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Is Touch in Romantic Relationships Universally Beneficial for Psychological Well-Being? The Role of Attachment Avoidance

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Abstract

Affectionate touch is crucial for well-being. However, attachment avoidance is associated with negative attitudes toward touch. We tested two preregistered hypotheses about how attachment avoidance influences the association between touch in romantic couples and psychological well-being. We examined whether greater attachment avoidance is associated with a reduced link between touch and well-being, and/or whether reduced touch mediates the relationship between attachment avoidance and lower well-being. Across three studies, including two dyadic ones, we measured retrospective self-reports (Studies 1 and 2), laboratory observations (Study 2), and daily experiences (Study 3) of touch. Touch and well-being were positively associated, and attachment avoidance was associated with lower well-being and less frequent touch. Touch was associated with greater well-being regardless of level of attachment avoidance, and less frequent touch mediated the negative association between attachment avoidance and well-being in most analyses. This underscores the importance of touch, even for those valuing distance and autonomy.

Keywords

touch, attachment, well-being, attachment avoidance

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Affectionate touch (i.e., touch intended to demonstrate affection; Floyd, 2006) is a powerful modality of communicating intimacy in close relationships (Debrot et al., 2013; Gulledge et al., 2003). In romantic relationships particularly, touch has unique properties, as certain body parts are only allowed to be touched by the partner (Suvilehto et al., 2015), and the frequency of touch is high. For example, 85% of people reported having touched their partner in the previous 4 hr of time together (Debrot et al., 2014). A recent review compiles evidence that affectionate touch in close relationships (particularly in couples) is not only associated with relational and physical well-being but also plays a particularly important role in promoting personal well-being (Jakubiak & Feeney, 2017). For example, daily touch with one's partner is associated with short-term boosts in mood and long-term improvements in overall psychological well-being (Debrot et al., 2013). Affectionate touch enhances well-being, in part, because it communicates intimacy, support, and availability (e.g., Coan et al., 2017; Debrot et al., 2012). Previous research indicates that both giving and receiving touch is beneficial (e.g., Debrot et al., 2013; Field et al., 1998); hence, *sharing* physical touch between partners is what matters (e.g., Muise et al., 2014).

What yet unknown, however, is whether touch yields similar well-being benefits for all people, independent of individual differences. Because attachment avoidance (i.e., feeling discomfort with closeness and value independence; Mikulincer & Shaver, 2008) is associated with more negative attitudes toward touch (Brennan, Wu, & Loev, 1998; Chopik et al., 2014), it might be associated with different touch behaviors and reactions to touch. Moreover, given that more avoidantly attached people report lower personal well-being (e.g., Kafetsios & Sideridis, 2006), touch could contribute to explain why. This article tests two hypotheses about affectionate touch, psychological well-being, and attachment avoidance:

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Hypothesis 1 (H1): First, touch may be associated with less well-being at higher levels of attachment avoidance.
Hypothesis 2 (H2): Second, attachment avoidance may be associated with lower well-being because of engaging in less touch.

The Role of Attachment in Touch

Despite robust evidence for the importance of touch for well-being, little is known about how interpersonal differences may shape this association (Gallace & Spence, 2010; Jakubiak & Feeney, 2017). The attachment system drives people to stay close to relevant others, and the resulting proximity provides security and supports well-being maintenance throughout the lifespan (Bowlby, 1969; Shaver & Mikulincer, 2007). According to attachment theory, experiences with primary caregiver(s) throughout the lifespan (especially romantic partners in adulthood) generate distinct sets of beliefs about oneself and others (Fraley et al., 2013; Hazan & Shaver, 1987) that might have important consequences for attitudes toward touch. Secure individuals believe that others are generally responsive and dependable; they are comfortable with and enjoy psychological and physical closeness and intimacy with others. They seek, give, and appreciate touch with their romantic partner (Brennan, Clark, & Shaver, 1998; Chopik et al., 2014). Anxiously attached individuals tend to see themselves as unworthy of care and affection and consider others as inconsistent and unreliable. Consequently, they experience more anxiety regarding closeness (Shaver & Mikulincer, 2007) and report wanting more touch than they receive (Brennan, Clark, & Shaver, 1998). However, they report similar touch behaviors as more securely attached people (e.g., Chopik et al., 2014), likely reflecting their ambivalence regarding closeness (MacDonald et al., 2013). Moreover, nonverbal clues of affection do not seem to affect people higher in attachment anxiety (as it does for people higher in attachment avoidance; Schrage et al., 2020). Given this, we do not have particular expectations regarding the interplay of attachment anxiety with touch.

Avoidantly attached individuals see others as unreliable, unavailable, and uncaring. Hence, they tend to deny their attachment needs, downplay the importance of intimacy, and value their independence and autonomy (Mikulincer & Shaver, 2008). Corresponding to this dislike of psychological intimacy, they report similar attitudes toward physical closeness; they show greater touch aversion and avoidance (Brennan, Clark, & Shaver, 1998; Ozolins & Sandberg, 2009) and more negative attitudes toward cuddling (Chopik et al., 2014). Consequently, they report providing less touch when their partner is in need (Kunce & Shaver, 1994), and they touch their romantic partner less than more securely attached people (Tucker & Anders, 1998). In addition, women high in attachment avoidance avoided their partner's touch when their partner tried to physically comfort them in an anxiety-provoking situation (Simpson et al., 1992). Given these particular characteristics of the more avoidantly attached, our hypotheses focus on how attachment avoidance shapes the association between affectionate touch and psychological well-being.

