



# Attachment Styles and Dating App Use

## A PRISMA-Based Systematic Literature Review

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**Abstract:** Dating apps have become an increasingly prominent context for romantic and sexual interactions, and their use has attracted growing research attention in scientific literature. In light of this, the present systematic review investigated the association between adult attachment styles and dating app use. Following the updated 2020 PRISMA guidelines, a systematic search was conducted across three electronic scientific databases (Scopus, PubMed, and PsycINFO), resulting in eight peer-reviewed empirical studies that met the inclusion criteria. Across the eight studies, anxious attachment was consistently associated with more frequent dating app use, emotionally driven motives (e.g., connection, self-esteem), and higher levels of engagement in problematic dating app use. In contrast, findings on avoidant attachment were mixed: while some studies reported lower use and interest in dating apps, others showed positive associations with specific motives such as escapism, self-regulation, or instrumental interaction. In some cases, avoidant attachment was also associated with problematic use. Secure attachment appeared to be associated with a more regulated, intentional use. These findings support the relevance of attachment theory in understanding online relational behaviors and highlight implications for clinical interventions targeting emotionally dysregulated dating app use.

**Keywords:** attachment, dating app use, dating app motives, problematic dating app use, systematic review

## 1. Introduction

### 1.1 Background: Dating app use

Over the past decade, the widespread availability of the internet and the constant access to consumer electronic devices (e.g., smartphones, smartwatches, tablets) have significantly transformed how individuals initiate romantic and sexual relationships. This technological shift has contributed to the emergence and normalization of what is commonly referred to as online dating (i.e., the use of digital platforms specifically designed to facilitate interpersonal connections ranging from casual sexual encounters to long-term romantic commitments) (Finkel et al., 2012; Gatter & Hodkinson, 2016). Among these platforms, mobile dating applications (i.e., ‘dating apps’) have become particularly prevalent. Research indicates a growing trend in the number of intimate relationships that originate online, reflecting a shift in how romantic connections are initiated (Rosenfeld et al., 2019; Potarca, 2020).

According to recent statistics, dating apps such as *Tinder*, *Bumble*, and *Grindr* continue to grow in popularity, reflecting a broad cultural shift in relationship-initiation behaviors (Statista, 2025a, b). These apps offer users several advantages, including convenience, affordability, ease of access, and the possibility to filter potential partners based on specific preferences (Chan, 2017).

Additionally, functionalities such as geolocation significantly increase the likelihood of encountering nearby users, enhancing opportunities for real-time social interactions (Danielsbacka et al., 2022; Miles, 2017). Research also suggests that dating apps can alleviate loneliness and foster social connectivity (Alexopoulos & Timmermans, 2020; Sumter et al., 2017). Compared to traditional offline dating, online dating platforms remove many temporal, social, and geographic constraints, therefore expanding the pool of potential romantic and sexual partners (Regan, 2016). Consequently, increasing numbers of individuals consider online dating not only a legitimate but also a highly effective way to meet new people (Potarca, 2020). However, as with many widespread online behaviors (e.g., social media use; Sun & Zhang, 2021), increasing concerns have emerged regarding the potentially problematic or dysregulated use of dating apps, particularly among vulnerable individuals (Gori & Topino, 2024). Considering the extant literature and given that dating app use is an evolving phenomenon with potentially problematic implications for vulnerable individuals, the study of psychological and interpersonal factors associated with its use has attracted growing scientific interest (Bonilla-Zorita et al., 2021; Castro & Barrada, 2020).

## **1.2 Attachment theory in adult relationships**

Attachment theory (Bowlby, 1982) offers a well-established framework for understanding how individuals develop, maintain, and interpret close relationships across the lifespan. Initially conceived to explain the emotional bond between infants and their primary caregivers, attachment theory was later extended to adult romantic relationships (Hazan & Shaver, 1987; Mikulincer & Shaver, 2016). According to this theory, early interactions with caregivers give rise to internal working models, which shape individuals' expectations, affect regulation strategies, and interpersonal behaviors throughout life (Bretherton, 1992; Fraley & Shaver, 2000).

In adulthood, attachment orientations are commonly described along two dimensions: anxiety and avoidance (Brennan et al., 1998). Individuals high in attachment anxiety tend to seek closeness and reassurance, fearing rejection and abandonment. In contrast, those high in attachment avoidance prefer emotional distance and self-reliance, often feeling discomfort with intimacy. Individuals low on both dimensions are generally considered securely attached, displaying comfort with both dependence and emotional closeness in romantic relationships (Mikulincer & Shaver, 2016). Alongside this framework, Bartholomew and Horowitz (1991) proposed a complementary model that integrates the anxiety and avoidance dimensions with individuals' self-model and other-model, resulting in four prototypical attachment styles: *secure* (positive self, positive other; low anxiety, low avoidance), *preoccupied* (negative self, positive other; high anxiety, low avoidance), *dismissing*

(positive self, negative other; low anxiety, high avoidance), and *fearful* (negative self, negative other; high anxiety, high avoidance).

A large body of research has associated attachment styles with a wide range of relationship dynamics, including (among others) interpersonal competence (Groh et al., 2014), experiences of loneliness (Mikulincer & Shaver, 2014), romantic relationship stability (Simpson & Rholes, 2017), peer relationship satisfaction (Delgado et al., 2022), and even involvement in bullying, both as victims and perpetrators (Murphy et al., 2017). Moreover, recent evidence has begun to highlight the relevance of attachment orientations in shaping technology-mediated relationship behaviors. For example, associations have been found between insecure attachment and phubbing (Sun & Miller, 2023), problematic social media use (D'Arienzo et al., 2019), and sexting (Weisskirch & Delevi, 2011).

More recently, scholars have started to apply the attachment framework to online dating contexts, particularly those involving mobile dating apps. Since these platforms are inherently relational in nature, they provide a fertile ground for studying how individual differences in attachment may manifest in contemporary courtship behaviors. Bonilla-Zorita et al. (2021) reviewed how attachment theory has been used to explain motivations, preferences, and behavioral outcomes in online dating. Several empirical studies have further explored how attachment anxiety and avoidance predict different patterns of dating app use, including frequency of use, matching behavior, motivations for engagement, and even problematic or compulsive use (Chin et al., 2019; Coffey, 2022; Hu & Thomas, 2025; Jayawardena et al., 2022; Liang et al., 2025; Rochat et al., 2019; Timmermans & Alexopoulos, 2020; Topino et al., 2025).

### **1.3 Rationale and aims of the present review**

Given the growing interest in online dating as a relationship phenomenon, Bonilla-Zorita et al. (2021) conducted a systematic review of the literature on the associations between attachment styles and online dating. While dating apps fall under the broader umbrella of online dating, they possess distinctive technological features, such as geolocation, algorithmic matching, immediacy, and gamified interaction, which may interact differently with psychological predispositions, particularly attachment-related tendencies (e.g., Regan, 2016). These affordances differentiate dating apps from earlier forms of online dating, which typically rely on slower, profile-based exchanges. For example, swiping mechanisms and instant feedback loops may amplify hyperactivating strategies in anxiously attached individuals, whereas customizable profiles and asynchronous communication may be particularly attractive to avoidant users seeking control and distance.

To the best of the authors' knowledge, no previous systematic review has specifically focused on the use of mobile dating applications and their relationship with adult attachment orientations. This represents a meaningful gap in the literature, especially considering the increasing popularity of dating apps (see Wu & Trottier, 2022 for a review), and the well-documented influence of attachment patterns on how individuals seek, maintain, and interpret close relationships (Pietromonaco & Beck, 2015). Therefore, the aim of the present systematic literature review was to synthesize the empirical evidence on the association between attachment styles and dating app use among adult populations.

## 2. Method

### 2.1 Data sources and search strategy

The present systematic review was developed and reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines (Page et al., 2021). The entire review process, from the formulation of the research question to data extraction and synthesis, followed a structured and transparent methodology aimed at minimizing bias and ensuring replicability. No restrictions were placed on publication date, allowing for a comprehensive inclusion of studies from the earliest available records up to the most recent publications. To ensure comprehensive coverage of the existing literature, the database search was conducted across three major electronic sources: *Scopus*, *PsycINFO*, and *PubMed*. These databases were selected for their relevance to psychological, medical, and interdisciplinary research and their indexing of peer-reviewed studies from both the social sciences and health domains. The search included all available records up to October 19, 2025, with no restriction on the year of publication. The search strategy was restricted to Titles, Abstracts, and, for *Scopus*, keywords in order to ensure the retrieval of studies that specifically addressed the core constructs of interest. The following Boolean search string was used: ("dating app" OR "dating apps" OR "Tinder" OR "Grindr" OR "Bumble" OR "OKCupid" OR "eHarmony" OR "Match.com" OR "Lovoo" OR "Coffee Meets Bagel" OR "Happn" OR "MeetMe" OR "Skout" OR "Facebook Dating" OR "Badoo") AND "attachment". This search was designed to capture studies exploring the association between the use of dating applications and attachment-related constructs. The dating app terms included both general and platform-specific keywords to maximize potential studies for inclusion in the review.

