



Is my attachment style showing? Perceptions of a date's attachment anxiety and avoidance and dating interest during a speed-dating event

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ABSTRACT

Choosing who to pursue as a romantic partner can have wide-reaching consequences. Attachment anxiety (i.e., need for reassurance) and avoidance (i.e., comfort with closeness) are associated with relationship quality and maintenance, but do people accurately perceive a date's attachment style and are these perceptions associated with dating interest? In a sample of 164 speed-daters ($n = 1,869$ dates), we found that people accurately perceived dates' attachment anxiety, but not their attachment avoidance. Perceiving a date as more anxiously or avoidantly attached was associated with less dating interest, and when dates were higher on attachment anxiety, accurate perceptions of anxious attachment were associated with less dating interest. Implications for partner selection and for understanding perceptions in dating relationships are discussed.

1. Introduction

Decisions about whom to pursue as a romantic partner can have long-term, wide-reaching consequences for relationship quality (Joel, MacDonald, & Plaks, 2013). Once established, romantic relationships tend to persist (Joel & MacDonald, 2021), and romantic relationship quality is a key predictor of physical and psychological wellbeing (Baumeister & Leary, 1995; Coombs, 1991; Diener & Seligman, 2002; Holt-Lunstad, Smith, & Layton, 2010; Pietromonaco & Collins, 2017). Research has identified factors, such as attachment styles, that are associated with relationship quality in established relationships (Joel et al., 2020). A wealth of research on romantic attachment shows that a person's *attachment anxiety* (i.e., need for reassurance and fear of rejection) and *attachment avoidance* (i.e., comfort with closeness and value placed on independence; Hazan & Shaver, 1994; Mikulincer & Shaver, 2007) are associated with how they experience and evaluate their romantic relationships and are among the top predictors of relationship quality (Candel & Turliuc, 2019; Joel et al., 2020). People who are securely attached (low in attachment anxiety and avoidance) tend to be more satisfied in their relationships, better navigate conflict, are more responsive to their partners, and as such, may have the potential to be more viable long-term partners (Creasey, 2002; Crowell, Treboux, & Waters, 2002).

Past work has found the accurate perception of a partner's traits, including attachment styles, are linked to higher relationship quality in established relationships (Carlson, 2016; Lackenbauer, Campbell, Rubin, Fletcher, & Troister, 2010; Letzring & Nofle, 2010; Luo & Snider, 2009; Swann, De la Ronde, & Hixon, 1994), and people are able to accurately perceive other people's personality in speed dating contexts (Kerr, Borenstein-Laurie, & Human, 2020). However, it is not clear if people accurately detect potential dating partners' attachment styles when they first meet them and if this information is used to inform dating interest. In the current study, our goal is to test whether people accurately perceive a potential partner's attachment anxiety and avoidance, and whether these perceptions are associated with dating interest during an initial encounter.

1.1. Do people accurately perceive potential partners' attachment style?

Attachment theory is a prominent theory in relationship science, with a host of work consistently finding links between attachment anxiety and avoidance with relationship quality in established relationships (see Candel & Turliuc, 2019). People higher in attachment anxiety have a strong desire for closeness and worry about being abandoned by their partner, tend to distrust their partners, anticipate partner infidelity, and are prone to experiencing jealousy (Toplu-

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Demirtas, Akcabozan-Kayabol, Araci-Iyiydin, & Fincham, 2020). People higher in attachment avoidance tend to be uncomfortable being close to others and find it difficult to trust others, are less responsive to their partner's needs and less committed to their partners than people lower in avoidance (see review by Mikulincer & Shaver, 2007). Given that partners' attachment styles are linked to the quality and long-term potential of a relationship, as well as early relationship development (Finkel & Eastwick, 2008), an open question is whether attachment anxiety and avoidance are detectable when people first meet and interact with potential partners.

There is some evidence that people can detect another person's attachment anxiety and avoidance, even from limited information. Across two studies, people showed some accuracy in perceiving other people's attachment styles from photos of neutral faces (Alaei, L  v  que, MacDonald, & Rule, 2020). Compared to the self-reported attachment of the people in the photos, perceivers accurately detected men's attachment anxiety and avoidance, but were unable to detect women's attachment anxiety, and demonstrated mixed results when detecting women's attachment avoidance. Perceivers also tended to project their own attachment insecurities onto their ratings of target faces, particularly their attachment anxiety (Alaei et al., 2020). However, other research has demonstrated that people might be more likely to form accurate impressions of a person's attachment during an in-person interaction. Following a five-minute conversation with a new acquaintance, same-gender pairs formed accurate perceptions of each other's attachment anxiety and avoidance (Banai, Weller, & Mikulincer, 1998); that is, perceptions of the interaction partner's attachment style were significantly correlated with the person's self-reported attachment. In the same study, a stranger watched the recording of these conversations and rated the attachment styles of the conversation members. However, there was no association between the observer's rating and the self-reports of the interaction partners, suggesting there may be some information about a person's attachment style that is communicated through having a live interaction with the person that is not detected from observations.

