



Contents lists available at ScienceDirect

Computers in Human Behavior

journal homepage: www.elsevier.com/locate/comphumbeh

Swiping more, committing less: Unraveling the links among dating app use, dating app success, and intention to commit infidelity

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ARTICLE INFO

Keywords:

Infidelity
 Online dating
 Dating apps
 Investment model
 Equity theory

ABSTRACT

The present study was conducted to explore the cognitive processes linking people's perceptions of their mobile dating app experience and their intention to commit infidelity. Three hundred and ninety-five participants were recruited through a U.S. based university (44.6%) and MTurk (55.4%). Our results indicate that people's perceived success on a dating app was positively associated with their intention to commit infidelity through self-perceived desirability, and negatively associated with their intention to commit infidelity through perceived amount of available partners. These findings are discussed in light of theories of relational investment.

1. Introduction

The dating pool is larger than we have ever seen. Recent studies estimate that approximately 30% of Americans aged 18 to 29 are using a dating site or mobile dating app (Statista, 2017). These platforms have changed the way many people initiate relationships: People using dating sites and mobile apps now have greater access to potential romantic and sexual partners compared to those available in face-to-face encounters (Fiore & Donath, 2004). However, less obvious are the changes that people experience in maintaining relationships in the era of online dating.

Empirical studies show that not only singles, but also those in committed relationships, have started using mobile dating apps (e.g., Orosz, Tóth-Király, Bóthe, & Melher, 2016; Shapiro et al., 2017). For non-single users, this can have a detrimental influence on their existing relationship because the use of dating apps while in a committed relationship might lead to sexual infidelity (e.g., Hobbs, Owen, & Gerber, 2017; Weiser et al., 2018). Moreover, using a dating app while in a committed relationship may result in a lower level of commitment and the pursuit of other romantic partners, given that the odds for developing a committed relationship with another dating app user were significantly higher for mobile dating app users in a committed relationship compared to single users (Timmermans & Courtois, 2018). In general, those who were using a mobile dating app while in a committed relationship were found more likely to be seeking casual sexual encounters, satisfying their curiosity about the current dating market,

and understanding their own value as a potential dating partner compared to single dating app users (Timmermans, DeCaluwé, & Alexopoulos, 2018).

People who found their romantic partner on a mobile dating app might be particularly likely to continue their quest for a relationship, despite already being in a committed relationship. For instance, an experimental study conducted in the U.S., in which undergraduate students could select a partner from a large versus small pool of potential partners, revealed that participants who selected a partner from a large dating pool were less satisfied with their choice and more likely to change their choice compared to those with fewer options (D'Angelo & Toma, 2017). Similarly, in a Taiwanese experiment among young adults, researchers found that an abundance of dating options triggered more searching and decreased the quality of the final partner choice (Wu & Chiou, 2009). Such findings may be worrisome because mobile dating apps indeed offer users a myriad of options and are becoming increasingly popular (Smith, 2016).

Affordances of mobile dating apps further stress the importance of studying the effects of mobile dating app use on maintaining relationships. According to Gibson (1979), affordances refer to the subjective perceptions of an artifact that are based on its material characteristics such as shape and size. Affordances structure an interaction between actor and object by making certain actions possible and ruling out other actions. In the case of mobile dating apps, the mobility affordance enhances the spontaneity and frequency of use because users can generally use dating apps anywhere at any time as long as they have an

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<https://doi.org/10.1016/j.chb.2019.08.009>

Received 16 January 2019; Received in revised form 10 August 2019; Accepted 12 August 2019

Available online 12 August 2019

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Internet connection (Chan, 2017; Ranzini & Lutz, 2017). Additionally, given that mobile dating apps usually have access to users' geolocate information, they have the ability to display other users who are in the immediate vicinity (Blackwell, Birnholtz, & Abbott, 2015). Consequently, users in a committed relationship are constantly reminded of the amount and quality of singles within their proximity. Moreover, this proximity affordance is known to facilitate meeting in real life (Yeo & Fung, 2016), thereby further challenging those in a committed relationship. Therefore, the current study examines the explanatory mechanism linking the use of mobile dating apps and intention to commit infidelity. First, based on the investment model (Rusbult, 1980), we argue that the frequency of mobile dating app use will be positively associated with infidelity through perceived amount of available partners. Second, based on equity theory (Walster, Traupman, & Walster, 1978), we hypothesize that perceived success on mobile dating apps will be positively related to infidelity through self-perceived desirability.

1.1. Mobile dating app use and perceived amount of available partners

People generally rely on contextual cues for information about their dating market. People want to know how many viable options they have, and the general level of attractiveness of these options. Mobile dating apps may be an important source of this information. Researchers have used the metaphor of a marketplace to describe the online dating market (Heino, Ellison, & Gibbs, 2010). Dating websites and mobile dating apps, which are designed to facilitate romantic or sexual encounters, provide users with the opportunity to "sell" themselves as potential relationship candidates. In addition, users are able to observe the potential relationship candidates available to them in a virtual marketplace.