### 2.2 Inclusion and exclusion criteria

Studies were eligible for inclusion in the present review if they met the following criteria: (i) published in peer-reviewed journals; (ii) written in English; (iii) reported original empirical data

(qualitative, quantitative, or mixed-method); and (iv) examined the relationship between attachment and at least one aspect of dating app use (e.g., probability, frequency, motivation, addiction). The exclusion criteria were as follows: (i) studies not published in English; (ii) reviews, meta-analyses, conference abstracts, dissertations, books or book chapters, editorials, or commentaries; and (iii) studies in which dating app use was not examined as a variable of interest (either through direct measurement or participant self-report), or in which attachment was not addressed within the framework of attachment theory (e.g., Ainsworth et al., 1978; Bowlby, 1982; Hazan & Shaver, 1987; Mikulincer & Shaver, 2007).

### ***2.3 Study selection and data extraction***

The study selection process was carried out in two sequential phases. First, the titles and abstracts of all records retrieved through the database search were screened to determine preliminary eligibility, based on the inclusion and exclusion criteria. Second, full-text papers of potentially relevant studies were reviewed in detail to assess their eligibility for inclusion in the review. Duplicate records were identified and removed prior to screening. The entire process was conducted in accordance with PRISMA 2020 guidelines and is summarized in the PRISMA flow diagram (Figure 1).

Screening and data extraction were conducted independently by two authors. Any discrepancies were resolved through discussion and consensus. For each study that met the inclusion criteria, relevant information was extracted and recorded in a structured coding sheet. The following variables were extracted: (i) author(s) and year of publication; (ii) country in which the study was conducted; (iii) study design (qualitative, quantitative, or mixed-method); (iv) sample characteristics (e.g., age range, gender distribution, clinical or general population); (v) instruments used to assess attachment and dating app use; and (iv) main findings. This structured approach allowed for consistent comparison across studies and facilitated the synthesis of results. A PRISMA flowchart of the search strategy, depicting the selection of papers, is presented in Figure 1.

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### ***2.4 Quality assessment of included studies***

The methodological quality of the included studies was assessed using the Appraisal Tool for Cross-Sectional Studies (AXIS; Downes et al. 2016). This 20-item tool evaluates key aspects of study design and reporting across five domains: Introduction, Methods, Results, Discussion, and Other

considerations. Each item was rated as “1” (= Yes), “0” (= No), or “N/A” (= Not Available). Two authors independently evaluated each study. Discrepancies in scoring were resolved through discussion until consensus was reached. The total quality score for each study ranged from 0 to 20, with higher scores indicating greater methodological quality. Studies were classified as low quality (0–7), medium quality (8–14), or high quality (15–20). The detailed quality assessment results are reported in Table 1.

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### **3. Results**

#### ***3.1 Overview of included studies***

A total of eight studies were included in the review after screening and eligibility assessment. The detailed selection process is presented in the PRISMA flow diagram (Figure 1). The quality assessment is detailed in Table 1. AXIS scores for the included studies ranged from 12 to 15 ( $M = 14.13$ ,  $SD = 0.93$ ). Three studies were classified as high quality (scores  $\geq 15$ ; Coffey, 2022; Rochat et al., 2019; Topino et al., 2025), while the remaining five were rated as medium quality (scores between 12 and 14).

Studies were conducted in North America (Chin et al., 2019; Coffey, 2022), China (Hu & Thomas, 2025; Liang et al., 2025), Australia and the United States combined (Jayawardena et al., 2022), and Italy (Topino et al., 2025). In two cases the country was not specified (Rochat et al., 2019; Timmermans & Alexopoulos, 2020). All eight included studies adopted a cross-sectional quantitative design and were published between 2018 and 2025. Collectively, the studies comprised 3408 participants, with sample sizes ranging from 118 to 1159 ( $M = 490$ ). All the studies recruited non-clinical adult samples of dating app users, with a weighted mean age of 28.23 years ( $SD$  range = 3.86–12.67). Gender distribution was relatively balanced across most studies. However, one study (Jayawardena et al., 2022) exclusively involved men who have sex with men. Considering the total sample across all included studies ( $N = 3408$ ), 52.9% of participants were male and 47.1% were female (see Table 2).

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The main research objectives and the measures employed to assess both dating app use and attachment across the included studies are listed in Table 3. Regarding the assessment of dating app use, the included studies employed a variety of self-report instruments, differing in scope and level

of standardization. Rochat et al. (2019) and Topino et al. (2025) used validated psychometric scales to assess problematic use: the Problematic Tinder Use Scale (PTUS; Orosz et al., 2016) and the Problematic Dating App Use Scale (PODAUS; Gori et al., 2024), respectively. Several studies have developed ad hoc questionnaires specifically designed to assess behavioral and motivational aspects of dating app use. Chin et al. (2019) employed a custom set of items addressing use patterns and motivations (e.g., “*Do you use dating apps?*”, “*How likely are you to use dating apps?*” “*What dating apps have you used?*”, “*Why would you decide to use dating apps?*”, “*Why would you decide not to use dating apps?*”).

Similarly, Coffey (2022) included questions on use (yes or no), use frequency, safety perception, and hookup intentions. Rochat et al. (2019), included an ad hoc questionnaire assessing *Tinder* use patterns, such as the number of matches, online/offline contacts in the past six months, and motivations for romantic or sexual encounters. Timmermans and Alexopoulos (2020) used a self-constructed questionnaire to assess outcomes of dating app use, including the number of romantic or sexual partners, friendships, and encounters during an existing relationship. Four studies adapted items from existing scales to the context of dating app use.

Hu and Thomas (2025) assessed perceived dating app Success using four items from [what?] (Her and Timmermans, 2021), perceived anonymity affordance using three items from [what?] (Fox & McEwan, 2017), and post-dating app joviality and sadness using four items each from the PANAS-X [acronym needs explaining] (Watson & Clark, 1994). They also included two items from the Tinder Motives Scale (Timmermans & De Caluwé, 2017) to assess relationship-seeking motives. Jayawardena et al. (2022) tailored two subscales (ease of communication and self-esteem enhancement) from the Tinder Motivation Scale (Sumter et al., 2017), and two (escapism and companionship) from the Facebook Motivation Scale (Smock et al., 2011). They also employed an adapted version of the Bergen Facebook Addiction Scale (Andreassen et al., 2012) to assess problematic *Grindr* use. Similarly, Timmermans and Alexopoulos (2020) adapted the Tinder Motives Scale (Timmermans & De Caluwé, 2017) to assess users’ motivational patterns. Liang et al. (2025) adapted one item from [what?] (Timmermans et al., 2021) to assess the frequency of ignoring or ceasing contact with matches, and used two subscales of the Tinder-based Disillusionment Scale (Niehuis et al., 2020), adapted to the dating app context, to assess romantic disillusionment related to app use.

As for attachment, most studies ( $n = 5$ ; Chin et al., 2019; Coffey, 2022; Jayawardena et al., 2022; Rochat et al., 2019; Timmermans & Alexopoulos, 2020) focused on assessing the two core dimensions of attachment anxiety and attachment avoidance. Chin et al. (2019) used the Attachment

Style Questionnaire (ASQ; Simpson et al., 1992), while the other four studies employed different versions of the Experiences in Close Relationships Scale (ECR). More specifically, the revised (ECR-R; Fraley et al., 2000) was used by Coffey (2022) and Rochat et al. (2019), whereas the short-form version (ECR-SF; Wei et al., 2007) was used by Jayawardena et al. (2022) and Timmermans and Alexopoulos (2020). Topino et al. (2025) used the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991), which classifies individuals into four categorical attachment styles: secure, preoccupied, dismissive, and fearful. Two studies focused on only one of the two attachment dimensions: Hu and Thomas (2025) on anxiety, and Liang et al. (2025) on avoidance. Both used the Experiences in Close Relationships Scale—Short Form (ECR-SF; Wei et al., 2007). In addition, Topino et al. (2025) and Rochat et al. (2019) also reported scores for secure attachment.