Indeed, when interacting with their romantic partner, people exhibit different non-verbal cues that signal their attachment style. For example, when discussing positive aspects of their relationship, people lower in both attachment avoidance and attachment anxiety (i.e., secure attachment) displayed more nonverbal cues of closeness (such as greater smiling and expressiveness), whereas people higher in attachment avoidance displayed few nonverbal cues of closeness (Tucker & Anders, 1998). Therefore, in addition to displaying aspects of their attachment style with facial cues (Alaei et al., 2020), people might also display aspects of their attachment style using other non-verbal cues. Although the reviewed studies provide evidence that people can detect another person's attachment style from photos and interactions, in past work people were rating others in general rather than *potential* romantic partners. The dating market is a context in which perceivers might be more motivated to accurately perceive attachment-related cues, depending on their relationship goals. First dates are situations that may involve self-presentational concerns that constrain the way people behave (Rauthmann et al., 2014; Sherman, Nave, & Funder, 2012). Evaluations of a person through photographs are also more susceptible to the Halo Effect, which suggests people that are seen as attractive are also assumed to possess other positive traits (Bak, 2010; Nisbett & Wilson, 1977). It is possible that relative to neutral contexts, in a dating context, cues of a person's need for reassurance (i.e., attachment anxiety) and value placed on independence (i.e., attachment avoidance) might be more salient to perceivers, but might also be cues that targets strategically try to mask.

1.2. Are perceptions of a person's attachment style associated with dating interest?

In established romantic relationships, accurately perceiving a

partner's personality, including their attachment style was associated with higher relationship satisfaction for the perceiver (Carlson, 2016; Lackenbauer et al., 2010; Letzring & Nofle, 2010; Swann et al., 1994) and being perceived accurately was associated with higher satisfaction for the target (Luo & Snider, 2009). However, one study found that one's own attachment avoidance, as well as perceiving a partner as higher in attachment avoidance was linked to *lower* relationship satisfaction in established relationships, but there was no association between one's own or perceptions of a partner's attachment anxiety and relationship satisfaction (Molero, Shaver, Fernandez, Alonso-Arbiol, & Recio, 2016). When considering initial attraction to hypothetical partners, there is evidence that people may be more attracted to secure partners, as well as partners with a similar attachment style (Holmes & Johnson, 2009). Thus, although there is broader evidence that accurate perceptions are linked to relationship satisfaction in long-term relationships (Luo & Snider, 2009), this might depend on whether the accurate perception is for a positive or negative partner trait (Fletcher, 2015). That is, accurately perceiving a date as high in attachment anxiety may not have the same association with dating interest as accurately perceiving a date as low in attachment anxiety. Past work suggests accurate impressions may be beneficial for relationship development and satisfaction by promoting processing fluency, or the sense that the person is easy to understand (Reber, Schwarz, & Winkielman, 2004). Furthermore, accurate impressions could also allow for greater feelings of familiarity, which can promote more liking (Langlois & Roggman, 1990; Reis, Maniaci, Caprariello, Eastwick, & Finkel, 2011). Therefore, in the current study, the extent to which accurate perceptions of a partner's attachment style are associated with dating interest might depend on whether people are perceived as more secure or insecure.

Past research on attachment and dating suggests that people higher in attachment anxiety and avoidance might garner less dating interest than securely attached people (Latty-Mann & Davis, 1996; Pietromonaco & Carnelley, 1994; c.f., Brumbaugh & Fraley, 2010; Brumbaugh, Baren, & Agishtein, 2014). In one speed-dating study, men higher in attachment anxiety matched with fewer partners than men lower in attachment anxiety, and although anxious women tended to indicate interest in more partners compared to women low in attachment anxiety, they matched with fewer partners (McClure, Lydon, Baccus, & Baldwin, 2010). Other work has found people higher in attachment anxiety report fewer face-to-face meetups with people with whom they interact on dating apps (Timmermans & Alexopoulos, 2020), possibly suggesting they garner less dating interest. Nonetheless, people higher in attachment insecurity can make good first impressions (Brumbaugh & Fraley, 2010) and it is not clear from previous research if these perceptions, or their accuracy, during initial encounters associated with dating interest.

1.3. The current study

In pre-registered analyses of a speed-dating study (<https://osf.io/vgtps/>) we tested two key questions: (1) Do people accurately perceive a date's attachment anxiety or avoidance and are they biased by their own attachment style? (2) Is the accurate perceptions of date's attachment anxiety or avoidance associated with dating interest? The current research will expand our understanding of perceptions of attachment styles to a dating context and shed light on how perceptions of dates' attachment style are associated with initial dating interest.

2. Methods

2.1. Participants and procedure

Participants were recruited from eight mixed-gender speed-dating events at an annual anime convention in Toronto (May 2015). Each participant went on 13 3-minute dates with participants of the other gender/sex. We did not explicitly collect data on participants' sexual

orientation, biological sex, or gender identity, but advertised the event as an opportunity for women and men to date. Women remained seated while men rotated to the next date. A total of 208 men and women participated in the study. Participants first completed a baseline survey prior to the speed dates, on which they completed a measure of attachment anxiety and avoidance. Then, following each date, as part of a larger questionnaire participants reported their perceptions of their date's attachment anxiety and avoidance, as well as indicated their romantic and sexual interest in each date and their interest in seeing the date again.