Previous research has demonstrated that media stimuli, such as a television program, news story, or a photograph, can influence people's perceptions of their self or social environment (e.g., Taylor, 2013). For example, one study primed female participants to perceive an abundance of male partners by showing them 25 photos of men and 5 photos of women. Women who were primed with partner abundance exhibited greater selectivity for male partners (Watkins, Jones, Little, DeBruine, & Feinberg, 2012). Applied to the context of mobile dating apps, it is possible that frequent use of such apps, and thus frequent exposure to the profiles of potential partners, provides users with the contextual cues necessary to develop the perception that they have an abundance of available partners compared to someone who seldom uses a dating app. Further, the virtual proximity afforded by mobile dating apps connects users to potential dating partners beyond physical constraints, broadening the field and increasing accessibility (Regan, 2017). Thus, we expect that people who use dating apps more frequently will have a wider scope of the dating market and partners that are available to them for future romantic or sexual encounters.

H1. People's mobile dating app use will be positively associated with their perceived amount of available dating partners.

People's perceptions of the amount of potential partners may influence their behaviors, including their mating strategies and willingness to engage in casual sex. For example, those who perceive there to be a limited number of potential mates tend to exhibit greater intrasexual competition (Arnocky, Ribout, Mirza, & Knack, 2014). Even when in a committed relationship, partners continually monitor relationship alternatives (Fletcher, 2002). Individuals may use social media platforms such as Facebook to solicit romantic interests not only when they are single, but also when they are in a committed relationship (Drouin, Miller, & Dibble, 2014). Such social platforms can act as a memory primer for recognition of potential sexual alternatives, especially for men (Drouin, Miller, & Dibble, 2015). Thus, it is possible that mobile dating apps function in a similar manner, creating a shift in users' perceptions of their environment.

Rusbult's Investment Model of Commitment explains the factors that influence the degree to which a person is committed to his or her romantic partner (Rusbult, 1980). The investment model suggests that there are three factors that influence the endurance of an interpersonal relationship. Commitment is dependent on the couple's relational satisfaction, or the positive qualities that attract partners to one another; the amount of resources invested by each partner, such as a shared apartment or mutual friends; and the availability of alternative partners (Rusbult, Agnew, & Arriaga, 2011).

The factor that has endured major changes in the face of online dating is availability of alternative partners. The investment model assumes that commitment to one's partner increases when a person perceives that their current relationship is more rewarding compared to any alternative relationships. Conversely, commitment is diminished if a person perceives there to be many alternative partners available should their current relationship end. In addition to influencing the overall level of satisfaction within the relationship, researchers have found commitment to be one of the strongest predictors of infidelity: The perceived quality of alternative partners is positively related to the tendency to engage in cheating behaviors, whereas commitment is negatively related to infidelity (Drigotas, Safstrom, & Gentilia, 1999). For example, merely thinking about potential alternatives in one's social circle reduces relationship satisfaction and commitment with the current partner (Drouin et al., 2015). Research has also established a direct link between perceived partner availability and infidelity, finding that married couples who perceive a greater number of alternative partners are more likely to have engaged in extramarital sexual behaviors (Johnson, 1970; Maykovich, 1976). In addition, evidence from experimental designs has supported the notion that changes in one's perception of their environment can influence their relationship cognitions. Male participants primed with partner abundance reported more permissive sociosexual attitudes, and those in relationships reported greater intentions to commit infidelity (Arnocky, Woodruff, & Schmitt, 2016). Another study found that anxiously-attached participants primed with partner abundance expressed lower levels of emotional attachment to their ex-partner (Spielmann, Macdonald, & Wilson, 2009). Thus, we predict that people who perceive a greater amount of available partners will exhibit a greater tendency to consider those alternatives, and will exhibit a lower level of commitment to a single romantic partner. Together with the assumptions of Hypothesis 1, we predict that dating app use will be positively associated with perceived amount of available partners, and perceived amount of available partners will be positively associated with intention to commit infidelity.

H2. Perceived amount of available partners will mediate the association between mobile dating app use and intention to commit infidelity.

1.2. Perceived mobile dating app success and self-perceived desirability

Although it has been established that many Americans are active users of mobile dating apps, there is some variation in their experiences on those apps, such as their perceived success or popularity with other users (e.g., Hobbs et al., 2017; LeFebvre, 2018; Tyson, Perta, Haddadi, & Seto, 2016). For example, imagine that Carl and Heather both individually use dating apps several times per week, but Heather receives many more matches compared to Carl. Because Heather is receiving more matches, she also finds that other users are starting many more conversations with her compared to Carl. In other words, Heather is experiencing a higher level of other-initiated engagement while she is using a dating app. Because of this, it is likely that Heather and Carl will develop differing perceptions of themselves regarding their romantic desirability in the eyes of other people in the dating pool.

Several empirical studies confirm that not every user feels equally successful on mobile dating apps. In fact, being unsuccessful (i.e., being unable to obtain matches or receive responses) was the second most cited reason to delete a mobile dating app (LeFebvre, 2018). Several

studies seem to suggest that dating app success might differ by gender, given that those who expressed frustration regarding their lack of matches on dating apps were heterosexual male users (Hobbs et al., 2017). Male users have also cited a fear of failure to get responses and thus a failure to attract desirable relationship partners within their online dating experience (Zytka, Grandhi, & Jones, 2014). Additionally, a study that examined links between mobile dating app use and self-esteem showed that male Tinder users, in particular, reported significantly lower self-esteem compared to non-users. Interestingly, this was not the case for female users, as their self-esteem did not significantly differ from non-users' self-esteem (Strubel & Petrie, 2017). In general, female users receive more validation wherein they are more likely to experience matches and other-instigated conversations compared to male users (Timmermans & Courtois, 2018), which might partially explain why only male dating app users report lower self-esteem compared to non-users, as they are less likely to receive validation from other users in the form of matches and other-instigated conversations.