Attachment Avoidance and the Association Between Touch and Psychological Well-Being

Attachment avoidance is associated with greater depression, anxiety, somatic symptoms (Kafetsios & Sideridis, 2006), and less positive daily affect (Simpson et al., 2007). These negative correlates extend to their partners, who also report more depression (Whiffen, 2005). Touch could contribute to explain these links. One possibility is that attachment avoidance might moderate the association between touch and well-being. In particular, while individuals low in attachment avoidance could show a positive association between touch and well-being, individuals high in attachment avoidance could show a less positive or possibly a negative association (a *moderation* hypothesis). Theoretical support for this prediction comes from idea that because more avoidantly attached tend to see others as not dependable and trustworthy, they strive to maintain self-reliance and independence (Collins & Feeney, 2004). Accordingly, they report wanting less closeness in their relationships than they have (Mashek & Sherman, 2004) and are more touch avoidant (Ozolins & Sandberg, 2009). Importantly, individuals higher in attachment avoidance showed no increase in state attachment security in an experimental condition where their romantic partner was instructed to touch them, in contrast to more secure and anxiously attached individuals (Jakubiak & Feeney, 2016).

Accumulating studies show, however, that despite holding negative attitudes toward closeness, individuals higher in attachment avoidance can benefit from their partners' positive actions. Although they typically reject social support, they benefit from *high* levels of support from their partner (Girme et al., 2015). Moreover, positive relationship experiences with a romantic partner—such as thinking positively about one's partner or sharing daily positive activities with them—predict lower negative affect in avoidantly attached individuals (Stanton et al., 2017). Perceiving a partner as grateful buffers avoidantly attached individuals against typically low levels of relationship quality (Park, Impett, et al., 2019). Because touch may be another form of positivity that could improve avoidantly attached individuals' well-being, a second hypothesis is that attachment avoidance results in less frequent physical affection, and this touch deprivation explains why attachment avoidance is associated with lower psychological well-being (a *mediation* hypothesis).

The Present Research

Across three studies of individuals (Study 1) and couples (Studies 2 and 3), we investigate how attachment avoidance

affects the association between touch in romantic relationships and psychological well-being. We take a multi-method approach, relying on self-reported and objectively measured affectionate touch (measured at the couple level) and on global psychological well-being and momentary positive affect (a marker of psychological well-being; Cohn et al., 2009). Study 1 was a large-scale cross-sectional study of individuals in romantic relationships based on self-reports. Study 2 was a dyadic study, including cross-sectional self-reports and observational measures in a lab setting. Study 3 was an ecologically valid dyadic experience sampling study of touch among couples in daily life.

We preregistered our hypotheses and posted the stimulus material and code online.[1] First, we expected to replicate previous research regarding the main effects: (H1) affectionate touch is associated with higher psychological well-being, (H2) attachment avoidance is associated with lower psychological well-being, and (H3) attachment avoidance is associated with reduced touch. For our novel moderation and mediation hypotheses, we tested whether (H4) touch shows a weaker association with psychological well-being as a function of higher attachment avoidance and/or (H5) attachment avoidance is associated with reduced psychological well-being because of engaging in less touch.

Although our hypotheses focused on processes occurring within individuals (i.e., actor effects), in our dyadic samples, we explored partner effects of attachment on well-being (Kenny et al., 2006). Across all analyses, we only found one significant gender difference;[2] thus, we set all parameters equal across gender and included same-gender couples. Given the consistent moderate association between attachment avoidance and attachment anxiety (Del Giudice, 2011), we controlled for attachment anxiety in all models.[3] We conducted additional analyses to control for and test for moderations by relationship length and age (see Supplemental Material F). Moreover, to verify if the results would hold beyond two aspects related to touch—relationship quality (Gulledge et al., 2003) and sexual activity (van Anders et al., 2013)—we controlled for these variables in all studies (see Supplemental Material G).

Study 1

A large sample of individuals currently in romantic relationships reported on their habitual touch level in their relationship, attachment style, and general well-being.

Method

Procedure and participants. We recruited 2,101 participants from the United States through Amazon's Mechanical Turk in 2016. Participants had to be at least 21 years old and currently in a romantic relationship for at least 6 months. We excluded 497 participants who did not pass at least one of three attention checks, leaving a final sample of 1,604 participants (801 men, 798 women, three transgender persons, and two who preferred not to identify). This study has 90% power to detect a two-way interaction (Simonsohn, 2015), and 95% power to detect mediation (Kenny, 2017), based on the expectation of a medium size effect ($\beta = .20$) at an alpha of .05.

Participants were aged between 21 and 73 years (M = 35.4 years, SD = 10.5 years). Their ethnic backgrounds were as follows: 78.9% White and/or European, 6.8% African American, 6.0% Asian, 7.9% Latino, 7.5% Native American, 1.3% Middle-Eastern, and 2.4% "Other." Most participants (74.9%) were married, engaged, or cohabitating and identified as heterosexual (88.4%). Relationship length ranged from 6 months to 46 years (M = 7.9 years, SD = 8.2 years). Each participant was paid US$1.30 for completing the survey.

Measures

Attachment style. We used an abbreviated 20-item version of the Experiences in Close Relationships Scale (Brennan, Clark, & Shaver, 1998) due to an error in data collection where some items were not presented to participants. Attachment anxiety (e.g., "I worry about being abandoned," $\alpha = .92$) and attachment avoidance (e.g., "I am very uncomfortable being close to romantic partners," $\alpha = .92$) were each measured with 10 items, rated on a 7-point scale (1 = *disagree strongly* to 7 = *agree strongly*). See Table 1 for descriptive information of all measures.

