrumb or ghost, and develop the psychological flexibility to tolerate increasing levels of closeness with potential partners. One of the biggest challenges for the avoidant individual is the expression of needs. The therapist can help the client in session practice expressing their needs with the therapist in a safe space, and then encouraging incrementally vulnerable needs to be expressed in real life settings. This will slowly develop the window of tolerance to allow the individual to learn that being close to others can be a safe place, which will ultimately help with dating going forward (The Attachment Project, 2022).

Limitations and Next Steps for Future Research

The scope of this capstone is limited by the lack of research available on the novel topic of attachment and online dating trends of ghosting, breadcrumbing, navigating choice, and electronic intrusion. Research on the trends in modern dating is truly in its infancy, given that

online dating has become mainstream and normalized only in the past two decades. Therefore, research on the topic has much room for expansion. Conceptualizing these trends through an attachment theory lens is a novel topic with only a handful of articles published. Therefore, this capstone provides a backdrop for the development of future research.

There are also significant gaps in the literature and areas where research could be further expanded. Future research should expand on the available research exploring the correlation between trends such as breadcrumbing, ghosting, electronic intrusion, and how individual navigate an abundance of choice through an attachment lens. Research could explore the intentions of breadcrumbers and ghosters through a fear or rejection mindset (anxious) and a fear of intimacy and closeness (avoidant) lens to determine the true intentions of these behaviours. This is especially true for breadcrumbing which has had no empirical research to date on the motivations of why individuals breadcrumb but is quickly pathologized in social media and linked to narcissism. Navigating the abundance of choice could also be further studied to determine whether individuals who are anxiously attached prefer to have more potential partners on hand and, if so, what adaptive purpose it serves for them. Research on this topic could also further explore what the optimal number of matches is through the attachment lens. Are there differences in what is cognitively demanding for an avoidant, secure, and anxious individual? How does each individual navigate terminating connections when they do settle on one potential partner? Are there differences, and if so, what are they? For example, do the avoidants ghost? Do the anxious breadcrumb? And do the secure offer more direct communication as a dissolution strategy?

Most of the research presented in this literature review focused on heteronormative individuals within the North American context. Therefore, future research may focus on

increasing representation of how attachment influences these trends based on sexual orientation and nonnormative gender identity. Current research also focused solely on the assumption that experiences with dating were viewed through the lens of monogamous relational dynamics. It would therefore be interesting to see how polyamorous individuals and couples' experiences of the trends of ghosting, breadcrumbing, navigating choice, and electronic intrusion differ from those who are monogamous. Research should also include other minority groups, as the majority of participants were White. This will result in more inclusion of possible cultural differences pertaining to dating and courting practices. For example, are there some cultures who, regardless of attachment style, may not ghost or breadcrumb due to an overriding cultural norm or tradition that values face to face discussions?

Overall, the literature used for this capstone advocated for future research between attachment insecurity and ghosting and breadcrumbing. For example, Chin et al. (2019) suggested assigning anxious attached users to dating apps and testing whether their attachment orientation changes over time or whether their attachment orientation behaviours are impacted by online dating use. Powell et al. (2021) recommend that future researchers exploring ghosting create longitudinal studies and manipulate attachment orientation to determine directionality of ghosting experiences.

From my perspective, future research may also explore the differences in age related to the experiences of breadcrumbing, ghosting, navigating choice, and electronic intrusion. Much of the research focused on younger individuals, many of whom were in college. Arguably these individuals have been exposed to social media for much of their childhood and online dating since their adolescent and young adult years, which may make them more prone to enacting or tolerating these behaviours in online dating platforms. I would be interested in learning more

about how these trends affect older adults who have navigated face to face dating and have subsequently shifted toward online dating as the trend became more popular. There may be differences in how individuals conduct themselves with online dating based on previous scripts brought about by face-to-face dating or potentially previous long-term relationships and marriages. I would also be curious if individuals who have undergone a significant relational breakdown such as a divorce or long-term relationship breakdown which may have affected their attachment style or level of availability and therefore may contribute to these behaviours as they navigate life and regain emotional stability following a significant life change.