Although the use of dating apps might decrease some users' self-esteem (Strubel & Petrie, 2017), receiving positive feedback from other users can also increase users' self-perceived desirability. Several participants in a qualitative study (Study 1) referred to Tinder as an 'ego-booster' or 'self-confidence booster', describing their matches as an indication of being evaluated as attractive (Timmermans & DeCaluwé, 2017). In another qualitative study, a female participant explained, "matches on dating apps are a form of social validation regarding desirability, which could have a positive impact on one's self-esteem" (Hobbs et al., 2017, p. 277). Overall, it seems that receiving external validation from others can boost positive feelings about oneself. A third hypothesis is thus formulated as follows:

H3. People's perceived success on mobile dating apps will be positively associated with their self-perceived desirability.

Studies examining online dating platforms argue that physical attractiveness is the most important determinant of online dating success (e.g., Fiore, Taylor, Mendelsohn, & Hearst, 2008; McGloin & Denes, 2018). However, this may be particularly true of dating apps, given the affordance of visual dominance (Chan, 2017), which encourages its users to filter in profiles predominantly based on the attractiveness of the profile pictures (Ward, 2016). Some of those apps even more so emphasize dynamics of mutual attraction by requiring a match (i.e., both users like each other) before any form of communication is possible (MacKee, 2016). Consequently, dating apps have a built-in evaluative component in which users can better assess their own attractiveness (Strubel & Petrie, 2017).

Unsurprisingly, using Tinder to boost the ego and assess one's own value on the dating market has been one of the most commonly mentioned Tinder motives (Timmermans & DeCaluwé, 2017), and non-single Tinder users are equally as likely to use such apps to boost their ego compared to single users (Timmermans et al., 2018). However, when non-single users' self-perceived attractiveness is repeatedly validated through the use of such platforms, they might be more likely to look for multiple sexual partners, given that the ego-boosting motive has been positively correlated with reporting casual sexual relationships with other dating app users (Timmermans et al., 2018). Consequently, it is plausible that dating app users with increased self-perceived desirability will be less likely to commit to one relationship.

Equity theory asserts that romantic relationships will persist if both partners feel that their investments in the relationship match the benefits that they receive (Walster, Traupman, & Walster, 1978). When people perceive their relationships to be equitable, they experience a greater level of commitment to the relationship (Rusbult, 1980). Someone may feel under-benefitted if they feel that they "bring more to the table" than their partner. For example, if a person perceives himself to be slightly more physically fit, caring, and intelligent than his

partner, he may feel that he is under-benefitted and that his partner is over-benefitted.

The qualities that people feel will benefit their romantic partners make up their mate value (Fisher, Cox, Bennett, & Gavric, 2008). If we return to the marketplace metaphor, a person's mate value is a form of currency that can be used to "afford" the best possible mate (Emerson, 1976). Use of a mobile dating app not only maximizes someone's opportunities to meet an alternate partner with an increased mate value, but also gives the user an opportunity to assess his or her own mate value. On a mobile dating app, people's assessments of their mate value come in the form of matches. Many popular dating apps like Tinder and Bumble apply a bilateral algorithm, which requires that both users like each other (i.e., match) before any verbal contact is possible (Zhang, 2016). Therefore, it is possible that a person who sees a high number of matches would think that they have a lot to offer as a partner.

Perceptions of one's own mate value can have important implications for sexual attitudes and behaviors. People who perceive themselves to be more attractive have reported more sexual experience and more positive attitudes toward casual sex (Perilloux, Cloud, & Buss, 2013). Interestingly, evidence has shown that subjective ratings of attractiveness are more closely linked to tolerance for and experience with multiple sexual partners than objective ratings of attractiveness (see Weeden & Sabini, 2007). Heterosexual women who were shown images of unattractive women, and therefore were made to feel more physically attractive, exhibited greater preferences for masculinity, which has been conceptualized as a proxy for men's mate quality (Little & Mannion, 2006). This provides evidence for "market-value-dependent mate choice" and may mean that women who feel more desirable are more likely to continue seeking a quality partner. Other studies have found that related constructs such as self-perceived mate value, self-esteem, and attractiveness significantly predicted intention to pursue another person's romantic partner (Erik & Bhogal, 2016; Rhodes, Simmons, & Peters, 2005). Thus, in light of equity theory, we expect that mobile dating app users experiencing an increase in self-perceived desirability will be more likely to consider alternative partners and engage in infidelity. Together with the assumptions of Hypothesis 3, we predict that perceived success will be positively associated with self-perceived desirability, and self-perceived desirability will be positively associated with intention to commit infidelity.

H4. People's self-perceived desirability will mediate the association between perceived success and intention to commit infidelity.