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### **3.2 Main findings**

The main findings emerging from the eight included studies are presented below and organized according to specific outcome domains related to dating app use (see Table 4). For clarity, the results are structured into thematic subsections focusing on the associations between attachment styles and (i) patterns of dating app use, (ii) problematic use, (iii) user motivations, (iv) outcomes, and (v) potential mediating variables.

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#### *3.2.1 Attachment styles and patterns of dating app use*

Three studies (Chin et al., 2019; Rochat et al., 2019; Coffey, 2022) examined the relationship between attachment styles and the patterns of dating app use. Both Chin et al. (2019) and Coffey (2022) found that anxious attachment was positively associated with the perceived likelihood of using dating apps ( $b = .22, p < .05$  and  $\beta = .19, p < .01$ , respectively). Coffey (2022) also found that anxious attachment was positively associated with the frequency of dating app use ( $\beta = .28, p < .01$ ). Moreover, anxious attachment was associated with the use of specific platforms such as *Tinder* ( $b = .35, p < .05$ ) and *Plenty of Fish* ( $b = .44, p < .05$ ; Chin et al., 2019). Similarly, Rochat et al. (2019) found that individuals with high levels of anxious attachment were part of a user cluster characterized by the highest number of current matches on *Tinder*.

Regarding avoidant attachment, Chin et al. (2019) found that it negatively predicted both the perceived likelihood ( $b = -.31, p < .01$ ) and actual use ( $b = -.33, p < .05$ ) of dating apps. However, Coffey (2022) found no significant associations between avoidant attachment and either the likelihood or frequency of dating app use. According to Chin et al. (2019), avoidantly attached individuals were less likely to use *Tinder* ( $b = -.35, p < .05$ ), but avoidant attachment was positively associated with the use of *OkCupid* ( $b = .38, p < .05$ ).

### 3.2.2 Attachment styles and problematic dating app use

Three studies (Jayawardena et al., 2022; Rochat et al., 2019; Topino et al., 2025) examined the relationship between adult attachment styles and problematic use of dating apps. In all cases, problematic use was conceptualized as an addiction-like behavioral pattern, grounded in the components model of addiction proposed by Griffiths (2005). This model posits that there are six core features of behavioral addiction: salience, mood modification, tolerance, withdrawal, conflict, and relapse.

Regarding anxious attachment, Jayawardena et al. (2022), in a study of men who have sex with men, found a positive association between anxious attachment and problematic use of *Grindr* (total effect:  $b = .19$ ). Similarly, Rochat et al. (2019) identified an unregulated and highly motivated *Tinder* user cluster characterized by high levels of anxious attachment and associated with increased problematic use of the app. Topino et al. (2025) also reported a significant positive association between preoccupied attachment (a style defined by high anxiety and low avoidance; Bartholomew & Horowitz, 1991) and problematic dating app use ( $\beta = .260$ ). Moreover, the same study found that fearful attachment, defined by high anxiety and high avoidance, was also positively associated with problematic use ( $\beta = .113$ ). Additionally, problematic dating app use in turn predicted greater daily time spent on dating apps ( $\beta = .41, p < .05$ ; Topino et al., 2025).

With regard to avoidant attachment, Jayawardena et al. (2022) found a positive association with problematic *Grindr* use ( $\beta = .19$ ). Similarly, Rochat et al. (2019) identified a second unregulated user cluster marked by avoidant attachment, which was associated with moderate levels of problematic *Tinder* use. Finally, both Topino et al. (2025) and Rochat et al. (2019) examined the role of secure attachment. Rochat et al. reported that securely attached users belonged to a regulated cluster, characterized by low levels of problematic dating app use. Topino et al. found that both secure and dismissing-avoidant attachment styles showed no significant associations with problematic dating app use.

### 3.2.3 Attachment styles and motivation for dating app use

Five studies (Chin et al., 2019; Coffey, 2022; Jayawardena et al., 2022; Rochat et al., 2019; Timmermans & Alexopoulos, 2020) examined the association between adult attachment styles and the motivations underlying dating app use. Multiple studies identified an association between anxious attachment and motivations centered on social connection and relationship formation. Chin et al. (2019) found that anxious attachment positively predicted the likelihood of using dating apps to meet others ( $b = .34, p < .05$ ). Jayawardena et al. (2022) found that anxious attachment was positively associated with motivations such as ease of communication ( $r = .31, p < .01$ ) and companionship ( $r = .44, p < .001$ ). In a cluster analysis, Rochat et al. (2019) classified anxiously attached individuals into an ‘unregulated and highly motivated group’ that showed high levels of general *Tinder* use motives and a tendency to seek both committed and sexual partners. Timmermans and Alexopoulos (2020) further confirmed these associations, reporting significant positive associations with relationship-seeking ( $\beta = .40, p < .001$ ), flirting and social skills ( $\beta = .42, p < .001$ ), sexual experience ( $\beta = .19, p < .001$ ), social approval ( $\beta = .42, p < .001$ ), and socializing ( $\beta = .35, p < .001$ ).

Anxious attachment was also associated with motives for managing emotional states and self-image. Jayawardena et al. (2022) found positive correlations with self-esteem enhancement ( $r = .46, p < .001$ ) and escape ( $r = .21, p < .05$ ). Similarly, Timmermans and Alexopoulos (2020) found associations with using dating apps to cope with emotional difficulties, such as forgetting an ex-partner ( $\beta = .53, p < .001$ ). Finally, anxiously attached individuals were also more likely to report hedonic and curiosity-driven motives. Moreover, anxious attachment was positively associated with using dating apps for entertainment ( $\beta = .37, p < .001$ ) and curiosity ( $\beta = .36, p < .001$ ).

Findings regarding avoidantly attached individuals were more mixed and varied across studies. Chin et al. (2019) found a negative association between avoidant attachment and the likelihood of using dating apps to meet others ( $b = -.57, p < .001$ ) whereas Coffey (2022) found no significant associations between avoidant attachment and motivations such as perceived safety or hookup intentions.

Jayawardena et al. (2022) found that avoidant attachment was positively associated with companionship motives ( $r = .32, p < .001$ ) and ease of communication ( $r = .35, p < .001$ ). Rochat et al. (2019) identified an unregulated avoidant cluster, characterized by moderate levels of *Tinder*-related motivations and a higher likelihood of seeking both committed and sexual partners, compared to other user profiles. Avoidant attachment was also associated with coping-related motives associated with emotional and affective regulation. Jayawardena et al. (2022) found positive

associations between avoidant attachment and both self-esteem enhancement ( $r = .19, p < .01$ ) and escape ( $r = .32, p < .001$ ).

From an exploratory entertainment perspective, Timmermans and Alexopoulos (2020) found that avoidant attachment was positively associated with the travel-related motive ( $\beta = .16, p < .001$ ). Avoidant attachment was also negatively associated with the entertainment motive ( $\beta = -.19, p < .001$ ). Evidence regarding securely attached individuals is limited but points to a more regulated and restrained pattern of dating app use. Rochat et al. (2019) included securely attached individuals in a ‘regulated’ cluster, characterized by low overall motivation to use *Tinder*. This group appeared to engage with the app in a more controlled and less emotionally driven way, possibly reflecting greater offline relationship stability or self-regulation.

### *3.2.4 Attachment styles and dating app use outcomes*

Four studies investigated the outcomes associated with dating app use among individuals with different attachment styles, focusing on both relationship behaviors and psychological correlates (Hu & Thomas, 2025; Jayawardena et al., 2022; Liang et al., 2025; Timmermans & Alexopoulos, 2020). Hu and Thomas (2025) found that anxious attachment was negatively associated with perceived dating app success ( $b = -.12, p < .001$ ), which in turn mediated the relationship between attachment anxiety and emotional outcomes following app use. More specifically, higher attachment anxiety predicted lower joviality and greater sadness through reduced perceptions of success. Moreover, perceived anonymity affordance emerged as a significant moderator: the indirect effects of attachment anxiety on both joviality (negative) and sadness (positive) via perceived dating app success were significant at low and moderate (but not high) levels of perceived anonymity affordance.