2.2. Exclusion criteria

The total sample for the study ($N = 208$, $M_{\text{age}} = 21.6$, $SD_{\text{age}} = 3.4$) was based on the number of events we were able to run over a weekend. We removed the data of one participant who was a research assistant in the study (to fill in for a cancellation by a participant), and eight other participants due to having incomplete responses on assessments of our key predictors (e.g., attachment style, perceptions of date's attachment). A response was considered incomplete if the participant did not respond to 50% or more of the items a measure of interest. In line with exclusions from other, similar speed-dating studies (Spielmann, Maxwell, MacDonald, Peragine, & Impett, 2020), we also removed 14 participants who specified they were in an exclusive romantic relationship at the time of the event and 21 participants for having failed an attention check ("I am paying attention to this survey. If you are paying attention, select 'Agree'") in the background survey. The final sample consisted of 164 participants and a total of 1,869 dates (see Table 1 for demographic information). We also compared the descriptive statistics of our key variables before and after excluding these participants and there were very small differences. Mean differences varied from 0 to 0.10, and standard deviation differences varied from 0 to 0.06.¹ We conducted sensitivity analyses which indicated that with 80% power and a two-tailed α of 0.05, our sample allowed for the detection of a small minimum unstandardized slope of 0.022–0.036 for our main research questions (see OSM p. 1 for details).

Table 1
Demographic information.

Demographic	<i>n</i>	%
Gender		
Woman	74	45.1
Man	90	54.9
Ethnicity		
White	77	47.0
Black	19	11.6
Asian	55	33.5
Latin American	7	4.3
Not listed or not specified	13	7.9

Note: Participants were allowed to select multiple ethnicities, therefore these columns may exceed our total sample size/100%. Gender was not reported explicitly but assumed based on the chosen speed-dating group.

¹ We conducted t-tests to compare the mean differences between our sample before and after applying our exclusion criteria. There was a statistically significant difference between attachment accuracy before and after applying our exclusion criteria, $t(3542) = 2.68$, $p = .007$, such that attachment accuracy was higher after applying our exclusion criteria ($M = 0.12$, $SD = 0.35$), compared to before ($M = 0.09$, $SD = 0.32$). There was also a statistically significant difference between contact interest, $t(3869) = 1.9$, $p = .046$, such that contact interest was higher after applying our exclusion criteria ($M = 6.85$, $SD = 3.43$), compared to before ($M = 6.63$, $SD = 3.46$).

2.3. Baseline measures

We report the reliability of our measures below using two indicators, coefficient alpha (α ; Cronbach, 1951) and coefficient omega (ω ; McDonald, 1999). See Table 2 for correlations, means and standard deviations of our main demographics and measures of interest.

2.3.1. Attachment style

We used six items from the Experiences in Close Relationships-Short Form (ECR-S; Wei, Russell, Mallinckrodt, & Vogel, 2007) for attachment anxiety (one reverse coded; $\alpha = 0.80$, 95% CI [0.779, 0.812], $\omega = 0.81$, 95% CI [0.795, 0.824]) and although we administered six items from the ECR-S for avoidance (three reverse coded), the six items had low reliability ($\alpha = 0.63$, 95% CI [0.594, 0.654], $\omega = 0.35$, 95% CI [0.300, 0.398]). To determine the items that would reliably assess attachment avoidance in the current sample, we estimated a one-factor CFA, and a two-factor CFA with the reverse and non-reversed items loaded onto separate factors to determine the best fit. First, we found the fit of the one-factor model with both the reverse and non-reverse items loading together was poor, $\chi^2(9) = 1405.95$, $p < .001$, $CFI = 0.66$, $TLI = 0.43$, $RMSEA = 0.288$, 90% CI [0.276, 0.301], $SRMR = 0.163$, and the factor loadings varied drastically ($\beta = -0.47$ – 1.27). The factor loadings of the two-factor model were more consistent ($\beta = 1.01$ – 1.25), and the overall model fit was better, $\chi^2(8) = 503.04$, $p < .001$, $CFI = 0.88$, $TLI = 0.77$, $RMSEA = 0.182$, 90% CI [0.276, 0.301], $SRMR = 0.099$, and the two-factor model fit significantly better than the one-factor model, $\chi^2(1) = 902.91$, $p < .001$, suggesting that the reverse and non-reverse coded items loaded separately. Given that reverse scored items can pose issues for model fit (Suárez-Álvarez, Pedrosa, & Lozano, 2018; Zhang, Noor, & Savalei, 2016), we deemed it was most appropriate to assess avoidance with the three non-reverse coded items, $\alpha = 0.71$, 95% CI [0.687, 0.739], $\omega = 0.72$, 95% CI [0.688, 0.739]. However, the pattern of results was the same when we used the full attachment avoidance subscale (see OSM pp. 13–17).