Just as users who "do well" on a dating app are likely to experience an increase in self-perceived desirability, they are also likely to perceive themselves to have an abundance of romantic or sexual mating options on the platform that has granted them success. Thus, we predict that people's perceived success on a dating app will be positively associated with intention to commit infidelity through perceived amount of available partners.

H5. People's perceived amount of available partners will mediate the association between self-perceived success and intention to commit infidelity.

Finally, evidence suggests that the frequency with which a person uses a dating app precedes their positive and successful experience with other users. In a quantitative study, people who had been using a dating app for a longer time seemed to reap the benefits of prolonged use, as it increased their odds for having a meeting with another user. Thus, it might be that satisfied users are more likely to continue to use the app (Timmermans & Courtois, 2018). In this case, being satisfied indicates a greater sense of success in the form of having matches and other-instigated conversations, which in turn might boost users' self-perceived desirability. In another study, researchers confirmed that self-perceived mate value increased the odds for reporting intention to commit sexual

infidelity for both men and women (Starratt, Weekes-Shackelford, & Shackelford, 2017). Thus, we pose a serial mediation hypothesis in which the frequency of dating app use will be positively associated with perceived dating app success, perceived dating app success will be positively associated with self-perceived desirability, and finally, self-perceived desirability will be positively associated with intention to commit infidelity (see Fig. 1 for the proposed model).

H6. People's self-perceived success and self-perceived desirability will mediate the association between mobile dating app use and intention to commit infidelity.

2. Method

2.1. Sample and procedure

We recruited 562 participants from two recruitment sites to complete an online survey. Approximately half of participants who began the survey were undergraduate students at a medium-sized east coast university who completed the survey in exchange for extra credit ($n = 309$ or 55.0% of the recruited sample). We also recruited a non-student sample because dating app use is not limited to the college student population. Rather, more than half of the people using popular dating apps Tinder and Hinge are above the age of 25 (Statista, 2018). Thus, the other half of this study's sample was recruited from Amazon Mechanical Turk ($n = 253$, 45% of the entire sample), and they received a compensation of two dollars for their participation. For the purpose of this study, we were only interested in people who were currently using mobile dating apps. All participants who indicated that they were not using a mobile dating app at the moment of inquiry ($n = 167$) were automatically redirected to the end of the survey and were deleted from our analyses. After passing through the filter question, which asked whether participants were currently using a mobile dating app, the sample comprised of 395 participants (55.9% male, $M_{age} = 26.7$, $SD = 8.32$) who completed the survey in full. The final sample included 176 students (44.6% of the final sample, 38.0% male, $M_{age} = 21.91$, $SD = 3.43$), and 219 MTurk participants (55.4% of the final sample, 70.3% male, $M_{age} = 30.62$, 9.04).

After providing consent, participants were asked if they were currently using the mobile dating app Tinder ($n = 365$, 92.4%), given that Tinder is the number one grossing app in the US app store (Shead, 2017), generating 1.6 billion swipes a day in over 190 different countries (Tinder, 2018). Then, they were asked if they were currently using another mobile dating app, and if so, to specify the dating app that they use most often. Other commonly used dating apps included Bumble (used by 12.2% of the sample), Grindr (4.0%), Plenty of Fish (5.8%), and OK Cupid (6.6%).

The majority of participants reported themselves to be heterosexual or straight ($n = 318$, 80.5%), followed by bisexual ($n = 60$, 15.2%), and gay or lesbian ($n = 17$, 4.3%). They indicated their relationship status as single ($n = 144$, 36.5%), followed by casually dating ($n = 91$, 23%), seriously dating ($n = 73$, 18.5%), married ($n = 56$, 14.2%), cohabiting ($n = 16$, 4.1%), engaged to be married ($n = 11$, 2.8%), and divorced or separated ($n = 4$, 1.0%). This relationship status composition is noteworthy because it signifies that approximately 39.50% of participants using a mobile dating app appeared to be using it while in a serious romantic relationship ($n = 156$).

2.2. Measures

For any scales that included more than four items, a confirmatory factor analysis (CFA) was conducted using AMOS 24. Model fit was deemed acceptable when the chi-square test was nonsignificant, the Root Mean Square Error of Approximation (RMSEA) was below .10, and the Comparative Fit Index (CFI) was above .90 (Weston & Gore, 2006). Because the significance of the chi-square test can be sensitive to

sample size and high degrees of freedom (Barrett, 2007), more interpretive weight was placed on the RMSEA and CFI values.¹

Frequency of Mobile Dating App Use. Participants were asked, "Approximately how often do you use a mobile dating app?" Possible responses included 1 = almost never ($n = 49$), 2 = once a month ($n = 69$), 3 = multiple times a month ($n = 71$), 4 = once a week ($n = 70$), 5 = multiple times a week ($n = 88$), 6 = every day ($n = 34$), and 7 = multiple times a day ($n = 14$).

Perceived Dating App Success. We asked participants about their perceived success on dating apps using two indirect measures: the average number of matches they receive and the average number of other-instigated dating app conversations (Timmermans et al., 2018). First, participants were asked, "Please indicate, on average, how many in 10 mobile dating app users you swipe right on that you match with." Then, they were asked, "Please indicate, on average, how many in 10 mobile dating app users you match with *start a conversation with you*" ($\alpha = .71$, $r_{SB} = .70$, $M = 3.45$, $SD = 2.16$).