Timmermans and Alexopoulos (2020) found that individuals high in anxious attachment reported a greater number of romantic relationships ( $\beta = .25, p < .001$ ), more casual sexual relationships ( $\beta = .21, p < .001$ ), and a higher number of friendships initiated through dating apps ( $\beta = .24, p < .001$ ). The same study also found that anxious attachment was negatively associated with having had face-to-face meetings with dating app users while in a committed relationship ( $b = -.55, p < .001$ ). However, anxious attachment was positively associated with casual sexual interactions while in a relationship ( $\beta = .28, p < .05$ ). Jayawardena et al. (2022) reported that anxious attachment was positively associated with depressive symptoms (total effect:  $b = 2.21$ ), with this relationship mediated by the motivation for self-esteem enhancement.

With regard to avoidant attachment, Timmermans and Alexopoulos (2020) found that it was positively associated with the number of romantic relationships ( $\beta = .19, p < .001$ ) and with

friendships formed via dating apps ( $\beta = .15, p < .05$ ). However, avoidant attachment was not significantly associated with (i) casual sexual relationships, (ii) face-to-face meetings with other users or (iii) meeting others while in a committed relationship.

Both Liang et al. (2025) and Jayawardena et al. (2022) found that avoidant attachment was positively associated with depressive symptoms. Moreover, Liang et al. (2025) found that this association was mediated by ghosting others within dating apps ( $\beta = .30, p < .001$ ), and romantic disillusionment ( $\beta = .52, p < .001$ ). Additionally, destiny belief moderated the association between avoidant attachment and ghosting others, such that avoidant attachment was no longer a significant predictor of ghosting at high levels of destiny belief (Liang et al., 2025).

### *3.2.5 Mediators in the relationships between attachment and dating app use*

Two studies (Jayawardena et al., 2022; Topino et al., 2025) investigated mediating mechanisms that explain how attachment styles are associated with problematic dating app use. Jayawardena et al. (2022) found that the relationship between anxious attachment and problematic *Grindr* use was mediated by self-esteem enhancement and companionship motivations. Similarly, avoidant attachment was also positively associated with problematic *Grindr* use, with ease of communication and escapism motives serving as mediators. Topino et al. (2025) found that preoccupied attachment was positively associated with problematic online dating app use, with rejection anxiety acting as a mediator. Additionally, the positive relationship between fearful attachment and problematic app use was mediated through a dual pathway, involving both rejection anxiety and rejection expectancy.

## **3.3 Limitations of the studies**

Several recurring issues emerged that should be considered when interpreting their findings. First, many studies emphasized limitations in research design that constrained causal interpretation. For example, Chin et al. (2019) noted that their study was correlational, which prevented conclusions about whether attachment orientation causes individuals to engage with dating apps. Similarly, all the studies employed a cross-sectional design, which also precluded the determining of causal relationships between the study variables (Chin et al., 2019; Coffey, 2022; Hu & Thomas, 2025; Jayawardena et al., 2022; Liang et al., 2025; Rochat et al., 2019; Timmermans & Alexopoulos, 2020; Topino et al., 2025).

Second, issues related to sampling methods and generalizability were frequently acknowledged. All the studies used self-selected or non-probability sampling strategies, which may

have introduced bias and limited representativeness. For example, Topino et al. (2025) employed a snowball sampling method with an overrepresentation of highly educated individuals, while Rochat et al. (2019) relied on a self-selected heterosexual sample. Liang et al. (2025) recruited participants through several popular online dating applications in China, a procedure that may have excluded less active users or individuals who rely on alternative, non-mainstream dating platforms, thereby limiting sample representativeness. In Jayawardena et al.'s study (2022), targeted *Facebook* advertising may have excluded individuals not openly identifying as men who have sex with men. Similarly, Chin et al. (2019), Coffey (2022), and Timmermans and Alexopoulos (2020) recruited participants using *MTurk*, a widely used online platform that facilitates rapid data collection but may limit sample diversity and introduce self-selection effects. Hu and Thomas (2025), relied on data collected through *Credamo.com*, a Chinese online survey platform. Although this allowed access to a large pool of dating app users, participants were mostly young, highly educated adults, which may restrict the generalizability of the findings to the broader population of Chinese dating app users.

Third, all eight studies relied exclusively on self-report measures, several of which were specifically adapted for the purposes of the respective research (Chin et al., 2019; Coffey, 2022; Hu & Thomas, 2025; Jayawardena et al., 2022; Liang et al., 2025; Rochat et al., 2019; Timmermans & Alexopoulos, 2020), which may introduce well-known biases such as social desirability, recall inaccuracies, and shared method variance.

Fourth, some studies reported conceptual limitations in the operationalization of variables. For instance, Chin et al. (2019) assessed general motivations for dating app use but did not examine specific-platforms preferences or use frequency and intensity. Rochat et al. (2019) used the number of matches as a proxy for engagement, which may not adequately distinguish between high engagement and problematic use. Topino et al. (2025) did not collect relevant participant characteristics, such as sexual orientation, specific dating apps used, or the devices employed (e.g., smartphones vs. computers). Similarly, Hu and Thomas (2025) acknowledged that they did not account for several contextual factors that could have influenced the observed associations, while Liang et al. (2025) overlooked potential cultural influences and other relevant variables that might have shaped participants' experiences. Jayawardena et al. (2022) highlighted that internalized stigma may influence perceptions of problematic *Grindr* use among men who have sex with men, yet this variable was not directly assessed. Timmermans and Alexopoulos (2020) included both single and committed participants but did not systematically differentiate their motivations or outcomes in the main analyses, despite the likelihood that relationship status moderates the meaning and implications of dating app use.

## 4. Discussion

Given the growing popularity of dating apps (Statista, 2025a, b), empirical research has increasingly focused on the psychological and interpersonal factors associated with their use (Bonilla-Zorita et al., 2021; Coduto & Fox, 2024). Due to the inherently relational nature of dating apps, attachment theory has emerged as a particularly relevant framework because attachment styles are known to play a central role in shaping individuals' expectations, motivations, and behaviors in intimate relationships (Mikulincer & Shaver, 2016). Given this, the present systematic review aimed to synthesize the available evidence regarding the relationship between adult attachment styles and dating app use. Drawing upon data from eight empirical studies published between 2018 and 2025, the findings showed a consistent pattern regarding attachment anxiety. In contrast, the results concerning attachment avoidance were more heterogeneous.

### 4.1 Attachment anxiety and dating app use

Individuals high in attachment anxiety were found to be more likely to use dating applications such as *Tinder* and *Plenty of Fish* (Chin et al., 2019), and tended to engage with them more frequently, with a greater number of current matches (Chin et al., 2019; Rochat et al., 2019; Coffey, 2022). This pattern is consistent with a core feature of anxious attachment (i.e., hyperactivation of the attachment system) which leads individuals to intensify efforts to seek proximity, reassurance, and connection with potential partners (Mikulincer & Shaver, 2016). In this regard, dating apps may be particularly attractive to anxiously attached individuals because they offer both increased opportunities for initiating contact and a reduced risk of direct rejection. For instance, anxiously attached individuals have been shown to exhibit low selectivity in partner choice during speed-dating interactions, expressing interest in nearly every partner (McClure et al., 2010). This non-selective approach may reflect a strategy to maximize the chances of reciprocal interest, in line with their desire for closeness and fear of being alone.

Consistent with this interpretation, Hu and Thomas (2025) found that anxious attachment was negatively associated with perceived dating app success, which in turn mediated its relationship with post-use affect. More specifically, higher attachment anxiety predicted lower joviality and greater sadness through reduced perceptions of success. However, this effect became non-significant among users reporting high levels of perceived anonymity affordance, further supporting the notion that anxious individuals are particularly sensitive to cues of potential rejection. When anonymity is high and perceived social exposure is reduced, their fear of rejection (and the related emotional costs of

unsuccessful interactions; Leary, 2015) appears to diminish. Timmermans and Alexopoulos (2020) found that individuals high in attachment anxiety reported a greater number of romantic relationships, more casual sexual relationships, and a higher number of friendships initiated through dating apps. These findings point to a pattern of intensified relationship involvement across contexts, including casual and non-romantic connections.

Such behaviors may reflect the anxiously attached individual's heightened motivation to avoid being alone and their tendency to seek relationship security through frequent interpersonal contact (Mikulincer & Shaver, 2016). Interestingly, the same study showed that anxious attachment was negatively associated with meeting other users face-to-face while in a committed relationship, yet positively associated with engaging in casual sexual interactions during such relationships. This apparent contradiction might be understood through the lens of anxious individuals' internal conflict. Their strong desire for closeness coexists with a pervasive fear of rejection and abandonment, which can lead to ambivalent or impulsive relationship behaviors (Shaver & Mikulincer, 2007). Moreover, mobile dating platforms may help buffer this fear by minimizing explicit rejection cues in that users are only shown matches where mutual interest has been expressed, effectively hiding instances of disinterest or non-reciprocation. Here, the design of dating apps may serve a regulatory function for anxiously attached individuals, providing an emotionally safer environment for initiating romantic connections.