Well-being. Participants completed three scales. First, the five-item Satisfaction with Life Scale (SWLS; Diener et al., 1985) measures individuals' evaluations of their lives (e.g., "In most ways, my life is close to my ideal") ranging from 1 (*strongly disagree*) to 7 (*strongly agree;* $\alpha = .93$). Second, the shortened version (van Dierendonck, 2004) of Ryff's (1989) Psychological Well-Being Scale includes 39 items measuring eudemonic well-being (e.g., "In general, I feel that I continue to learn more about myself as time goes by") ranging from 1 (*strongly disagree*) to 7 (*strongly agree;* $\alpha = .95$). Third, the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) measures emotional well-being, assessing how much participants experienced positive (10 items; for example, "inspired"; $\alpha = .91$) and negative affect (10 items; for example, "irritable"; $\alpha = .93$) during the past few weeks on a scale ranging from 1 (*not at all*) to 7 (*extremely*). Having no hypotheses regarding how results would vary across these well-being measures and as we found high reliability across them, alpha = .80, we computed a mean score (with the negative affect subscale reverse-scored).

Touch behaviors. We assessed the frequency of 16 touch behaviors with the romantic partner (e.g., "caressing," "massaging," "back rubbing," "cuddling," and "kissing"), both given by the participants and received by their partner,[4] on a scale ranging from 1 (*never*) to 9 (*4 or more times per day*).

Table 1. Study 1 Descriptives and Zero-Order Correlations.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Touch behaviors	5.17	1.57	—	−.25***	−.07*	.24***	.21***	.20***	.25***	−.12***
2. Attachment avoidance	2.39	1.15		—	.41***	−.49***	−.33***	.49***	−.27***	.36***
3. Attachment anxiety	3.07	1.42			—	−.50***	−.37***	−.55***	−.24***	.48***
4. Global well-being	4.99	0.97				—	.85***	.85***	.72***	−.78***
5. Satisfaction with life	4.64	1.49					—	.66***	.48***	−.50***
6. Psychological well-being	4.99	0.90						—	.56***	−.60***
7. Positive affect	5.01	1.10							—	−.35***
8. Negative affect	2.68	1.37								

Note. SD = standard deviation.
*$p < .05$. **$p < .01$. ***$p < .001$.

On average, people reported engaging in these behaviors 2 to 3 times per week ($\alpha = .97$).

Results

Data analytic strategy. We conducted regression analyses using SPSS 23 (IBM Corporation, 2017). The models with attachment avoidance as a predictor included attachment anxiety as a control variable (as main effect and moderator). To test the moderation hypothesis, we mean centered all predictors. To test the mediation hypothesis, we constructed a 95% confidence interval for the indirect effect using bootstrapping techniques, employing the INDIRECT macro v.2.16.3 (Hayes, 2013).

Testing the hypotheses. We first tested the main effects. Touch frequency was positively associated with well-being, $\beta = .24$, $t(1,377) = 9.00$, $p < .001$, 95% CI = [.12, .18]—see Table 4.[5] In addition, attachment avoidance, $\beta = -.28$, $t(1,599) = -12.35$, $p < .001$, 95% CI = [–.27, −.20], was associated with lower well-being. Finally, attachment avoidance was associated with less touch, $\beta = -.26$, $t(1,374) = -9.23$, $p < .001$, 95% CI = [−.44, −.29].

Next, we tested whether more avoidantly attached individuals had a weaker association between touch and well-being. We found no support for this hypothesis, $b = .01$, $SE = .01$, $p = .51$, 95% CI = [–.02, .03]. Instead, the results supported the mediation hypothesis. Attachment avoidance predicted less frequent touch, $b = -.36$, $SE = .04$, $p < .001$, 95% CI = [−.44, −.29], which in turn was associated with well-being, $b = .09$, $SE = .01$, $p < .001$, 95% CI = [.07, .12]. The negative indirect effect of attachment avoidance on well-being as mediated by touch was significant, $\beta = -.04$, $SE = .008$, $p < .001$, 95% Bootstrap CI = [−.06, −.03]. The direct association between attachment avoidance and well-being remained significant, $b = -.20$, $SE = .02$, $p < .001$, 95% CI = [−.24, −.16], suggesting that other mediators explain this association.

In all models, the results held when controlling for age and relationship duration. Age and relationship length moderated the association between attachment and well-being, and between attachment and touch,[6] but the association remained significant for participants of all ages and relationship lengths. Moreover, including these parameters neither changed the pattern nor the significance level of the hypotheses (see Supplemental Material F for details). When controlling for sexual frequency, the pattern of results remained unchanged. However, when controlling for relationship quality, H1, H3, and H5 were no longer supported.

Brief Discussion

This study corroborated all but one prediction. Affectionate touch was associated with higher well-being, and attachment avoidance with lower well-being and with less frequent touch. However, attachment avoidance did not moderate the association between touch and well-being, suggesting that touch is significantly associated with well-being regardless of attachment avoidance levels. Less frequent touch partially mediated the link between attachment avoidance and lower well-being, suggesting that one reason why more avoidantly attached individuals experience poorer well-being is because they engage in less frequent touch. However, the association between touch and well-being and between attachment avoidance and touch—and accordingly our mediation hypothesis—dropped to nonsignificance when controlling for relationship quality, indicating that touch might be a behavioral proxy for relationship quality. Our next studies extend these results by moving beyond the use of cross-sectional designs and self-reports of touch.

Study 2

We recruited both partners to create a measure of shared affectionate touch in the couple and to test for partner effects of attachment on well-being (Kenny et al., 2006). At baseline, we assessed both partners' self-reports. In the lab, we objectively measured touch while romantic partners engaged in conversations.