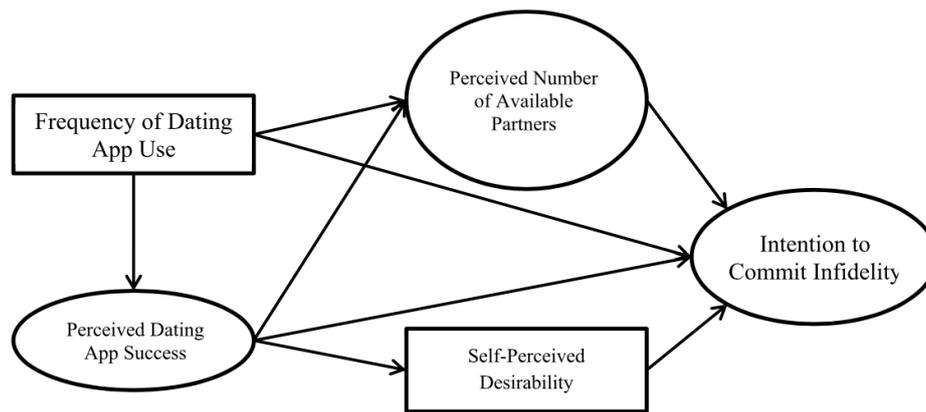
Perceived Amount of Available Partners. We employed a modified version of James, Tucker, and Mitchell-Kernan's (1996) single-item measure of perceived amount of available partners. Participants were asked to think about their current romantic relationship or their most recent romantic relationship. Then they were asked to indicate on a scale of 1 (strongly disagree) to 7 (strongly agree) the extent to which they agreed with two statements about their ability to find a new partner. For example, they were asked, "Though it might take a while, I could find another desirable partner if I wanted to or needed to" ($\alpha = 0.75$, $r_{SB} = .75$, $M = 5.20$, $SD = 1.34$).

Self-Perceived Desirability. To measure participants' self-ratings of their romantic desirability, participants were asked to rate on a scale of 1–100 the percentage of dating app users who have seen their profile that they think have wanted to match with them ($M = 51.32$, $SD = 22.82$).

Intention toward Infidelity. We employed the 7-item Intention toward Infidelity Scale (ITIS; Jones, Olderbak, & Figueredo, 2011). Because this measure was designed for participants currently in a romantic relationship, we expanded the instructions to make the measure applicable to participants of all relationship statuses and to provide participants with more context on what it means to be unfaithful. Participants read, "The following questions describe hypothetical situations about being unfaithful to a partner. For the purpose of answering these questions, imagine that 'unfaithful' means engaging in any behavior that you personally consider to be unfaithful to a partner in a committed relationship. Please indicate how likely or unlikely you would be to do the following things if you are (or were) in a committed relationship." Then, participants indicated on a scale of 1 (very unlikely) to 7 (very likely) the likelihood that they would be unfaithful to a partner in a variety of contexts. Sample items included, "How likely are you to be unfaithful to a partner if you knew you wouldn't get caught?" and "How likely would you be to hide your relationship from an attractive person you just met?" Thus, a higher score indicated a greater intention to commit infidelity. The CFAs revealed one item did not fit well with the other items and was removed. Model fit for the resulting six-item scale was acceptable ($\alpha = .90$, $M = 3.22$, $SD = 1.62$, $\chi^2(395, 9) = 44.34$, $p < .001$, CFI = .97, RMSEA = .08).

The Intention toward Infidelity Scale has been previously validated using a longitudinal design, which found that scores on the ITIS positively predicted actual infidelity and relationship dissolution (Olderbak, 2008). In addition, intention toward infidelity was sensitive to relationship-related factors like relational satisfaction, suggesting that it may be influenced by environmental factors.

¹ Correlation matrices, factor loadings, composite reliability, and average variance extracted (AVE) are available upon request.



Note: Rectangles indicate single-item variables while ovals indicate latent (i.e., multiple item) variables.

Fig. 1. Proposed model.

3. Results

3.1. Analyses

To test the hypotheses, the model was created in AMOS 24 using structural equation modeling (SEM; Bollen, 1989). We controlled for participant characteristics (age, sex, sexual orientation, and relationship status) that were significantly correlated with the outcome variable (Babyak, 2004; Hawkins, 2004). Good model fit for the overall model was determined using the same fit indices described for the CFAs. The fit indices for the model were acceptable, $\chi^2(395, 89) = 208.02$, $p < .001$, CFI = 0.94, RMSEA = 0.06 (see Fig. 2 for the observed model).

Because bootstrapping within AMOS only provides significance values for the total indirect effect, phantom modeling was used to test the significance of individual mediation paths (i.e., Hypothesis 2, Hypothesis 4, Hypothesis 5, and Hypothesis 6; see Macho & Ledermann, 2011 for instructions). Standardized coefficients (β) are reported.

3.2. Mobile dating app use and perceived amount of available partners

The first hypothesis predicted a positive association between frequency of mobile dating app use and the perceived amount of available dating partners; however, the results indicated that this relationship was not significant, $\beta = .085$, $SE = 0.027$, $p = .134$ (Fig. 2). Hypothesis 1 was not supported.