2.5. Post-date measures

2.5.1. Perceived attachment style

After each date we assessed perceptions of a date's attachment style using two items. The measure read "In relationships I think < current speed-dating partner > is..." and had the item "insecure and needy" to assess attachment anxiety, and "uncomfortable with closeness" to assess attachment avoidance. Participants rated both items on a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). To ensure these one-item measures were assessing attachment anxiety and avoidance, we conducted a confirmatory factor analysis in a separate sample and found the single item measures of attachment anxiety and avoidance loaded onto their respective factors (0.80 for the anxious attachment item, and 0.74

Table 2
Means, Standard Deviations, Range, and Correlations.

Variable	<i>M</i>	<i>SD</i>	Range	1	2	3	4	5	6	7
1. Dating Interest	3.42	1.72	1–7							
2. Contact Interest	0.52	0.50	0–1							
3. SR Attachment Anxiety	4.16	1.16	1–7	0.10**	0.00					
4. SR Attachment Avoidance	3.63	1.32	1–7	−0.05	−0.03	0.34**				
5. PP Attachment Anxiety	2.98	1.40	1–7	−0.21**	−0.20**	0.13**	0.11**			
6. PP Attachment Avoidance	3.06	1.46	1–7	−0.18**	−0.18**	0.10**	0.08**	0.78**		
7. Attachment Anxiety Accuracy	0.13	0.38	−1–1	−0.10**	−0.07**	0.04	−0.02	0.02	0.02	
8. Attachment Avoidance Accuracy	−0.00	0.34	−1–1	0.00	0.10**	−0.02	−0.10**	0.03	−0.01	−0.03

Note. * $p < .05$. ** $p < .01$. *M* and *SD* are used to represent mean and standard deviation, respectively. SR = Self-Reported, PP = Perceived Partner. Contact Interest is a binary variable measured as either 0 or 1. Therefore, a mean of 0.52 can be interpreted as a 52% likelihood that people would say yes to seeing their date again. The Attachment Anxiety and Avoidance Accuracy variables are accuracy correlations transformed into Fisher's Z scores, therefore a mean of 0 can be interpreted as no correlation between self-reported and perceived attachment.

for the avoidant attachment item; see OSM pp. 3–5 for full details).²

2.5.2. Dating interest

After each date, we also asked participants to respond to two items about their interest in the date: “How interested are you in this date romantically?” as well as “How interested are you in this date sexually?” Participants rated both items on a 7-point Likert scale (1 = “Not at all”, 7 = “Very much”). In line with our preregistration, we combined these two items into a composite to represent dating interest as they were highly correlated ($r = 0.83$).

2.5.3. Contact interest

After each date, we asked participants: “Do you want to see this date after the event? If you and this date both say “yes” to each other, you and this date will get each other's contact information. If either of you says “no” to the other, neither of you will get the other's contact information,” with a binary choice response of *yes* or *no*.

2.6. Data analyses

We preregistered our key analyses regarding accuracy and projection of attachment style and the association between accurate perception of attachment style and dating outcomes. Data and syntax for all analyses are available on the Open Science Framework (<https://osf.io/ckmsr/>). We analyzed the data using R Version 1.3.1093 (R Core Team, 2020) using the glmmTMB package (Brooks et al., 2017; see OSM p. 6 for additional information about the analytic approach). We used multilevel modeling (MLM) guided by the Social Relations Model (SRM) with an asymmetric block design (Kenny, 1994), following procedures for analyzing data with mixed-gender dyads (Ackerman, Kashy, & Corretti, 2015) to address the issue of nonindependence (i.e., people nested in groups). We were primarily interested in the fixed effects between our

² Although perceptions of a date's attachment anxiety and avoidance were highly correlated ($r = 0.76$), we looked at these constructs separately rather than as a composite of perceptions of a date's general attachment insecurity. Past research typically assesses attachment insecurity as two dimensions (avoidance and anxiety, e.g., Chopik, Edelstein, & Grimm, 2019; Fraley, 2002), which differ in whether the individual has negative views towards themselves (anxiety) or others (avoidance), which likely manifest in different motivations and interaction types during speed-dating (e.g., McClure et al., 2010). Past work suggests the outcomes for people high in attachment anxiety and avoidance can differ, and by combining these into a general insecurity construct we would not be able to tell whether high attachment anxiety or avoidance is driving the effects (Chopik et al., 2014; Fraley, Niedenthal, Marks, Brumbaugh, & Vicary, 2006; Li & Chan, 2012; Shaver, Schachner, & Mikulincer, 2005). In addition, we tested confirmatory factor models and found the best fitting model was a model in which the attachment anxiety and avoidance items loaded onto separate factors (OSM pp. 3–5). We also found the single item post-date measures of attachment anxiety and avoidance loaded most strongly onto their respective attachment anxiety and avoidance factors.