Table 2. Study 2 Descriptives and Zero-Order Correlations.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Touch	5.47	0.64	—	−.23**	.07	.21*	.13	.27**	.03	.20*	.03	.03	.13
2. Attachment avoidance	2.81	0.60		—	.13	−.29***	−.20*	−.35***	−.19*	−.09	−.19*	−.12	−.19*
3. Attachment anxiety	2.04	0.55			—	−.22**	−.26**	−.09	−.22*	−.19*	−.15	.11	.04
4. Global well-being	3.61	0.51				—	.93***	.78***	.40***	.30**	.18*	.06	.14
5. Satisfaction with life	3.56	0.73					—	.50***	.29**	.22*	.16†	.03	.10
6. Dispositional positive emotion	3.67	0.43						—	.44***	.32***	.15†	.09	.15†
7. Positive affect pre-conversation	4.92	1.18							—	.68***	.49***	.03	.09
8. Positive affect post-love conversation	5.05	1.36								—	.59***	.13	.14
9. Positive affect post-suffering conversation	3.79	1.34									—	.08	.08
10. Time touching in love conversation	00:37	01:10										—	.54***
11. Time touching in suffering conversation	00:47	01:18											—

Note. SD = standard deviation.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Method

Participants. We recruited participants in California via paper flyers and Craigslist.org postings. In total, 81 couples agreed to participate in this larger multiphase project on romantic relationships (e.g., Impett et al., 2010). We removed one couple because one partner did not complete the study. The final sample included 80 couples. However, due to technical problems, the videos of 14 couples were unusable, yielding a final sample of 66 couples for the lab conversations. We did not determine the sample size a priori because the data set was originally collected for a different purpose.

Participants' age ranged from 17 to 51 years ($M = 23.4$ years, $SD = 5.07$ years). Their ethnic backgrounds were as follows: 54.5% European, 23.7% Asian, 7.7% Latino, 8.3% African American, 3.2% Indian, 1.9% Middle-Eastern, and 0.6% Native American. Almost half (49.4%) were dating, 45.5% were cohabitating, and 5.1% were engaged or married. Relationship length varied from 6 months to 7 years 10 months ($M = 2.1$ years, $SD = 1.9$ years). There were five same-gender couples.

Procedure. Both partners completed an online survey before coming to the laboratory.[7] We videotaped couples while they were having three conversations in which each partner took turns being the "speaker" and the "listener." Each partner was asked to report on a time when they had (a) made a sacrifice for their partner, (b) felt strong love for their partner, and (c) experienced personal suffering, for a total of six conversations. We decided a priori to focus on more positive (love) and negative (suffering) conversations, and not the sacrifice conversations, which were more ambivalently valenced.

The mean conversation length was 3 min 38 s ($SD = 59$ s) with a range of 1 min 2 s to 6 min 4 s. Speaking order was randomly assigned through a coin toss. Couples sat in chairs angled to closely face each other, allowing partners to touch each other. Two small cameras were set visibly on the wall, pointing at each participant. Each partner was paid US$30 in total.

Baseline measures

Attachment style. We measured attachment style with the Experiences in Close Relationships Questionnaire (Brennan, Clark, & Shaver, 1998). Participants rated 18 items assessing attachment anxiety ($\alpha = .91$) and 18 assessing attachment avoidance ($\alpha = .91$) on a 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*). Even though the correlation between the two subscales was nonsignificant, we included both dimensions in our models to ensure consistency in analytic strategy across studies. See Table 2 for descriptive information of all measures.

Well-being. We assessed well-being with two measures: the SWLS (Diener et al., 1985; $\alpha = .81$) and the 38-item Dispositional Positive Emotion Scale (Shiota et al., 2006), which assessed the trait-like tendency to experience seven positive emotions (e.g., joy, love). The scale ranged from 1 (*strongly disagree*) to 5 (*strongly agree*; $\alpha = .92$). We computed a mean score of the well-being measures because reliability across these scales was high, alpha = .92.

Touch. We measured touch with the Physical Affection Scale (Light et al., 2005; adapted from Diamond, 2000). Participants indicated how frequently they engaged in

five affectionate touch behaviors with their romantic partner ("holding hands," "sitting close or laying down close together," "giving each other neck or back massages [or similar warm touches]," "hugging," and "kissing"), on a scale ranging from 1 (*never or almost never*) to 6 (*more than once a day;* $\alpha = .75$). Because correlation between both partners' reports was $r = .46$, $p < .001$, we used both partners' mean as a couple-level measure of touch.[8]

Laboratory measures

Self-related positive affect. Participants indicated their positive affect with four series of adjectives, at the beginning of their lab session and after each conversation (see Impett et al., 2010): "happy, pleased, joyful," "proud, good about themselves," "interested, attentive," and "amused, having fun" ($\alpha_{pre} = .83$, $\alpha_{post\text{-}love} = .91$, $\alpha_{post\text{-}suffering} = .87$) on a scale ranging from 1 (*not at all*) to 7 (*a lot*).[9]

Observers ratings of touch. Nine coders independently coded the time partners spent having any physical contact with each other in seconds, in each of 30-s segments.[10] The reliability was very good (average intraclass correlation coefficient [ICC] was .96). Couples touched in 59.8% of the love conversations, and in 55.3% of the suffering conversations. When they touched, it was for an average of 56 s in the love conversations (SD_{love} = 1 min 19 s) and 1 min 21 s in the suffering conversations ($SD_{suffering}$ = 1 min 28 s). Because almost half of the couples did not touch during the conversations, we also tested whether couples who touched differed from couples who did not. Finally, we computed the mean time partners spent touching in each video in which each was the speaker for each type of conversation to obtain a couple-level measure of touch ($r_{love} = .77$, $p < .001$; $r_{suffering} = .34$, $p = .006$).