Consistently, the reviewed studies showed that individuals with high levels of attachment anxiety reported using dating apps to meet others (Chin et al., 2019), to facilitate communication and find companionship (Jayawardena et al., 2022), and to seek sexual partners (Rochat et al., 2019). These findings are also consistent with prior literature suggesting that anxiously attached individuals are more likely to cite "meeting new people" as a central motive for using dating apps (Spielmann et al., 2013). Their use of dating platforms may serve as a proactive coping strategy to manage their chronic fear of being single, a fear that has been found to influence both the intensity and urgency of their romantic pursuits.

Moreover, anxiously attached individuals reported using dating apps not only for entertainment and curiosity (Timmermans & Alexopoulos, 2020), but also to regulate their emotional states and self-image. Jayawardena et al. (2022) identified positive associations between anxious attachment and motivations such as self-esteem enhancement and emotional escape among men who have sex with men. Similarly, Timmermans and Alexopoulos (2020) found that anxious users were more likely to turn to dating apps as a coping strategy in response to emotional distress, including

attempts to forget a former partner. Such data are in line with several theoretical conceptualizations that are increasingly being applied to online behaviors.

The compensatory internet use theory (Kardefelt-Winther, 2014) suggests that individuals engage with online platforms to cope with negative emotional states or unmet offline needs. Here, dating apps may function as a digital environment where anxiously attached individuals attempt to compensate for relational insecurity. Additionally, self-determination theory (Deci & Ryan, 2000) posits that when basic psychological needs (i.e., relatedness, competence, and autonomy) are not met or are externally regulated, individuals may adopt maladaptive behaviors. For anxious users, dating apps may represent an externally driven effort to satisfy the need for connection, which could, over time, foster dependency or compulsive patterns of use.

Consistently, the reviewed literature indicated that individuals with high levels of anxious attachment were more likely to engage in problematic or compulsive use of dating applications (Jayawardena et al., 2022; Rochat et al., 2019; Topino et al., 2025). For example, Jayawardena et al. (2022) reported that anxious attachment was positively associated with depressive symptoms among men who have sex with men, and that this relationship was mediated by the motivation to enhance self-esteem. Similarly, in the study by Rochat et al. (2019), individuals in the unregulated and highly motivated cluster (characterized by elevated levels of attachment anxiety) also reported significantly higher levels of problematic *Tinder* use. Topino et al. (2025) found that both the preoccupied and fearful attachment patterns, which share high levels of attachment anxiety, were significantly associated with problematic dating app use, with the mediation of rejection anxiety. This reinforced the idea that anxious users may engage with dating apps in an attempt to mitigate anticipated interpersonal rejection and gain external reassurance (Mikulincer & Shaver, 2016).

Moreover, the strong associations between attachment anxiety and problematic dating app use support the conceptualization of behavioral addiction as an attachment-related disorder (Flores, 2004). Previous research has shown that insecure attachment, especially in the presence of emotional dysregulation and unmet relational needs, plays a key role in various forms of behavioral and technological addictions (Gori et al., 2023a, b; Gori & Topino, 2024; Topino et al., 2024a, b). The findings of the present review further strengthen the application of attachment theory (Bowlby, 1982) as a valuable framework for understanding the psychological mechanisms underlying problematic online dating behavior.

#### **4.2 Attachment avoidance and dating app use**

The findings related to avoidant attachment showed higher variability. In one study, individuals high in avoidant attachment were less likely to use dating apps and reported lower use frequency (Chin et al., 2019), whereas another study found no significant association between avoidant attachment and either the likelihood or frequency of dating app use (Coffey, 2022). A key to understanding these data lies in an underlying characteristic of avoidant attachment, which is typically marked by the deactivation of the attachment system, a tendency to suppress relational needs, and a preference for emotional independence (Mikulincer & Shaver, 2003; Simpson et al., 1992). Avoidantly attached individuals may find dating apps less appealing because these platforms are explicitly designed to encourage interpersonal connection, which is in contrast with their discomfort with intimacy. Supporting this, prior studies have shown that individuals high in avoidant attachment are less positive and open when communicating via digital media (Morey et al., 2013; Oldmeadow et al., 2013). Moreover, these individuals were found to be less likely to use *Tinder* but more likely to use *OkCupid* (Chin et al., 2019), suggesting that platform characteristics may interact with attachment orientations. While *Tinder* is often associated with casual encounters and emotionally charged, fast-paced interactions, *OkCupid* emphasizes user profiles, compatibility algorithms, and communication before matching, features that may allow avoidant users to maintain greater control and emotional distance.

Timmermans and Alexopoulos (2020) found that avoidant attachment was not significantly associated with either face-to-face meetings among dating app users or with meeting others while in a committed relationship. Moreover, avoidant attachment did not predict casual sexual relationships in their study, suggesting that while some avoidant individuals may engage in sex without commitment, this is not a universal behavioral pattern. Interestingly, the same study also reported positive associations between avoidant attachment and the number of romantic relationships, as well as friendships formed via dating apps. These findings suggest that avoidantly attached individuals may still pursue relationship contact, but in a way that allows them to retain emotional control and distance. From a theoretical standpoint, avoidant attachment reflects a deactivating strategy aimed at minimizing perceived dependence and vulnerability (Mikulincer & Shaver, 2008, 2016). While this tendency may discourage deep emotional engagement or app use motivated by intimacy, it may still support moderate use of dating platforms for instrumental purposes, such as casual interaction, curiosity, or even fulfilling sexual needs without emotional closeness (Rochat et al., 2019).

This perspective may help explain why avoidant attachment was negatively associated with the likelihood of using dating apps to meet others (Chin et al., 2019), but when avoidantly attached

individuals do engage with these platforms, their use tends to be associated with instrumental motives such as companionship and ease of communication (Jayawardena et al., 2022), as well as the pursuit of both committed and sexual partners. Interestingly, although avoidant individuals often report discomfort with emotional closeness, some studies suggest they may still engage in casual sex to satisfy physical needs while maintaining emotional distance (Gentzler & Kerns, 2004; Sprecher, 2013). This may help clarify why some avoidantly attached users are drawn to dating apps, particularly those that allow for asynchronous, controlled, and low-intimacy interactions.

Timmermans and Alexopoulos (2020) also found that avoidant attachment was negatively associated with entertainment motives, but positively associated with travel-related motives. This pattern suggests that avoidantly attached individuals are less interested in dating apps as a source of social play or emotional stimulation and may instead be drawn to their exploratory or distraction-based features. In this context, connecting with others during travel may offer a temporary form of interaction that does not threaten their need for autonomy or elicit discomfort related to emotional proximity (Mikulincer & Shaver, 2016).

Avoidant attachment was also associated with motives concerning emotional and affective regulation. Jayawardena et al. (2022) found positive associations between avoidant attachment and both self-esteem enhancement and escapism. As with individuals high in attachment anxiety, dating apps may serve for avoidantly attached users as a tool to cope with offline deficits (Kardfelt-Winther, 2014), and to externally regulate dysregulated emotional states through avoidant or dissociative coping strategies (Caretti et al., 2018). Jayawardena et al. (2022) also reported that avoidant attachment was positively associated with problematic *Grindr* use, with escapism and ease of communication motives acting as mediators. Notably, avoidant attachment was also positively associated with depressive symptoms among men who have sex with men.

Similarly, Liang et al. (2025) found that avoidant attachment was positively associated with depression among Chinese online daters, with the partial mediation of ghosting others, and romantic disillusionment. Interestingly, destiny belief buffered this pathway, making the association non-significant between avoidance and ghosting among individuals who strongly endorsed the idea that romantic relationships are predetermined. Rochat et al. (2019) identified a user cluster marked by avoidant attachment and emotional dysregulation, which showed moderate levels of problematic *Tinder* use. Moreover, Topino et al. (2025) found that the fearful attachment style (characterized by high levels of both anxiety and avoidance) was significantly associated with problematic dating app use, mediated by rejection anxiety and rejection expectancy.