key variables of interest, however the SRM also allowed us to account for multiple sources of variance (see OSM pp. 6–10 for details as well as additional effects from the SRM not directly relevant to our key questions). Since this is an asymmetric block design (i.e., participants only rate members of the other sex) and past work suggests gender can interact with attachment style when predicting relationship satisfaction (Collins & Read, 1990), parameters are estimated separately for men and women using effects coding. If gender did not moderate the effect, we interpreted the effect for the sample as a whole (Ackerman et al., 2015; Wu, Chen, & Greenberger, 2019). Given that people can be high or low on both attachment anxiety and avoidance, we were interested in the unique effects of attachment anxiety or avoidance on our outcomes. Therefore, modeling both predictors in the same model allowed us to determine the unique effect of each attachment dimension above and beyond the other. Furthermore, in the attachment literature more broadly, when assessing attachment anxiety and avoidance as continuous scales, it is considered best practice to enter these simultaneously (e.g., Brumbaugh & Fraley, 2010; MacDonald & Park, 2022), so in the models in which we test accuracy and projection, we enter one's own report and a date's self-report of attachment anxiety and avoidance as predictors of perceptions of a date's attachment anxiety. We then test a similar model predicting perceptions of a date's attachment avoidance. In models predicting binary outcomes (i.e., contact interest), we followed a similar procedure using a binomial logistic regression function. For our models with perception or accuracy of attachment insecurity predicting dating outcomes, we enter perceptions/accuracy of both attachment anxiety and avoidance in our models to allow us to parse out the shared variance and better capture the unique effects of attachment anxiety or avoidance on our outcomes.

We were also interested in whether accuracy of a date's anxious or avoidant attachment predicted dating outcomes. Because we have a full measure of participants' self-reported attachment style but only single item measures of the perceptions of a date's attachment style, we created a correlational accuracy score to test associations between accuracy and dating outcomes (Alaei et al., 2020; Krueger & Zeiger, 1993; Stern & West, 2018). That is, we correlated a participant's perceptions of their date's attachment and their date's self-reported attachment to produce an accuracy score for each dater, in which larger positive scores indicate greater concordance between the perceptions of dates' attachment anxiety and avoidance and dates' self-reported attachment (i.e., perceiving a date as anxiously attached and the date self-reports as anxiously attached), while a greater negative score would represent concordance in the opposite direction (i.e., perceiving a date as anxiously attached but the date self-reports as less anxiously attached), and a score closer to zero would represent no concordance (i.e., perceiving a date as anxiously attached is not linked to the date's self-report of their anxious attachment). This provides us with a trait-like accuracy score for each participant across their dates that we use in subsequent analyses to test associations with dating outcomes. We then transformed the correlation score to a Fisher's Z score and used the SRM

to test whether attachment accuracy is associated with dating outcomes (i.e., dating interest, contact interest; Stern & West, 2018). In an exploratory manner, we also pre-registered moderations by sociosexual orientation—a person’s comfort with and interest in casual, shorter-term relationships compared to longer term relationships—and report these results in the OSM (pp. 11–12). Furthermore, we also preregistered exploratory analyses of whether the accurate perception of a date’s attachment anxiety or avoidance was associated with perceptions of a date’s mate value and report the measures and results in the OSM (pp. 12–13). Lastly, in an exploratory manner we also tested whether the association between the accurate perception of a date’s attachment style and dating interest was moderated by a date’s self-reported attachment style and have included the results in the OSM (p. 13).

3. Results

3.1. Do people accurately detect potential dates attachment anxiety or avoidance?

First, we tested whether people accurately detected a date’s attachment anxiety or avoidance, or projected their own attachment style, by testing whether a perceiver’s perceptions of a date’s attachment style predicted a date’s self-reported attachment while controlling for their own self-reported attachment style. We found that there was an overall effect, such that people were accurate in perceptions of attachment anxiety, $b = 0.02, SE = 0.01, z = 4.10, p < .001$, and this did not differ between men and women, $b = -0.01, SE = 0.01, z = -1.30, p = .193$. For projection, there was a gendered effect, $b = 0.02, SE = 0.01, z = 2.25, p = .024$, such that men tended to project their own attachment anxiety, $b = 0.05$, and women did not, $b = 0.001$. For attachment avoidance, people did not accurately perceive their date’s attachment avoidance, $b = 0.002, SE = 0.01, z = 0.20, p = .844$, or project their own attachment avoidance, $b = 0.02, SE = 0.02, z = 1.14, p = .255$. However, there was a crossed effect, such that dates who self-reported high in attachment anxiety were perceived as high in attachment avoidance (i.e., as more uncomfortable with closeness), $b = 0.02, SE = 0.02, z = 3.02, p = .003$.

3.2. How are perceptions of attachment anxiety and avoidance associated with dating and contact interest?

Next, we tested whether perceptions of a date’s attachment anxiety and avoidance were associated with dating interest or contact interest in separate models, while controlling for the perceiver and target’s self-reported attachment style. We found that perceiving a date as higher in attachment anxiety or attachment avoidance was associated with less dating and contact interest (See Table 3). That is, people had less dating

Table 3
Associations Between Perceptions, Own Self-reports, and Date’s Self-reports of Anxious and Avoidant Attachment and Dating and Contact Interest Across Entire Sample.