Hypothesis 2, which proposed that the perceived amount of available partners would mediate the relationship between mobile dating app use and the intention to commit infidelity, was also not supported, $\beta = -0.016$, $SE = 0.009$, $p = .075$.

3.3. Perceived dating app success and self-perceived desirability

Hypothesis 3 predicted that people's perceived success on mobile dating apps would be positively related to their self-perceived desirability, which was supported in the model, $\beta = 0.495$, $SE = 0.909$, $p < .001$ (Fig. 2). As people's perceived success increased, their perceptions of their own desirability also increased.

Hypothesis 4 posited that self-perceived desirability would mediate the relationship between perceived dating app success and intention to commit infidelity. This indirect path was significant, $\beta = 0.070$, $SE = 0.036$, $p = .022$. Perceived success on mobile dating apps was

positively associated with self-perceived desirability, and self-perceived desirability was positively associated with intention to commit infidelity. Overall, increased perceived success was associated with an increase in the intention to commit infidelity through higher self-perceived desirability. Hypothesis 4 was supported.

3.4. Perceived dating app success and perceived amount of available partners

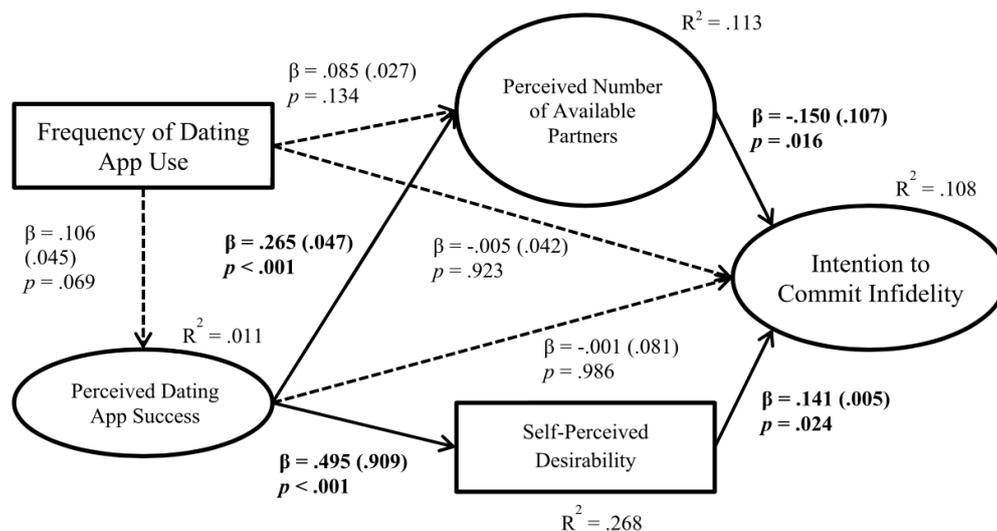
The fifth hypothesis proposed that the perceived amount of available partners would mediate the relationship between self-perceived success and intention to commit infidelity. The indirect path through the perceived amount of available partners was significant, $\beta = -0.040$, $SE = 0.022$, $p = .011$. Perceived success on mobile dating apps was positively associated with perceived number of available partners. Perceived amount of available partners was negatively associated with intention to commit infidelity. Overall, increased perceived success was associated with a decrease in the intention to commit infidelity through a higher perceived number of available partners.

3.5. Mobile dating app use and perceived dating app success

The sixth hypothesis posited a serial mediation whereby frequency of dating app use would be indirectly associated with intention to commit infidelity through perceived success on mobile dating apps and self-perceived desirability. This indirect relationship was not significant, $\beta = 0.006$, $SE = 0.005$, $p = .079$; therefore, Hypothesis 6 was not supported.

4. Discussion

The goal of this study was to explicate the process by which using a mobile dating app may be associated with an intention to commit infidelity. Efforts have been made to predict why some have the tendency to stay committed to one single partner, and why others have the tendency to seek, sometimes multiple, alternative partners (e.g., Emmers-Sommer, Warber, & Halford, 2010; Fincham & May 2017). In this vein, studies have examined the role that social media use and, more specifically, online dating platforms play in facilitating infidelity. The current study further examines the association between mobile dating app use, individuals' experiences with other users, and their intention to commit infidelity. Our findings point to self-perceived success on a



Note: Coefficients are reported as standardized coefficients and numbers in parentheses are standard errors. Sex, age, sexual orientation, and relationship status were included as covariates. Solid lines represent significant paths, and the dotted lines represent hypothesized but insignificant paths.

Fig. 2. Observed model (results).

dating app as an important predictor of perceptions of one's self and dating environment.

Several international studies have shown that it is quite common for people in a committed relationship to be active on a mobile dating app while in this relationship, with numbers ranging between 15 and 25% (e.g., Botnen, Bendixenm, Grøntvedt, & Kennair, 2018; Orosz, Tóth-Király, Bőthe, & Melher, 2016; Shapiro et al., 2017). Remarkably, in our US sample, approximately 40% of respondents reported being in a serious relationship while using a mobile dating app (i.e., seriously dating, cohabiting, engaged to be married, or married). This is by far exceeding numbers found in similar international studies. Such findings indicate that further exploration of mobile dating app use and infidelity are warranted and that more attention should be paid to cultural differences regarding the use of dating apps within committed relationships.