Reflectivity

Reflecting on my research and experience writing this capstone, I recognize several areas of personal and professional growth that have emerged since undertaking this project. Firstly, in my initial self-positioning statement, I disclosed my personal bias about online dating and suggested that I preferred traditional face-to-face dating methods. After conducting this research, I recognize that it is not the online dating platforms that I dislike, rather the accompanying trends including abundance of choice, ghosting, breadcrumbing, and mostly electronic intrusion. Looking back at my experience with online dating, I recognize that there is likely a significant amount of insecurely attached individuals on the sites, such as myself, and that we are all attempting to have our needs met to the level we are capable of at the time. I have learned that my negative bias toward online dating was more a reflection of my own level of self-awareness and my porous boundaries and lack of self-worth. I would entertain breadcrumbs, be emotionally distraught with ghosting, and hypervigilant to signs of rejection. Similar to what Reed et al. (2016) found in their research, I would also turn to the platform at times to gain validation and would obsessively conduct electronic intrusion if my emotional needs for closeness were not

met. Interestingly, I also equally partook in these behaviours, because of my own insecurities and uncertainty about my desires in a relationship.

Through the process of exploring this topic, coupled with the work I have done in this program to heal my relational wounds, I have found a new level of security within myself and am now intolerant of these behaviours and am consciously stepping toward direct, vulnerable, and open communication in an attempt to mirror what I would like to attract in my life. I held a previous assumption about how individuals display their anxious and avoidant tendencies, and through the process of this research this has only strengthened that assumption. Much of the literature confirms what I have experienced as my relating and coping strategies, along with observations from friends and clients.

Key learning moments as a researcher navigating this capstone process included keeping better track of my citations, being flexible with my research question, and not being afraid to reach out for the support of my colleagues and supervisors when needed. I learned that I am capable of effective writing and idea synthesis and that I am passionate about attachment and relationship dynamics. My research has also helped inform my clinical practice, as I have several clients who are navigating online dating and struggling with attachment insecurity, early childhood trauma, and establishing loving boundaries for themselves and others. The real-world experience I have gained through my clients has also supported the findings from the literature. It has been fascinating to recognize their similar patterns in behaviour as evidenced by the literature and helping them to recognize them as attempts to seek reassurance and validation which they ultimately can find within themselves in order to move to more security. However, that is not to say that one must find it within themselves, each of the experiences gained through

online dating is a learning tool that can be used to better understand oneself and refine individual wants and desires from a romantic partner.

Ethical Considerations

During the evaluation of the research presented in this capstone, I did not come across any ethical considerations and concerns in how research was conducted. All research met ethics approval through their respective ethics boards, there appeared to be no coercion of participants, and the researchers maintained impartiality to the best that qualitative research can be.

It is important to evaluate ethics as part of my self-reflection and in conducting my own research for this capstone. There are several ethical considerations to take into account when reviewing and synthesizing empirical research. Firstly, it is important to consider whether the researchers conducted their studies using ethically sound principles including informed consent, fair sampling, voluntary participation, and humane treatment of the participants. Based on my analysis of the literature I could not find any ethical breaches in the way research was conducted. One observation I have made while reviewing the literature is that very few researchers disclose whether they maintained confidentiality, nor did any of them have an ethics section attached to their research. Explicitly stating ethical considerations within reports may be a way to inform readers and set a precedence about maintaining high ethical standards, rather than having it be inferred or implicitly understood. This may raise the ethical standards and demonstrate a high level of accountability to society and other researchers in the field.

It is also important for me to evaluate how I have acted ethically during the development and dissemination of the research I have conducted for this capstone. The *Canadian Code of Ethics for Psychologists* (Canadian Psychological Association [CPA], 2017) recognizes the importance of ethical practice when conducting research. Principle IV, Responsibility to Society, is particularly relevant and acknowledges that psychologists have a responsibility to constructively inform society and policy makers and expand knowledge of the human species

that will be beneficial to society at large (CPA, 2017). In conducting research on a timely subject, behavioural trends in online dating, I have contributed to the development of knowledge that may be beneficial to individuals, policy makers, educators, and other psychologists within society.