	<i>b</i>	<i>SE</i>	<i>t</i> or <i>z</i>	<i>p</i>
DV: Dating Interest				
Perceptions of Anxious Attachment	-0.15	0.03	-4.45	<0.001
Perceptions of Avoidant Attachment	-0.12	0.03	-3.93	<0.001
Self-reported Anxious Attachment	0.03	0.01	2.01	0.045
Self-reported Avoidant Attachment	-0.001	0.02	-0.03	0.979
Date’s Self-reported Anxious Attachment	-0.01	0.01	-1.28	0.201
Date’s Self-reported Avoidant Attachment	0.001	0.02	0.09	0.926
DV: Contact Interest				
Perceptions of Anxious Attachment	-0.27	0.09	-3.13	0.002
Perceptions of Avoidant Attachment	-0.18	0.08	-2.27	0.023
Self-reported Anxious Attachment	0.002	0.03	0.08	0.940
Self-reported Avoidant Attachment	-0.001	0.05	0.13	0.901
Date’s Self-reported Anxious Attachment	-0.02	0.02	-1.12	0.262
Date’s Self-reported Avoidant Attachment	-0.01	0.03	-0.16	0.871

Note: Bolded coefficients indicate a statistically significant effect.

interest in their date and had less interest in seeing their date again when they perceived their date to be more anxiously or avoidantly attached. We also found that gender moderated the link between dating interest and a date’s self-reported attachment anxiety, $b = -0.02, SE = 0.01, z = -2.11, p = .035$, such that men had less dating interest in date’s who self-reported as anxiously attached, $b = -0.03$, compared to women, $b = -0.01$.

3.3. How are accurate perceptions of attachment anxiety and avoidance associated with dating and contact interest?

Using the z-transformed correlational accuracy scores we tested whether accuracy of date’s attachment anxiety or avoidance was associated with dating and contact interest. We tested whether accuracy of these perceptions was linked to dating interest by using the SRM to test whether a perceiver’s dating interest was linked to their accuracy score. There were no significant associations between accurately perceiving a date’s attachment anxiety or attachment avoidance and dating or contact interest (see Table 4). In one instance, associations between accuracy and dating interest depended on a date’s self-reported attachment. That is, a date’s self-reported attachment anxiety significantly moderated the association between the accurate perception of a date’s attachment anxiety and dating interest, $b = -0.04, SE = 0.01, z = -3.05, p = .002$. When a date reported higher attachment anxiety, perceivers who were more accurate reported less dating interest (although this did not reach traditional levels of significance), $b = -0.50, SE = 0.30, z = -1.64, p = .100$, but when a date reported lower attachment anxiety, accuracy was positively associated with dating interest, however this effect was not significant, $b = 0.09, SE = 0.30, z = 0.31, p = .758$. The association between the accurate perception of a date’s attachment anxiety or avoidance and contact interest was not moderated by a date’s self-reported attachment orientation (see OSM p. 13).³

4. Discussion

Attachment avoidance and anxiety are associated with romantic relationship quality and maintenance (Alexandrov, Cowan, & Cowan, 2005; Givertz, Woszidlo, Segrin, & Knutson, 2013; Kirkpatrick & Davis, 1994), but it was previously unclear if people accurately perceived potential partners’ attachment styles during initial encounters. In the current speed-dating study, people did tend to accurately perceive a date’s attachment anxiety, but not their avoidance. Men also projected their own attachment anxiety more so than women. Perceiving a date as higher in attachment anxiety or avoidance was associated with less dating interest and less desire for future contact, however, only in one case did the accuracy of these perceptions matter. When people were more accurate in their perceptions of a date’s attachment anxiety, they had less dating interest, but this differed by a date’s self-reported

Table 4
Associations Between Accurate Perceptions of Anxious and Avoidant Attachment and Dating and Contact Interest Across Entire Sample.

	<i>b</i>	<i>SE</i>	<i>t</i> or <i>z</i>	<i>p</i>
DV: Dating Interest				
Accurate Perception of Anxious Attachment	-0.09	0.29	-0.31	0.760
Accurate Perception of Avoidant Attachment	0.05	0.26	0.21	0.838
DV: Contact Interest				
Accurate Perception of Anxious Attachment	0.03	0.54	0.06	0.952
Accurate Perception of Avoidant Attachment	0.39	0.47	0.82	0.411

³ Models predicting contact interest produced a nonpositive definite Hessian matrices warning so we reduced the number of parameters estimated in the model (i.e., number of fixed effects; see <https://osf.io/ckmsr/>).

attachment anxiety. Accuracy trended toward lower dating interest when date's self-reported higher in attachment anxiety, but not for date's who self-reported lower in attachment anxiety, suggesting that less dating interest might only be associated with accuracy when perceiving a date high in attachment anxiety. Perceptions of attachment were also dependent on the gender of the perceiver, that is, men were less interested in date's who self-reported being anxiously attached compared to women.