Interestingly, the dismissing attachment style (high levels of avoidance, low levels of anxiety) did not show a significant association with problematic use in the same study. This pattern may be explained by the distinct internal working models that characterize these subtypes of insecure attachment. Dismissing individuals, who hold a positive model of the self and a negative view of others (Bartholomew & Horowitz, 1991), tend to minimize emotional dependence and downregulate interpersonal needs. Their avoidance is defensive but stable, which may buffer them from over-reliance on external tools for affect regulation. Conversely, preoccupied individuals, despite their negative self-view, maintain a positive model of others and seek constant reassurance to manage their rejection anxiety. Consequently, they may engage with dating apps in a compulsive or emotionally dependent manner, using them as a means of constant reassurance and connection to mitigate their underlying insecurity (Downey & Feldman, 1996; Mikulincer & Shaver, 2016). In sum, avoidant individuals may turn to dating apps not to foster intimacy, but to engage in emotionally detached interactions that allow them to maintain control and avoid face-to-face discomfort (Guerrero, 1996; Mikulincer & Shaver, 2016). When such use becomes habitual or is fueled by psychological escape motives, it may evolve into problematic use patterns, particularly among those with more fragile self-regulatory capacities.

#### ***4.3 Attachment security and dating app use***

Although evidence regarding securely attached individuals remains limited, existing findings suggest a more regulated and emotionally stable pattern of dating app engagement. Both Topino et al. (2025) and Rochat et al. (2019) included securely attached users in categories characterized by low levels of problematic use. More specifically, Rochat et al. identified these individuals within a ‘regulated cluster’ marked by low emotional reactivity and minimal compulsive app use. Similarly, Topino et al. found that secure attachment was not significantly associated with problematic online dating app use. These results are consistent with the broader theoretical understanding of secure attachment, which is typically associated with emotional stability, adaptive coping strategies, and satisfaction with offline relationships (Martins et al., 2023). Individuals with a secure attachment style are generally better equipped to balance their relational needs without becoming overly dependent on external validation (Mikulincer & Shaver, 2016). As such, their use of dating apps may reflect situational curiosity or pragmatic goals, rather than compulsive or emotionally driven engagement.

#### **4.4 Limitations and future directions**

The present review presents several methodological limitations that should be acknowledged. First, only peer-reviewed sources were included, excluding gray literature such as doctoral theses, book chapters, and non-indexed studies. This may have limited the inclusion of emerging or non-traditional findings. Future reviews could incorporate gray literature to broaden the scope and capture additional insights not available in peer-reviewed publications.

Second, the search was restricted to studies published in English, thereby excluding potentially relevant research conducted in other languages. This introduces a risk of linguistic bias and may reduce the cultural generalizability of the findings. Future reviews should consider including multilingual databases or translated sources to ensure greater cross-cultural representation.

Third, the review focused exclusively on studies based on a standard theoretical model of attachment as presented by Bowlby (1982) and his successors. Broader conceptualizations of attachment (e.g., social bonding dispositions shaped by cultural and relational contexts) were not considered. To enrich the understanding of attachment-related app use, future studies could integrate diverse theoretical perspectives, which may show different psychological processes or relational motivations.

Fourth, it should be noted that the studies included in the present review used different instruments to assess attachment (e.g., ECR, Fraley et al., 2000, Wei et al., 2007; ASQ, Simpson et al., 1992; RQ, Bartholomew & Horowitz, 1991). This heterogeneity may have influenced the comparability of findings because these instruments differ in their operationalization of attachment dimensions and in their psychometric properties. Future reviews could further explore how different attachment measures influence the observed associations, in order to refine the interpretation of cross-study findings.

Finally, only three databases (*Scopus*, *PubMed*, and *PsycINFO*) were used to locate studies for the present review. There is a possibility that other databases may have included studies not included in the present review. However, the three databases selected cover the largest proportion of peer-reviewed papers published in psychology.

### **5. Conclusions**

The present systematic review examined the association between adult attachment styles and dating app use, synthesizing findings from eight empirical studies conducted between 2018 and 2025 (i.e., Chin et al., 2019; Coffey, 2022; Hu & Thomas, 2025; Jayawardena et al., 2022; Liang et al., 2025; Rochat et al., 2019; Timmermans & Alexopoulos, 2020; Topino et al., 2025). Grounded in

established attachment theory (Bowlby, 1982; Mikulincer & Shaver, 2016), the review aimed to clarify how different attachment orientations were associated with patterns, motives, and potential risks associated with online relationship behavior.

The findings of the present review offer several practical implications. From a clinical perspective, they may inform psychological interventions targeting dysfunctional or emotionally driven app use. In particular, clinicians should pay attention to the attachment orientation of individuals presenting with problematic dating app use because insecure attachment may shape motives such as seeking reassurance, avoiding intimacy, or regulating affect through digital interactions. Exploring dating app behaviors within the therapeutic setting can therefore provide valuable insight into clients' relational strategies and vulnerabilities, helping to design interventions that foster emotional awareness, relational autonomy, and more secure forms of connection. This is particularly relevant in cases where dating app use is employed as a mechanism for affect regulation or to cope with interpersonal distress (Caretti et al., 2018; Jayawardena et al., 2022). From a psychoeducational perspective, users could be encouraged to reflect on how their attachment tendencies influence their motivations and emotional experiences when engaging with dating apps. Promoting awareness of these patterns may support healthier online intimacy and more intentional (and less compulsive) forms of engagement, particularly among individuals characterized by attachment-related anxiety or avoidance (Mikulincer & Shaver, 2008). Finally, at a design level, app developers and platform designers may benefit from considering how specific features (e.g., match feedback, swiping mechanisms, asynchronous communication) interact with users' attachment needs. Design elements that encourage mindful engagement and reduce emotionally compulsive behaviors may contribute to more psychologically sustainable use, especially for those at higher risk of dysregulated relational patterns (Sumter et al., 2017; Topino et al., 2025).

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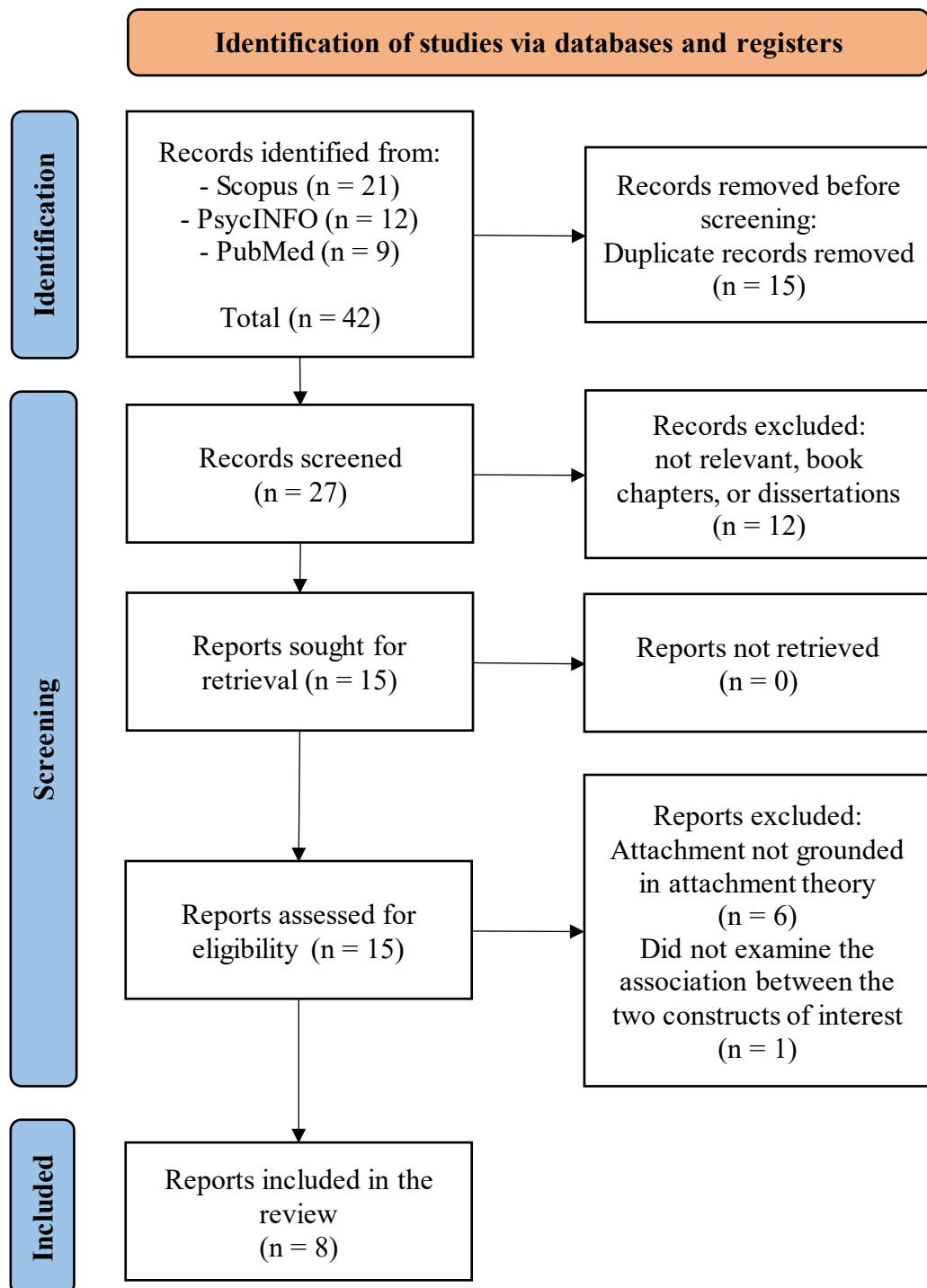
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## Tables and figures