Results

Data analytic strategy. We ran structural equation models (SEM) using Mplus, v. 7.31 (Muthén & Muthén, 1998–2019). Due to the small sample, we used a Bayes estimator (Koopman et al., 2015). Using the Actor-Partner Interdependence Model (APIM), we computed two sets of parameters per couple—one for each partner (Kenny et al., 2006)—and estimated the actor and partner effects in each model for all variables, except for touch whereby we used the mean of both partners' ratings. We correlated each pair of parameters to account for the partners' interdependence. We evaluated the model fit by looking at the *Posterior Predictive p-Value* (*ppp*; see Table 4); the closer it is to .50 (regardless of whether it is higher or lower), the better (van de Schoot et al., 2014). In addition, we report the partner effects of attachment style on well-being. When predicting whether partners touched or not during the conversations, we used a logistic regression model (Sommet & Morselli, 2017). To test the moderation hypothesis, the predictors were grand-mean centered. To test the mediation hypothesis, we computed the product of the a and b paths (Preacher et al., 2011).

In the lab conversations, the actor was the speaker and the partner the listener; we thus have two videos per couple. When post-conversation positive affect was the outcome, we controlled for pre-conversation positive affect to make stronger conclusions about directionality. We compared pre- and post-conversations positive affect using a modified version of paired sample *t*-tests in Mplus (Miles, 2014), whereby we additionally control for the partners' interdependence. They revealed that positive affect marginally increased after the love conversation, $b_{diff} = .14$, posterior standard deviation (*PSD*) = .08, $p = .08$, whereas it significantly decreased after the suffering conversation, $b_{diff} = -1.07$, *PSD* = .12, $p < .001$.

Baseline data: Testing the hypotheses. First, we tested our main effects (see Table 4). Touch frequency was positively associated with well-being, $\beta = .21$, *PSD*[11] = .09, $p = .01$, 95% CI = [.03, .38]. Actor attachment avoidance was negatively associated with actor well-being, $\beta = -.27$, *PSD* = .07, $p < .001$, 95% CI = [−.41, −.12]. Moreover, partner attachment avoidance was also associated with lower well-being, $\beta = -.25$, *PSD* = .09, $p = .004$, 95% CI = [−.42, −.08]. Attachment avoidance was associated with less frequent touch, $\beta = -.25$, *PSD* = .07, $p = .002$, 95% CI = [−.38, −.11].

Next, we tested our primary hypotheses. We did not find support for the hypothesis that attachment avoidance moderates the association between touch frequency and well-being, $\beta = -.04$, *PSD* = .07, $p = .57$, 95% CI = [−.16, .10].[12] Contrary to Study 1, touch frequency did not mediate the association between attachment avoidance and lower well-being, the indirect effect was $b = -.03$, *PSD* = .03, $p = .13$, 95% CI = [–.09, .01]—see Figure C1 in the Supplemental Material.

When controlling for age and relationship length, most of our results held. However, the association between touch and well-being became marginally significant when controlling for age, $\beta = .16$, *PSD* = .09, $p = .09$, 95% CI = [–.03, .34], and no longer significant when controlling for relationship length, $\beta = .15$, *PSD* = .10, $p = .12$, 95% CI = [–.04, .33]—see Supplemental Material F. When controlling for relationship satisfaction and sexual frequency, however, the pattern of results remained unchanged (see Supplemental Material G).

Lab conversations: Testing the hypotheses. We tested whether touch between the partners during the conversations predicted changes in positive affect after each conversation. Controlling for pre-conversation positive affect, the percentage of time couples spent touching was not significantly associated with changes in post-conversation positive affect in either conversation (love: $\beta = .02$, *PSD* = .07, $p = .74$, 95% CI = [–.11, .16]; suffering: $\beta = -.03$, *PSD* = .09, $p =$

.76, 95% CI = [–.19, .15]). Because some couples did not touch at all in many conversations, we conducted additional analyses using a binary measure of touch. Compared with couples who did not touch, those who did experienced a marginally significant increase in positive affect after the love conversations, β = .13, *PSD* = .07, *p* = .06, 95% CI = [–.01, .27], and the suffering conversations, β = .15, *PSD* = .09, *p* = .09, 95% CI = [–.02, .33]. In the subsequent analyses, we used the binary measure of touch.

Next, we investigated whether attachment avoidance predicted changes in positive affect. This was not the case (love: β = .07, *PSD* = .08, *p* = .39, 95% CI = [–.09, .22]; suffering: β = −.09, *PSD* = .09, *p* = .33, 95% CI = [–.28, .09]).[13] However, attachment avoidance was associated with lower pre-conversation positive affect, β = −.19, *PSD* = .09, *p* = .04, 95% CI = [−.36, −.01]. We then examined if attachment avoidance was negatively associated with touch during the conversations. It was the case in the love, β = −.25, *PSD* = .12, *p* = .05, 95% CI = [−.47, −.01], and in the suffering conversations, β = −.34, *PSD* = .11, *p* = .006, 95% CI = [−.55, −.12].

Finally, we tested the two main hypotheses. We did not find support for the hypothesis that attachment avoidance would moderate the association between touch and positive affect in either conversation (love: β = .07, *PSD* = .10, *p* = .51, 95% CI = [–.14, .26]; suffering: β = −.03, *PSD* = .12, *p* = .81, 95% CI = [−.27, .20]). Next, we tested whether attachment avoidance was indirectly associated with positive affect as mediated by whether the couple touched, although there was not a significant direct effect of attachment avoidance on post-conversation positive affect. In the love conversations, the indirect effect via touch was significant, *b* = −.18, *PSD* = .10, *p* = .04, 95% CI = [−.39, −.002]. In the suffering conversations, the indirect effect was not significant, *b* = −.21, *PSD* = .14, *p* = .10, 95% CI = [−.50, .06]. We report the additional parameters of both models in Figure C1 and C2 in the Supplemental Material.