Results from the current study show that rather than focusing on the frequency of use, it is more important to examine users' perceived success on a certain medium to gain a better understanding of the potentially detrimental consequences of dating app use. Especially in the case of mobile dating apps, to focus on the frequency of use alone seems to ignore important information about whether users have satisfied their needs and engaged in meaningful interactions with other users. In other words, using a mobile dating app frequently but failing to get (interesting or desirable) matches is not challenging current or future relationship development. Although social networking sites such as Facebook and Instagram provide users with access to previous dating partners and may potentially influence their perceptions of their dating pool (Drouin et al., 2015), dating apps come with certain affordances that make them a particularly rich source of information about the dating market. In addition, previous studies have found significant links between dating app frequency and dating app perceptions (e.g., Carpenter & McEwan, 2016; Griffin, Canevello, & McAnulty, 2018). Despite this, it is possible that frequency of dating app use was not significantly associated with users' perceived amount of available partners because a person who is using the app frequently, but is not successfully engaging with others, may not see other users as viable romantic or sexual options.

The findings indicate that self-perceived desirability mediates the relationship between perceived dating app success and intention to commit infidelity, providing a more nuanced understanding of the cognitive process underlying dating app use and intention to cheat. This finding provides support for equity theory by illustrating that people who may feel they are more romantically desirable than their partners, and therefore are over-benefitting the relationship, are more likely to exhibit a greater intention to pursue other romantic or sexual opportunities. In light of this, the environment of a mobile app may be able to provide people with the cues necessary to evaluate their own mate value and to make them feel like a desirable partner. Future research can bolster these claims informed by equity theory by also measuring participants' ratings of their romantic partners in conjunction with their self-reported desirability. For example, men who perceive their current partner as physically attractive exhibit lower intentions to commit both sexual and emotional infidelity (Starratt et al., 2017). When we perceive our partner as having higher mate value than us, we perceive that person as difficult to replace (Conroy-Beam, Goetz, & Buss, 2016). However, when mobile dating apps succeed in showing us matches we perceive as more desirable than our current partner, we might be more inclined to commit infidelity. Yet, it is important to note that interactions with other users on dating apps are not always positive (e.g., LeFebvre, 2018; Thompson, 2018). Aside from matching with others, successful online and offline interactions will be important to eventually engage in online, offline, emotional, or sexual infidelity. Therefore, future research may also examine the attractiveness or desirability of *other* users they encountered on mobile dating apps and not solely focus on the online success of users, which was limited to matching and other-instigated conversations in the current paper, but also include measures of offline success such as successful dates and/or (casual) sexual interactions.

These findings also have practical implications. Mobile dating apps have become a convenient, accessible method of seeking an extradyadic encounter, even if simply for the purpose of "just seeing what's out there." Because of the opportunities for developing relationships, some have recommended that therapists treat infidelity as a symptom of the state of the relationship with both partners present (Young, Griffin-

Shelley, O'Mara, & Buchanan, 2000). Others have suggested that decisions to engage in online infidelity are rooted in personality and thus those who have committed infidelity should be treated as individuals (Aviram & Amichai-Hamburger, 2005). These findings suggest that attention be paid to the user's shift in perceptions after receiving validation from outside the committed relationship. As our findings indicate, the user may be less likely to pursue an extradyadic encounter if there is an increase in the perceived number of available partners, but may be more likely to pursue such an encounter if one is made to feel like a desirable mate. Therefore, in addition to recommending that couples discuss which behaviors regarding mobile dating app use are appropriate or inappropriate (e.g., having a profile, viewing other users' profiles), marriage and family therapists may also encourage a discussion about the couples' perceptions of what they contribute to the relationship. At minimum, therapists may be able to identify one potential process by which dating app users develop a desire to be unfaithful to their partners.

The indirect relationship between perceived success on a dating app and intention to commit infidelity through perceived amount of available partners was not in the direction we expected. In particular, perceived success was positively associated with perceived amount of available partners, and perceived amount of available partners was *inversely* associated with intention to commit infidelity. The 'paradox of choice' follows the logic that although having more choices improves well-being (Schwartz, 2004), in practice, this is not always the case. The more choices that are available to people, the lower the quality of their decisions, the worse they will feel, and the less motivated they are to make a choice (Rosenfeld, 2017). One study found that people presented with more search options on an online dating platform exhibited excessive searching, reduced cognitive resources, and thus reduced ability to filter out inferior options (Wu & Chiou, 2009). For a dating app user who receives positive feedback from other users, and who therefore perceives themselves to have many options available to them, the dating app environment may be overwhelming and, potentially, even disappointing. Thus, they may be less interested in actively pursuing romantic or sexual behavior with someone outside of the relationship. Some argue that when people are faced with an abundance of choices (for example, of relational or sexual partners), there is an increased pressure to take on the role of 'maximizer'— someone who does what they can to select the best possible option and avoid settling (Simon, 1990). Given the assumptions of the paradox of choice, it is possible that users in this sample did not perceive their alternative partners to be of particularly high quality. Lower reports of the romantic desirability of other users would potentially explain why mobile dating apps provide users with more dating opportunities, but not those that motivate a user to cheat on a current partner. Although we did not measure participants' ratings of the attractiveness or desirability of other users they encountered on mobile dating apps, one proxy measure we did include was the average number of conversations instigated by participants. Specifically, we asked participants to indicate with how many people, out of 10 matches, do they start a conversation. Participants reported an average of 2.94 self-instigated conversations ($SD = 2.54$), falling well below the scale's midpoint. This may suggest that the participants were only motivated to act on a small number of the opportunities presented to them, and that the quantity of alternatives alone is not enough to motivate a desire to cheat. Again, these findings stress the importance of including an extensive measure of dating app success that encompasses not only matching and other-instigated conversations, but also provides information on the quality of both online and offline interactions as well as the desirability of the other users one interacts with.