Conclusion

The research presented in this capstone provides insight into the modern behavioural trends that have emerged since the onset of online dating, including breadcrumbing, ghosting, navigating an abundance of choice, and electronic intrusion. This capstone takes a unique approach and examines these behaviours through the lens of attachment theory, offering new insights into the motivations of those who conduct the behaviours and the psychological implications to those on the receiving end.

Overall, insecure attachment may be a motivating factor for behaviours that may seem malicious or manipulative on the surface. When conceptualized through the lens of attachment theory they can be viewed as maladaptive coping strategies in an attempt to have one's emotional needs met. Unfortunately, these behaviours are hurtful and may result in long-term psychological consequences for the recipient (Thomas & Dubar, 2021; Timmermans et al., 2021). Individuals acting out these behaviours may also be equally impacted as they avoid expressing their needs and conflict in a mature, emotionally vulnerable manner, often missing opportunities for growth and personal development (Shorey, 2019).

Therapists working with individuals who are interacting with online dating platforms may recognize these behaviours either in their clients or in the potential partners they are connecting with. It is important as a therapist to take a nonjudgemental approach when discussing these behaviours and conceptualize them through the lens of an adaptive coping

strategy. It is important to note, however, that psychologists must not outright condone these behaviours either, as they are hurtful and, in some cases, can be manipulative and malicious in nature. Empowering clients to gain awareness of their individual attachment style, understanding their needs for emotional connection, developing healthy boundaries, self-worth, healing relational wounding, and encouraging vulnerable and mature connection with others may be antidotes to enacting these behaviours and tolerating them from others.

With the growing trend toward social media and online platforms for connection, especially since the onset of COVID-19 (Toma, 2015), there are opportunities for policymakers, educators, and psychologists to inform individuals about the behaviours that have arisen in recent years. Much of the presented research focused on young adults, who may be particularly vulnerable to both enacting and tolerating these behaviours, as they are in a developmental stage of understanding themselves and others and forming scripts about who they are. School educators could provide educational opportunities to students about online behaviour, emotional coaching, attachment style, understanding their own needs and boundaries, and learning how to navigate these behaviours within themselves and others. Doing so may prevent future psychological harm and help individuals develop and grow into members of society who empathetically connect with others.

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Appendix

Summary of the Methods Used of the Five Primary Articles From the Literature Reviewed

Authors	Year	Title	Sample Size	Selection/Recruitment	Data Collection Processes	Data Analysis Process	Qualitative/Quantitative/Mixed/Case Study	Notes on Findings
LeFebvre, L., Allen, M., Rasner, R. D., Garstad, S., Wilms, A., & Parrish, C.	2019	Ghosting in Emerging Adults' Romantic Relationships: The Digital Dissolution Disappearance Strategy	99	Emerging adults aged 18–30. Each data collector recruited 5 participants using convenience and snowball strategies from their own personal and social networks. Consent forms were explained and signed. Inclusion criteria: Anyone familiar with the term ghosting; any gender or sexual orientation; ages 18–30; Exclusion criteria: Outside the age range 18–30; unfamiliar with the term ghosting; those who had not been an initiator or non-initiator of ghosting.	18 Graduate and undergraduate students enrolled in an advanced interpersonal communications course were trained on collection procedures. Assisting in data collection was part of their course requirement. Conducted semi-structured interviews via technology media to be recordable. Answered open and closed ended questions.	Thematic analysis and descriptive statistics.	Qualitative	Conceptualized ghosting as a non direct and avoidant strategy to terminate a relationship. Ghosting was considered undesirable in situations where a deeper connection has been established but acceptable with limited connection or to establish a boundary due to inappropriate behaviour of the recipient. Participants who initiated ghosting did so because of 5 themes: convenience, lack of attraction, to ward off negative behaviour from the recipient, lack of length and depth of relationship, and for safety reasons. Non-initiators knew ghosting occurred when they observed changes in communication patterns, lack of reciprocity in texting, or with perceived lack of interest following a date, or observing relationship status changes from “single” to “in a relationship” on social media.
Tohmas, J. O., & Dubar, R. T.	2021	Dissapearing in the Age of Hypervisibility: Definition, Context, and Perceived Psychological Consequences of	76	Emerging adults; 70% female, 30% male from a liberal arts university on the east coast of USA. Recruited in person, through on-campus flyers, social media posts, and the psychology departments participant pool. Consent was signed.	Online survey and a focus group lasting average 48 minutes and ranged in size from 2–5 participants with mixed genders. Semi structured questions and facilitated by primary author	Audio recorded data transcribed by professional online service. Interperativ	Qualitative	Most prevalent reason for ghosting was disinterest, followed by avoiding emotional and difficult conversations. Participants felt that ghosting emerged from social media because of the ability to see someone's online presence which indicates ghosting has occurred.