All the results reported here held when controlling for age, relationship length, and sexual frequency (see Supplemental Materials F and G). However, some results did not hold when controlling for relationship satisfaction. Touch no longer marginally predicted positive affect in the suffering conversations, but this association turned fully significant in the love conversations. The association between attachment avoidance and touch dropped to marginally significant. Finally, the indirect effect dropped to nonsignificant in the love conversations.

Brief Discussion

The results partially replicated those from Study 1. Most importantly, results further supported the idea that the association of touch with general psychological well-being and with momentary positive affect is independent from levels of attachment avoidance. Both partners' reported global touch frequency in the relationship was significantly associated with general well-being. However, touching during both conversations only marginally predicted higher post-conversation positive affect. Touch might not sufficiently mitigate the effects of these emotionally intense conversations. However, other studies have found that touch increases psychological well-being during conversations about conflict and personal stressors (Jakubiak & Feeney, 2019), suggesting that the association between touch and positive affect may not have reached significance because of the small sample size.

Attachment avoidance was associated with lower actor and partner general psychological well-being, but not with greater decreases in positive affect after the conversations. Consistent with previous research (Girme et al., 2015), the highly emotional context of the conversation might trigger similar reactions regardless of attachment avoidance. However, attachment avoidance was negatively associated with pre-conversation positive affect. Moreover, attachment avoidance was again associated with both lower general frequency of touch and a lower probability of touch in conversations (though only marginally in the love conversations).

There was some support for reduced touch as a mediator of the association between attachment avoidance and psychological well-being. In the baseline data, this mediation path failed to reach significance however, even though in the simple models, attachment avoidance significantly predicted touch and the latter significantly predicted well-being. Given the high overall mean of touch reported by the sample, the nonsignificance of the mediation could be due to a ceiling effect. During the love conversations, even though attachment avoidance was only marginally directly associated with post-conversation positive affect, the indirect path through lower touch exhibited when attachment avoidance was higher was significant. Hence, touch might be a covariate clarifying the association between avoidance and positive affect: variation in avoidance that touch does not capture could predict variation in positive affect. However, in the suffering conversations, touch did not mediate the association between attachment avoidance and positive affect. Finally, including relationship satisfaction as a covariate slightly changed the picture, however not consistently across conversation type, suggesting the need to further clarify the interplay among touch, attachment avoidance, and positive affect in highly emotional conversations. Given the inconsistencies between Studies 1 and 2, replication in a larger dyadic sample was necessary.

Study 3

In our final study, we sought to test our hypotheses in an ecologically valid 28-day experience sampling study. This enabled us to determine if within-person changes in daily affectionate touch among romantic partners would track subsequent changes in daily affective well-being, as well as the role of attachment avoidance in shaping this link.

Table 3. Study 3 Descriptives and Zero-Order Correlations.

Variable	*M*	*SD*	1	2	3	4
1. Touch behaviors	2.99	1.19	—	−.20**	−.03	.47***
2. Attachment avoidance	2.32	0.96		—	.16*	−.27***
3. Attachment anxiety	3.73	0.79			—	.04***
4. Positive affect	5.04	0.95				—

Note. SD = standard deviation.
*$p < .05$. **$p < .01$. ***$p < .001$.

Method

Procedure and participants. The eligibility criteria included being at least 18 years old, involved in a committed relationship of at least 2 years, and living together. Both members of each couple had to participate. We recruited participants through ads posted on kijiji.ca. A trained research assistant contacted interested individuals via email to confirm their eligibility and screened both partners on the phone to verify the relationship and review study procedures. We instructed participants to complete their surveys every evening, to not discuss them with their partner, and to leave the survey blank if they missed a day. Each participant initially received an online baseline survey where they provided demographic information and completed several questionnaires. The following day, participants began the 28-day survey. We removed daily surveys answered after the next morning. Participants completed an average of 24.7 days. Each participant received up to US$65 in gift cards for participation.

We initially recruited 104 couples ($N = 208$). We excluded six couples because one or both partners did not complete the baseline survey. The final analyses include 98 couples ($N = 196$). This sample size follows the sampling recommendations to detect small to medium effects (Finkel et al., 2015). Most couples (57%) were married or engaged, and 43% were common law or cohabitating. Participants were primarily Caucasian (65%); the remaining were East Asian (10%), South-American (7%), South-Asian (6%), African (4%), Native American (3%), and/or Other (9%). Most participants were heterosexual (86%), aged between 21 and 61 years ($M = 33$ years, $SD = 8$ years) and had been in the relationship from 2 to 25 years ($M = 8$ years, $SD = 5$ years).

Measures

Attachment style. Participants completed the Experiences in Close Relationships–Short (ECR-S; Wei et al., 2007), given the many questions they had to answer throughout the project. This scale includes six items assessing attachment anxiety ($\alpha = .76$) and six items assessing attachment avoidance ($\alpha = .79$) generally in romantic relationships. Items were rated on a scale ranging from 1 (*disagree strongly*) to 7 (*agree strongly*). Table 3 presents descriptive information for all measures.

Positive affect. To assess daily affective well-being, participants indicated how "happy, pleased, joyful" and "interested, attentive" they felt each day on a scale ranging from 1 (*not at all*) to 7 (*extremely*; $\omega = .56$).