**Figure 1. PRISMA 2020 flow diagram illustrating the selection process for studies included in the systematic review.**



**Table 1. Quality appraisal of included studies using the Appraisal Tool for Cross-Sectional Studies (AXIS; Downes et al. 2016)**

Author(s) (year)	Intro. Methods										Results					Discuss. Other			Tot.	Quality		
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13*	Q14	Q15	Q16	Q17	Q18	Q19*	Q20		
Chin et al. (2019)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	1	1	1	1	1	0	N/A	14	M
Coffey (2022)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	1	1	1	1	1	0	1	15	H
Hu and Thomas (2025)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	0	1	1	1	1	0	1	14	M
Jayawardena et al. (2022)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	0	1	1	1	1	0	1	14	M
Liang et al. (2025)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	0	1	1	1	1	0	1	14	M
Rochat et al. (2019)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	1	1	1	1	1	0	1	15	H
Timmermans and Alexopoulos (2020)	1	1	N/A	1	0	0	0	1	0	1	1	1	0	0	1	1	1	1	0	N/A	12	M
Topino et al. (2025)	1	1	N/A	1	0	0	0	1	1	1	1	1	0	0	1	1	1	1	0	1	15	H

**Note:** \* = Reverse Item; 0 = No; 1 = Yes; N/A = Not Available; H = High Quality (15–20); M = Medium Quality (8–14); L = Low Quality (0–7).

**Table 2. Studies characteristics and design**

Author(s) (year)	Country	Design	N	Age	Sample characteristics	
					Gender distribution	Population
Chin et al. (2019)	North America	- Quant. - CS	183	M = 29.97 (SD = 8.50)	60% male 40% female	Non-clinical adult sample. Participants were recruited through <i>Amazon's Mechanical Turk (MTurk)</i> . Eligibility criteria required individuals to be not currently in an exclusive romantic relationship.
Coffey (2022)	United States	- Quant. - CS	247	M = 27.34 (SD = 4.47)	59.5% male 40.5% female	Non-clinical adult sample. Participants were recruited through <i>Amazon's Mechanical Turk (MTurk)</i> . Eligibility criteria required individuals to be single, and to self-identify as straight or bisexual.
Hu and Thomas (2025)	China	- Quant. - CS	381	M = 29.19 (SD = 6.02)	43.8% male 56.2% female	Non-clinical adult sample. Participants were recruited through <i>credamo.com</i> . Eligibility criteria required individuals to be adults who used dating apps in the past month.
Jayawardena et al. (2022)	Australia and USA	- Quant. - CS	118	M = 33.62 (SD = 12.67)	100% male	Non-clinical adult sample. Participants were recruited via paid <i>Facebook</i> advertising. Eligibility criteria included being men who have sex with men and having used Grindr within the past 30 days.
Liang et al. (2025)	China	- Quant. - CS	475	M = 23.36 (SD = 3.86)	45.89% males 54.11% female	Non-clinical adult sample. Participants were recruited on a variety of popular online dating applications in China. Eligibility criteria required individuals to be dating app users.
Rochat et al. (2019)	N/A	- Quant. - CS	1159	M = 30.02 (SD = 9.19)	53.4% male 46.6% female	Non-clinical adult sample. Participants were recruited on social networking sites. Eligibility criteria required individuals to be English-speaking <i>Tinder</i> users.
Timmermans and Alexopoulos (2020)	N/A	- Quant. - CS	395	M = 26.76 (SD = 8.33)	55.9% male 44.1% female	Non-clinical adult sample. Participants were recruited through <i>Amazon's Mechanical Turk (MTurk)</i> or university systems. Eligibility criteria required individuals to be dating app users.
Topino et al. (2025)	Italy	- Quant. - CS	450	M = 27.57 (SD = 6.04)	45.1% male 54.9% female	Non-clinical adult sample. Participants were recruited through email, chat applications and social networks, and within academic and university networks. Eligibility criteria required individuals to use dating apps daily to find a romantic partner.

**Note:** N/A = Not available; CS = Cross-sectional; Quant. = Quantitative

**Table 3. Studies aims and measures**

Author(s) (year)	Aim	Dating app use measures	Attachment measures
Chin et al. (2019)	To explore how individual differences in adult attachment orientation (anxious and avoidant) are associated with the (i) perceived and actual likelihood of using dating apps, (ii) types of dating apps used, and (iii) reported motivations for using or avoiding them.	Ad hoc questionnaire (“Do you use dating apps?”; “How likely are you to use dating apps?”; “What dating apps have you used? Please list all.”; “Why would you decide to use dating apps?” and “Why would you decide NOT to use dating apps?”).	Attachment Style Questionnaire (Simpson et al., 1992).
Coffey (2022)	To examine whether the associations between adult attachment styles (anxious and avoidant) and sexual experiences differ by context (online vs. offline). Specifically, the study investigated how attachment was related to: (i) dating app use and motivations for casual sex, and (ii) emotional responses to casual sexual experiences in both online and offline encounters.	Ad hoc questionnaire (“Do you use dating apps?”; “On average, how many times a day do you open or check [dating type] dating profile(s)?”; feelings of safety [1–7 scale], and hookup intentions [binary response]).	Experiences in Close Relationships Scale - Revised (Fraley et al., 2000).
Hu and Thomas (2025)	To examine the association between attachment anxiety and users' emotional experiences after dating app use through perceived dating app success, exploring the moderation by perceived anonymity affordance in this relationship.	<p>The following measures were adapted for the dating app context:</p> <ul style="list-style-type: none"><li>– Dating app success: Four items from Her and Timmermans (2021).</li><li>– Perceived anonymity affordance: three items from the scales of communication technology affordances by Fox and McEwan (2017).</li><li>– Post-dating app joviality: four items from the PANAS-X (Watson &amp; Clark, 1994).</li><li>– Post-dating app sadness: four items from PANAS-X (Watson &amp; Clark, 1994).</li><li>– Relationship-seeking motive: two items from the Tinder Motives Scale (Timmermans &amp; De Caluwé, 2017).</li></ul>	Experiences in Close Relationships Scale - Short Form (Wei et al., 2007).