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		Social Media Ghosting			Thomas, J. O. Participants received a research participation credit or \$15.00 cash. Ethics board approved.	Qualitative approach to analyze. Themes were coded.		Ghosters expressed some guilt but resolved quickly and related to awkwardness of seeing the person in real life in the future, not for how it made the recipient feel. Resilience was discussed as a possible positive psychological outcome of being ghosted. However, an inability to trust in future relationships along with feelings of low self-worth emerged as common themes for ghostees.
Reed, L. A., Tolman, R. M., Ward, M. L., & Safyer, R.	2016	Keeping Tabs: Attachment Anxiety and Electronic Intrusion in High School Dating Relationships	703	9–12 grade students (age 13–19) in a large Michigan suburban high school. Convenience sampling of students across all grades to get a representative sample of the population. Consent was obtained from parents/guardians and assent was obtained from students. Participation was voluntary and anonymous. Inclusion criteria: grade 9–12; parental consent signed. Exclusion criteria: no parental consent signed.	Self-reported cross-sectional surveys were filled out online in the library and collected measures on demographics, digital media usage, dating experience, romantic attachment insecurity (using the Experiences in Close Relationships Scale-Short Form), and electronic intrusion.	Analysis was conducted only on students who reported current or prior dating experience. Regression analysis using hierarchical multiple regressions were performed for boys and girls to correlate anxious and avoidant attachment with electronic intrusion behaviour.	Quantitative	High school girls reported higher electronic intrusion than boys. Attachment anxiety was a significant predictor of electronic intrusion even after controlling for gender and other variables.

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Timmermans, E., & Alexopoulos, C.	2020	Anxiously Searching for Love (Among Other Things): Attachment Orientation and Mobile Dating Application Users' Motives and Outcomes	395	Dating app users; 55.9% male with median age 26.76. One group ($n = 291$) was recruited through MTurk and received \$2.00 for participation. The other group ($n = 176$) was recruited at a medium-sized east coast university and were given course credit for participation. The majority reported using Tinder (89.1%).	Cross sectional survey data with measures including demographics, dating app motives (using the Tinder Motives Scale), Dating app outcomes, and attachment orientation (using the Experiences in Close Relationships Scale-Short Form).	Regression Analysis	Quantitative	Attachment anxiety was positively associated with mobile dating app usage and all motives (curiosity, pass time, socializing, social approval, flirting/social skills, relationship seeking, sexual experience, travelling). Attachment avoidance was only positively associated with travelling motive. The likelihood of meeting face-to-face decreased with higher attachment anxiety and avoidance. Attachment anxiety was correlated with casual sexual relations using dating apps.
Chin, K., Edelstein, R. S., & Vernon, P. A.	2019	Attached to Dating Apps: Attachment Orientation and Preferences for Dating Apps	303	North American (geographic location was not collected) Age range was 18–65. Inclusion criteria: Being single. Exclusion criteria: Not single, and not completing the survey.	Participants were recruited via Amazon's Mechanical Turk (MTurk) and compensated at \$0.50 for completing the survey. Measures in the survey included attachment orientation (using the Attachment Style Questionnaire), and dating apps survey which examines dating app usage, type of app, and reasons to use and not use dating apps	Bivariate correlations among study variables were conducted	Quantitative	Likelihood of using and actually using dating apps was negatively correlated with avoidant attachment and significantly correlated with anxious attachment. Attachment anxiety was predictive of dating apps such as Plenty of Fish and Tinder. Avoidant individuals are less likely to use Tinder and more likely to use OKCupid.