Touch behaviors. We assessed daily touch by asking participants how much they engaged in the following behaviors each day: "caressing or stroking," "massaging," "cuddling," "kissing," "holding hands," "hugging," "leaning/laying on each other," and "making out"[14] on a scale ranging from 1 (*not at all*) through 4 (*somewhat*) to 7 (*a lot*; $\omega = .93$).[15] Both partners' touch reports correlated at $r = .64$, $p < .001$, confirming the appropriateness of using this variable at the couple level.

Results

Data analytic strategy. We analyzed the data with Mplus, v.7.3 (Muthén & Muthén, 1998–2019) using multilevel models for dyadic diary data with two levels of variation. The lower level represents variability due to within-person repeated measures for both partners, and the upper level represents between-couple variability across partners (Bolger & Laurenceau, 2013). Intercepts could vary randomly across couples and diaries, and we correlated residual terms between partners at Levels 1 and 2. We also controlled for the interdependence of both partners' predictors and outcomes at the within-person level, as well as for the Level 1 outcome (positive affect) at the prior measurement occasion. Hence, the outcome represents residualized change in positive affect since the previous day. As in Study 2, we used a couple-level measure of touch by averaging both partners' daily touch reports. To avoid confounding within- and between-level effects, we partitioned the daily predictors into their within- and between-variance components, which were person-mean and grand-mean centered, respectively (Bolger & Laurenceau, 2013). Thus, the analyses account for between-couple differences in touch. Elapsed time in days was controlled for, after having been centered on the middle of the time span (Day 14.5), to assess possible differences over the assessment period (Bolger & Laurenceau, 2013).

We first ran separate models for each main effect. We treated the slope at the within-person level (between touch and positive affect) as random, and the slopes with attachment as a predictor as fixed. In those latter models, we used a Maximum Likelihood Robust (MLR) estimator. To test our

mediation prediction, we ran a model with fixed slopes and computed the product of the a and b paths (Preacher et al., 2011). Finally, given that more avoidantly attached individuals might touch less because they avoid in-person contact with their partner, and given that attachment avoidance significantly predicted seeing the partner less frequently in-person, $\beta = .26$, $t(196) = 3.66$, $p < .001$, we added mean reported partner contact over the assessment period as a covariate in our models.

Testing the hypotheses. We began by testing the main effects (Table 4). First, daily reports of touch in the couple were associated with higher same-day positive affect, $b = .29$, $SE = .03$, $p < .001$, 95% CI = [.24, .33].[16] Second, attachment avoidance was associated with less daily positive affect, $\beta = -.20$, $SE = .07$, $p = .006$, 95% CI = [−.35, −.06]. Exploring partner effects revealed that attachment avoidance was associated with lower partner same-day positive affect, $\beta = -.20$, $SE = .08$, $p = .01$, 95% CI = [−.35, −.05]. Third, attachment avoidance was negatively associated with daily touch frequency, $\beta = -.20$, $SE = .06$, $p = .002$, 95% CI = [−.32, −.07].

Next, we tested the hypothesis that the association between daily touch frequency and positive affect would be moderated by attachment avoidance. Consistent with the first two studies, attachment avoidance did not predict the slope of the association between touch and positive affect, $b = .006$, $SE = .02$, $p = .78$, 95% CI = [–.04, .05]. Finally, we confirmed the hypothesis that less daily touch significantly accounted for the negative association between attachment avoidance and daily positive affect, $b = -.06$, $SE = .02$, $p = .004$, 95% CI = [−.10, −.02]—Figure 1 provides more details.

Controlling for age and relationship length did not affect the significance of any primary results. As in Study 1, age and relationship length moderated the association between attachment avoidance and touch, such that with increased age or relationship duration, the stronger the negative association between attachment avoidance and well-being. However, neither age nor relationship length moderated the association between attachment avoidance and daily positive affect (see Supplemental Material F). Neither controlling for daily sexual activity nor for contact with the partner affected the pattern of results. Finally, when controlling for relationship quality, the associations between attachment avoidance and both positive affect and touch dropped to nonsignificance, as well as the hypothesized mediation (see Supplemental Material G).

Brief Discussion

This study further supports our previous results. People experienced greater positive affect on days when partners reported more shared touch, independent from their general level of touch. Moreover, attachment avoidance was associated with lower daily positive affect and less daily touch. Attachment avoidance again did not moderate the association between touch and psychological well-being, further indicating that affectionate touch is associated with positive affect regardless of levels of attachment avoidance. However, lower touch among those higher in attachment avoidance again contributed to explain why they had lower daily well-being than less avoidantly attached people, further supporting our mediation hypothesis.

Partners of more avoidantly attached people reported lower daily positive affect, signaling the cost of sharing one's daily life with someone who shuns closeness and intimacy. This reduced daily positive affect is consistent with previous research (e.g., Simpson et al., 2007) and might be a component of the lower relationship satisfaction experienced by partners of avoidantly attached individuals (e.g., Bradford et al., 2002). Finally, controlling for relationship quality seemed to annul the consequences of attachment avoidance, indicating that lower relationship quality could contribute to explain why avoidantly attached people touch less and experience less positive affect.