4.1. Perceiving attachment anxiety and avoidance

Our findings are consistent with past work that suggests attachment anxiety (in men) can be accurately detected from photos and brief interactions (Alaei et al., 2020; Banai et al., 1998), and we found this accurate detection for both men and women targets. However, unlike previous work (Banai et al., 1998; Luo & Snider, 2009), we found no evidence that people's perceptions of a date's attachment avoidance corresponded with the date's self-reported avoidance. It is possible that people higher in attachment avoidance may be better able to present themselves positively and confidently through self-presentation tactics (Brennan & Morris, 1997; Mikulincer, Dolev, & Shaver, 2004) and strategically use humor and physical contact (Brumbaugh & Fraley, 2010) compared to people high in attachment anxiety. People higher in attachment avoidance tend to have a positive view of the self, and a negative view of others (Bartholomew, 1990), whereas people higher in attachment anxiety tend to have a positive view of others and a negative view of the self. Given this, when making brief first impressions (Collins, 1996), it might be more difficult to hide one's negative perspective of the self (attachment anxiety), compared to one's perspective toward others (attachment avoidance). That is, in a dating context, people could be biased toward leaving a good first impression, making them more likely to hide their negative views of others compared to their negative views of the self. We also found dates higher in attachment anxiety were perceived as higher in attachment avoidance – that is, people who self-reported as higher in attachment anxiety were perceived by their dates as more avoidant. It is possible that people high in attachment anxiety may use strategies that present as avoidantly attached (e.g., acting disinterested) when trying to mask their cues of attachment anxiety. This effect was not predicted and should be replicated to determine if it is a robust effect. In addition, we found a relatively high correlation ($r = 0.78$) between perceptions of a date's attachment anxiety and avoidance, suggesting people may be picking up on general attachment insecurity, but not uniquely a discomfort with closeness.

Projection—when perceivers assume targets are similar to themselves in their judgments—of one's own attachment style is common (Alaei et al., 2020; Robbins & Krueger, 2005), but, with the exception of men projecting their attachment anxiety onto their dates, in the current study, we did not find that people tended to project their own attachment on their perceptions of dates' attachment. To our knowledge, this is the first study to investigate projection of attachment styles in a speed-dating context and it will be important to test if the, mostly null, effects for projection replicate in future studies. Although, perceiving similarity to a partner—or even over-perceiving similarity—is associated with liking and relationship benefits (Luo & Snider, 2009), we did not find evidence of this. The dating context, particularly speed dating in which people might be motivated to learn a lot about a person in a short time, is unique and people may use different strategies when courting a potential partner, therefore more research is needed to better understand what leads to perceived similarity. Thus, the fact that our participants did not assume similarity in attachment could detract from their ultimate relationship success.

Accurate perceptions of attachment anxiety or attachment avoidance were not associated with dating or contact interest, except when interacting with a date higher in attachment anxiety: People who more accurately detect their date's attachment anxiety liked their date less compared to when they interacted with a date lower in attachment

anxiety. Past work suggests that the accurate perception of personality traits and attachment in more established relationships is positively linked to relationship quality for both partners (Lackenbauer et al., 2010; Letzring & Nofle, 2010; Luo & Snider, 2009; Swann et al., 1994); however, accuracy may play a different role in the early development of relationships. Although in early non-romantic contexts, accuracy has also been linked to greater liking (Carlson, 2016; Human et al., 2013, 2020; Swann, Stein-Seroussi, & Giesler, 1992), our current findings suggest that the accurate perception of a date's higher attachment anxiety, but not avoidance, was linked to less dating interest. This is consistent with past work that has found that the accurate perceptions of less romantically appealing personality traits hindered romantic interest (Kerr et al., 2020), that anxiously attached people may be biased toward saying “yes” to potential partners (McClure et al., 2010), and that people may not like dates who generally like everyone, but, instead, have a preference for unique liking (Finkel & Eastwick, 2008). Although there is evidence that accurate perceptions may be beneficial in early friendships or more established romantic relationships, the accurate perception of a negative quality (i.e., attachment anxiety) in a potential romantic partner may be associated with less dating interest.

Given that past work suggests high levels of attachment anxiety and avoidance are linked to lower relationship quality (Candel & Turliuc, 2019), people may pay attention to cues of their date's attachment style, their attachment anxiety specifically, in determining their interest in the date. The findings also suggest that the traits being perceived (e.g., positive vs. negative) and the context (e.g., established relationship vs. initiation of relationship) may play a role in determining whether perceptual accuracy is linked to positive outcomes. Perceptions of a date's attachment anxiety and avoidance, regardless of accuracy, were the most consistent predictors of dating and contact interest, which suggests that regardless of whether the perceiver was accurate or not, perceptions of dates' attachment insecurity had the strongest and most consistent association with dating interest. Future work can also consider the trajectory of accuracy in perceived partner's traits in romantic relationships. That is, are people able to accurately detect their partner's attachment anxiety or avoidance over time and is this linked to relationship quality and stability.