Jayawardena et al. (2022)	To examine whether adult attachment styles predict motivations for <i>Grindr</i> use, and whether these motivations mediate problematic use and depression among men who have sex with men.	The following measures were adapted for <i>Grindr</i> use: – Two subscales (ease of communication and self-esteem enhancement) from the Tinder Motivation Scale (Sumter et al., 2017), and two subscales (escapism and companionship) from the Facebook Motivation Scale (Smock et al., 2011), to assess user motivations; – The Bergen Facebook Addiction Scale (Andreassen et al., 2012), adapted to assess problematic <i>Grindr</i> use.	Experiences in Close Relationships Scale - Short Form (Wei et al., 2007).
Liang et al. (2025)	To examine how avoidant attachment relates with depression among Chinese online daters through the mediating roles of ghosting behaviour and romantic disillusionment. The study also explored the moderation of individual differences in destiny belief.	Ghosting others was assessed with one item adapted from Timmermans et al. (2021) to evaluate the frequency of ignoring or ceasing contact with matches. Two subscales of the Tinder-based Disillusionment Scale (Niehuis et al., 2020) were adapted to assess romantic disillusionment relative to dating app use.	Experiences in Close Relationships Scale - Short Form (Wei et al., 2007).
Rochat et al. (2019)	To identify psychological subgroups of <i>Tinder</i> users via cluster analysis (based on attachment, impulsivity, motives, sexual desire, and self-esteem), and to examine differences between subgroups on problematic use, depressive mood, and use patterns.	Problematic Tinder Use Scale (Orosz et al., 2016) and an ad hoc questionnaire assessing <i>Tinder</i> use patterns: number of online/offline contacts in past six months, search for romantic or sexual partners, and number of current matches.	Experiences in Close Relationships Scale – Revised (Fraley et al., 2000).
Timmermans and Alexopoulos (2020)	To examine the association between users' attachment orientation and their dating app motives and outcomes (e.g., meetings, romantic and casual relationships).	An adapted version of the Tinder Motives Scale (Timmermans & De Caluwé, 2017) and an ad hoc questionnaire for dating app outcomes (e.g., number of romantic or sexual partners, friendships, and encounters while in a relationship).	Experiences in Close Relationships Scale - Short Form (Wei et al., 2007).
Topino et al. (2025)	To examine the association between adult anxious attachment, rejection sensitivity and problematic online	Problematic Online Dating Apps Use Scale (Gori et al., 2024).	Relationship Questionnaire

dating app use, among adults who use dating apps to find a romantic partner.

(Bartholomew & Horowitz, 1991).

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**Table 4. Main findings of the reviewed studies**

Author(s) (year)	Key findings
Chin et al. (2019)	<p><b>Anxious attachment</b></p> <ul style="list-style-type: none"><li>- Positively predicted perceived likelihood of using dating apps (<math>b = .22, p &lt; .05</math>), but was not significantly associated with actual use.</li><li>- Positively associated with the use of <i>Tinder</i> (<math>b = .35, p &lt; .05</math>) and <i>Plenty of Fish</i> (<math>b = .44, p &lt; .05</math>).</li><li>- Positively associated with the likelihood of using dating apps to meet others (<math>b = .34, p &lt; .05</math>).</li></ul> <p><b>Avoidant attachment</b></p> <ul style="list-style-type: none"><li>- Negatively predicted both perceived likelihood (<math>b = -.31, p &lt; .01</math>) and actual use of dating apps (<math>b = -.33, p &lt; .05</math>).</li><li>- Negatively associated with <i>Tinder</i> use (<math>b = -.35, p &lt; .05</math>), but positively associated with <i>OkCupid</i> (<math>b = .38, p &lt; .05</math>).</li><li>- Negatively associated with the likelihood of using dating apps to meet others (<math>b = -.57, p &lt; .001</math>).</li></ul>
Coffey (2022)	<p><b>Anxious attachment</b></p> <ul style="list-style-type: none"><li>- Positively associated with a higher likelihood of using online dating app (<math>\beta = .19, p &lt; .01</math>).</li><li>- Positively associated with higher frequency of dating app use (<math>\beta = .28, p = .01</math>).</li><li>- Not significantly associated with perceived safety or hookup intentions.</li></ul> <p><b>Avoidant attachment</b></p> <ul style="list-style-type: none"><li>- Not significantly associated with likelihood or frequency of dating app use.</li><li>- Not significantly associated with perceived safety.</li><li>- Not significantly associated with hookup intention.</li></ul>
Hu and Thomas (2025)	<p><b>Anxious attachment</b></p> <ul style="list-style-type: none"><li>- Negatively associated with dating app success (<math>b = -.12, p &lt; .001</math>).</li><li>- Perceived anonymity affordance significantly moderated the association between attachment anxiety and dating app success (the negative relationship was weaker among users perceiving higher anonymity affordance).</li><li>- Moderated mediation analyses showed significant conditional indirect effects of attachment anxiety on both post-dating app joviality (negative indirect effect) and post-dating app sadness (positive indirect effect) through dating app success at low and moderate (but not high) levels of perceived anonymity affordance.</li></ul>
Jayawardena et al. (2022)	<p><b>Anxious attachment</b></p> <ul style="list-style-type: none"><li>- Positively correlated with self-esteem enhancement (<math>r = .46, p &lt; .001</math>), ease of communication (<math>r = .31, p &lt; .01</math>), companionship (<math>r = .44, p &lt; .001</math>) and escape (<math>r = .21, p &lt; .05</math>) motivations.</li><li>- Positively associated with problematic Grindr use (total effect: <math>b = .19</math>), with the mediation of self-esteem enhancement and companionship motivations.</li><li>- Positively associated with depression (total effect: <math>b = 2.21</math>), with the mediation of self-esteem enhancement motivation.</li></ul> <p><b>Avoidant attachment</b></p> <ul style="list-style-type: none"><li>- Positively correlated with Self-esteem enhancement (<math>r = .19, p &lt; .01</math>), ease of communication (<math>r = .35, p &lt; .001</math>), companionship (<math>r</math></li></ul>

Liang et al.  
(2025)

Rochat et al.  
(2019)

Timmermans and  
Alexopoulos  
(2020)

= .32,  $p < .001$ ) and escape ( $r = .32, p < .001$ ) motivations.

- Positively associated with problematic Grindr use (total effect:  $b = .19$ ), with the mediation of ease of communication and escapism motivations.
- Positively associated with depression (total effect:  $b = 1.90$ ), with the mediation of escapism motivation.

#### ***Avoidant attachment***

- Positively associated with depression ( $\beta = .33, p < 0.001$ ), ghosting others ( $\beta = .30, p < 0.001$ ), and romantic disillusionment ( $\beta = .52, p < 0.001$ ).
- Ghosting others and romantic disillusionment partially mediated the relationship between avoidant attachment and depression.
- Destiny belief moderated the association between avoidant attachment and ghosting others, such that avoidant attachment was no longer a significant predictor of ghosting at high levels of destiny belief.

#### ***Anxious attachment***

- Unregulated and highly motivated cluster, characterized by high levels of general motives to use Tinder.
- Associated with higher problematic *Tinder* use.
- More likely to seek committed and sexual partners.
- Reported the highest number of current matches.

#### ***Avoidant attachment***

- Unregulated avoidant cluster, characterized by medium levels of *Tinder* use motives.
- Associated with moderate problematic *Tinder* use.
- More likely to seek committed partners.

#### ***Secure attachment***

- Regulated cluster, characterized by low general motives to use *Tinder*.
- Associated with low problematic *Tinder* use.

#### ***Anxious attachment***

- Positively associated with all dating app motives: relationship seeking ( $\beta = .40, p < .001$ ), sexual experience ( $\beta = .19, p < .001$ ), social approval ( $\beta = .42, p < .001$ ), flirting/social skills ( $\beta = .42, p < .001$ ), forgetting ex-partner ( $\beta = .53, p < .001$ ), traveling ( $\beta = .35, p < .001$ ), socializing ( $\beta = .35, p < .001$ ), entertainment ( $\beta = .37, p < .001$ ), and curiosity ( $\beta = .36, p < .001$ ).
- Negatively associated with having had face-to-face meetings with other dating app users ( $b = -0.28, p < .05$ ).
- Negatively associated with having had face-to-face meetings while in a committed relationship ( $b = -0.55, p < .001$ ).
- Positively associated with number of romantic relationships ( $\beta = .25, p < .001$ ), casual sexual relationships ( $\beta = .21, p < .001$ ), friends made via dating apps ( $\beta = .24, p < .001$ ), and casual sexual interactions while in a committed relationship ( $\beta = .28, p < .05$ ).

#### ***Avoidant attachment***

- Positively associated with traveling motive ( $\beta = .16, p < .001$ ), and negatively associated with entertainment motive ( $\beta = -.19, p < .001$ ).

Topino et al.  
(2025)

- Not significantly associated with having face-to-face meetings or meeting others while in a committed relationship.
- Positively associated with number of romantic relationships ( $\beta = .19, p < .001$ ) and friends made via dating apps ( $\beta = .15, p < .05$ ).
- Not significantly associated with casual sexual relationships or casual sexual interactions while in a committed relationship.

***Preoccupied attachment***

- positively associated with problematic online dating app use (total effect:  $\beta = .260$ ), mediated by rejection anxiety.

***Fearful attachment***

- positively associated with problematic online dating app use (total effect:  $\beta = .113$ ), mediated by both rejection anxiety and rejection expectancy.

***Secure and dismissing attachment styles***

- showed no significant associations with problematic online dating app use.

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