The primary objective of this study was to explicate the relationship between mobile dating app use and intention toward infidelity. Thus, the arguments laid out in this paper were grounded in theories predicting relational commitment, or lack thereof, and specifically consider people who are in committed relationships. However, these

findings also have implications for single users. Our survey instrument presented our dependent variable, intention toward infidelity, in such way that was applicable to both single and non-single users, asking them to indicate the likelihood that they would be unfaithful to a partner. Thus, for single users, a greater intention to commit hypothetical infidelity may reflect a diminished intention to settle down with one partner if they perceive themselves to be desirable on a dating app. This is consistent with previous research that links self-ratings of attractiveness and desirability to positive attitudes about casual sex and sex with multiple partners (e.g., Clark, 2004; Perilloux et al., 2013; Weeden & Sabini, 2007). In addition, the Intention Toward Infidelity Scale is positively correlated with unrestricted sociosexual attitudes (Jones et al., 2011), which are characterized by a willingness to engage in casual sex, and to engage in sex without love or a committed relationship (Simpson & Gangestad, 1991).

4.1. Limitations and directions for future research

One major limitation of the current study is that we relied on self-reports of the likelihood of a future behavior (i.e., intention to commit infidelity) using a cross-sectional survey design. As Starratt and colleagues (2017) noted, one's actual future behavior might deviate from one's intentions and people might underreport or underestimate their infidelity intentions as those intentions are generally perceived as undesirable. Therefore, researchers might consider longitudinal methods to examine how perceived dating app success influences users' intention to engage in infidelity over time and accordingly link it to actual behavioral infidelity outcomes. In doing so, we would also like to encourage future research to differentiate not only between emotional and sexual infidelity, but also make a clear distinction between online and offline infidelity, as such distinction is crucial for a comprehensive understanding of infidelity as well as factors influencing infidelity behaviors (Martins et al., 2016; Whitty, 2005). Given that mobile dating apps connect users within an online environment before moving on to a face-to-face interaction (if any), emotional and online infidelity are likely to occur within such platforms (see also Weiser et al., 2018).

Second, we recruited both an undergraduate student sample at an east coast university and a community sample from MTurk. Although MTurk is a useful tool to sample from populations with special characteristics (for example, those who are currently using a dating app; Shapiro, Chandler, & Mueller, 2013), this method of recruiting participants is accompanied by limitations similar to those of other online data collection methods. These limitations include the possibility of low-quality or rushed responses and responses from automatic 'bot' programs. However, social scientists have established MTurk as a source for diverse, high-quality data (Buhrmester, Kwang, & Gosling, 2011; Shapiro et al., 2013).

Finally, although we asked participants to indicate their relationship status, we did not ask how committed participants were to their relational partners. People may be legally married or consider themselves to be seriously dating someone; however, it is possible that both partners in the relationship have consented to an open or polyamorous relationship and are using a dating app to seek an additional partner. One recent study found that approximately one in five Americans have engaged in a non-monogamous relationship at one point in their lifetime (Hauptert, Gesselman, Moors, Fisher, & Garcia, 2017). It is also possible that people in committed relationships sign up for mobile dating apps together in search of a short-term sexual partner or threesome. Yet, even though consensually non-monogamous couples have varying expectations for sexual behavior outside the relationship, that does not mean that infidelity cannot be perpetrated. They, like monogamous partners, also have rules within the relationship that should not be transgressed (Perel, 2017). Future studies examining the link between dating app use and intention toward infidelity should consider level of exclusivity to account for relationships in which dating app use and, by extension, engaging in extradyadic communication, is not

considered a betrayal to the relationship.

5. Conclusion

Our results suggest that people's perceived success on a dating app was positively associated with their intention to commit infidelity through self-perceived desirability, and negatively associated with their intention to commit infidelity through perceived amount of available partners. These findings lend support to the idea that, although the ways in which people search for potential romantic or sexual partners have changed, the outcomes have not. Rather, the environment of a mobile dating app can mimic our immediate environment, and thus offer a new platform to seek alternative partners. The dating app environment may not only challenge the boundaries of a committed relationship if a partner perceives themselves to be desirable, but also has consequences for singles users, as they might have difficulty settling or will be more likely to cheat on their future partners.

Acknowledgments

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 707404. The opinions expressed in this document reflect only the authors' view. The European Commission is not responsible for any use that may be made of the information it contains.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.chb.2019.08.009>.

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