4.2. Limitations and future directions

Despite the strengths of this work, an ecologically valid study of actual initial encounters with potential partners (Finkel & Eastwick, 2008), there are limitations. Given our sample was people attending an anime convention (some of whom were in costume), and past work has shown that anime fans can differ from the general population (i.e., are more likely to be on the autism spectrum, less likely to report a mood or anxiety disorder, less likely to report attention deficit/hyperactivity disorder, less likely to be perceived as an attractive romantic partner, greater well-being, lower loneliness; Ray, Plante, Reysen, Roberts, & Gerbasi, 2017; Reysen et al., 2018), additional research is needed to determine if the results are generalizable beyond this population. However, there are also positives of this unique recruitment strategy. These individuals may have opted to participate in the speed-dating on a whim, and thus may be more representative across the attachment spectrum versus pre-planned isolated speed-dating events (where avoidance rates are lower than typical populations; McClure et al., 2010). Our sample may have more successful dates due to their shared interests beyond wanting to find a mate (i.e., both being anime fans), and have lower stakes (i.e., potentially less anxiety provoking), as people were travelling to the convention rather than to a speed-dating event to find a partner.

We used one-item measures of perceptions of a date's attachment anxiety and avoidance, which could pose reliability and validity issues (Credé, Harms, Niehorster, & Gaye-Valentine, 2012; Krueger, Emons, & Sijtsma, 2013; Smith, McCarthy, & Anderson, 2000), and having only one-item indicators of our key constructs prevents us from using more

complex measures of accuracy, such as the Social Accuracy Model (Biesanz, 2010). In the current research, we tested accuracy effects using a transformed correlation between perceptions and dates' self-reports. Although this has been used in previous research, with a similar sample size (Shieh, 2021; Silver & Dunlap, 1987; Stern & West, 2018), the correlations are based on an average of 13 values and may not be reliable. In speed dating studies, however, it would be challenging to include more reports given that going on a large number of speed dates could tax participants. Future work should aim to replicate our findings with a multi-item measure of perceptions of a partner's attachment. Ideally future work could assess self-reported attachment and perceptions of a date's attachment with the same items. Having comparable items would also allow for the use of more complex methods, such as response surface analysis (Barranti, Carlson, & Côté, 2017), to test how dating outcomes differ depending on whether dates match or mismatch in their level of attachment anxiety and avoidance. Furthermore, given the low reliability of the attachment avoidance subscale, future work might consider a different short measure (Lafontaine et al., 2015) or a measure better suited to people with less dating experience (e.g., Feeney, Noller, & Hanrahan, 1994; Mikulincer & Shaver, 2007; Spielmann et al., 2020). Lastly, because participants were asked to reflect on their relationship patterns in order to self-report on their attachment anxiety and avoidance prior to going on the dates, this could have influenced their subsequent dating interactions and ratings in unknown ways.

Although the current work suggests people can accurately perceive a date's attachment anxiety and use this information when making dating decisions, we are unable to determine what cues people are picking up on when evaluating their dates. Past work has linked nonverbal behavior to attachment anxiety and avoidance (Tucker & Anders, 1998), thus future research could investigate whether the verbal and nonverbal behaviors displayed by targets during initial interactions (e.g., being very eager to please), are used by perceivers to form impressions of a potential partners' attachment styles. By investigating the verbal and nonverbal cues of attachment styles, future work can provide a better understanding of whether attachment anxiety or avoidance may be more easily perceived, and whether people high in attachment anxiety or avoidance use certain strategies to make positive impressions (Brumbaugh & Fraley, 2010). Given that perceptions of a date's attachment insecurities can influence dating outcomes, future work can investigate ways to alleviate attachment insecurities in therapy to improve people's interpersonal interactions. Finally, our study measured dating and contact interest after the speed-dating session, however this may not be informative of actual dating initiation and the long-term impacts of perceptions of attachment insecurities. Future work can follow participants over time after an initial encounter to understand how perceptions of attachment insecurities are associated with relationship initiation and development.

5. Conclusion

Past work on established romantic relationships has consistently demonstrated that people with insecure attachment styles tend to have poorer quality relationships (Candel & Turliuc, 2019), compared to securely attached people (Feeney, 2008; Hazan & Shaver, 1987; Sandberg, Bradford, & Brown, 2017). However, past work has not explored whether people rely on cues of a potential partner's attachment style to inform their dating decisions. Thus, investigating whether people use this information, and if it is accurate, to decide who to initiate and maintain a relationship with can have consequences for future relationship satisfaction and maintenance. Past research suggests people can accurately detect others' attachment style from photos and brief non-romantic interactions (Alaei et al., 2020; Banai et al., 1998), however, the current study extends past work to perceptions of real potential partners in a dating context. By providing evidence that people can accurately perceive a potential partner's attachment style from first encounters and that these perceptions are associated with dating

interest, we hope this work will promote more research on how accuracy and perceptions of individual differences in a romantic context inform dating decisions and relationship quality.

CRedit authorship contribution statement

Eric Tu: Writing – original draft, Conceptualization, Formal analysis. **Jessica A. Maxwell:** Data curation, Investigation, Writing – review & editing. **James J. Kim:** Formal analysis, Investigation, Writing – review & editing. **Diana Peragine:** Investigation, Writing – review & editing. **Emily A. Impett:** Investigation, Writing – review & editing. **Amy Muise:** Supervision, Conceptualization, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.jrp.2022.104269>.

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