General Discussion

The present research asks the important question about whether touch is associated with equal well-being benefits for everyone. We replicated past work demonstrating that attachment avoidance is associated with less frequent touch in romantic relationships (e.g., Chopik et al., 2014). We hypothesized that individuals higher in attachment avoidance would touch less frequently because they reap fewer benefits from touch. However, across three studies, there was no evidence for this claim. Instead, the association between touch and psychological well-being was positive, regardless of levels of attachment avoidance. This is in line with recent findings testing a similar hypothesis with relational well-being as an outcome (Carmichael et al., 2020). Moreover, our results suggest that the lower levels of shared touch associated with attachment avoidance help explain why avoidantly attached individuals experience poorer well-being. These findings reveal an unfortunate disconnect between the negative attitudes toward touch held by more avoidantly attached individuals (e.g., Brennan, Wu, & Loev, 1998) and the personal well-being they reap in receiving this behavior from others. The fact that people benefit from touch regardless of attachment avoidance levels further highlights the human need for affectionate touch. Even those who typically claim not liking closeness (Mikulincer & Shaver, 2003) benefit from touch. This finding supports recent studies indicating that more avoidantly attached people benefit from the affection of close others (e.g., Park, Impett, et al., 2019; Schrage et al., 2020; Stanton et al., 2017). Moreover, a qualitative study showing that touch avoiders hold touch as particularly essential in a romantic relationship (Johansson, 2013) further supports the benefits of touch among people who hold negative attitudes toward touch. The universal benefits of affectionate touch underscore its importance for

Table 4. Summary of the Results of Studies 1 to 3.

Studies / Hypotheses	1. Cross-sectional N = 1,604 individuals		2a. Cross-sectional–dyadic N = 80 couples	Model fit *ppp*	Conversation	2b. In lab, objective touch–dyadic N = 66 couples	Model fit *ppp*		3. Daily diary–dyadic N = 98 couples
1. Touch → WB	β = .24, t(1,377) = 9.00***		β = .21, *PSD* = .09**	.50	*love*	β = .13, *PSD* = .07†	.53		b = .29, *SE* = .03***
					suffering	β = .15, *PSD* = .09†	.20		
2. Avoid. att. → WB	β = −.28, t(1,599) = −12.35***	AE	β = −.27, *PSD* = .07***	.48	*love*	β = .07, *PSD* = .08, n.s.	.36	AE	β = −.20, *SE* = .07**
	PE		β = −.25, *PSD* = .09**		*suffering*	β = −.09, *PSD* = .09, n.s.	.20	PE	β = −.20, *SE* = .08**
3. Avoid. att. → touch	β = −.26, t(1,374) = −9.23***		β = −.25, *PSD* = .07**	.39	*love*	β = −.25, *PSD* = .12*	.50		β = −.20, *SE* = .06**
					suffering	β = −.34, *PSD* = .11**	.49		
4. Avoid. att. moderates touch → WB	b = .01, *SE* = .01, n.s.		β = −.04, *PSD* = .07, n.s.	.03	*love*	β = .07, *PSD* = .10, n.s.	<.001		b = .006, *SE* = .02, n.s.
					suffering	β = .03, *PSD* = .12, n.s.	<.001		
5. Indirect effect: Avoid. att. → touch → WB	β = −.04, *SE* = .008***		b = −.03, *PSD* = .03, n.s.	.39	*love*	b = −.18, *PSD* = .10*	.50		b =−.06, *SE* = .02**
					suffering	b = −.21, *PSD* = .14, n.s.	.42		

Note. ppp = Posterior Predictive p-Value; WB = well-being; PSD = posterior standard deviation; SE = standard error; avoid. att. = avoidant attachment; n.s. = nonsignificant; AE = actor effect; PE = partner effect; → = predicts.
†p < .10. *p < .05. **p < .01. ***p < .001.

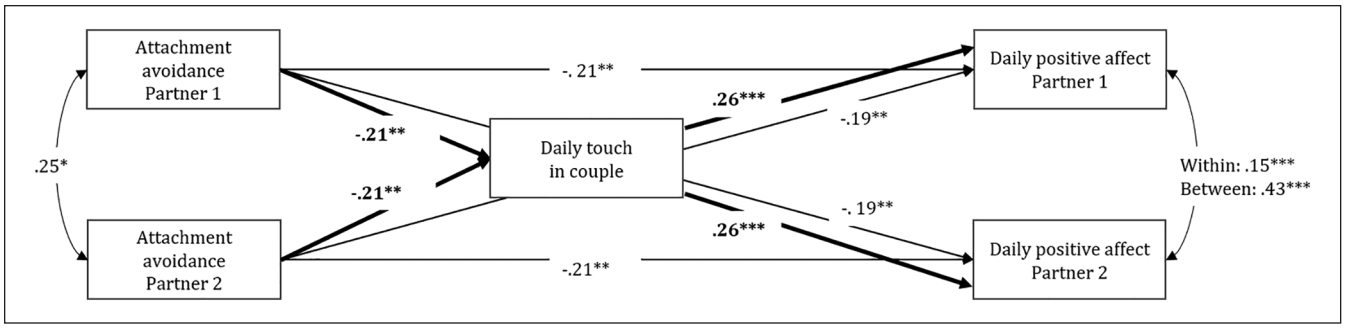

Figure 1. Standardized results of the multilevel multivariate mediation model for Study 3.
Note. The indirect effect of the association between attachment avoidance and daily positive affect mediated by daily touch was $b = -.06$**.
**$p < .01$. ***$p < .001$.

healthy and optimal psychological functioning.[17] The effect size of touch was modest, but as postulated in the Attachment Security Enhancement Model (ASEM; Arriaga et al., 2018), these small changes in well-being might accumulate over time to foster long-term improvement in avoidants' well-being. Recent research indicates indeed that nonverbally communicated affection (including touch) during discussions of love between romantic partners allowed listeners higher in attachment avoidance to show more positive emotions and receptiveness (Schrage et al., 2020). It is important to note, however, that when controlling for relationship quality, the association between attachment avoidance and touch, and correspondingly the mediation by touch of the negative association between attachment avoidance and well-being, did not hold in most analyses (except in the baseline data in Study 2). These findings indicate that the lower touch exhibited by more avoidantly attached people might be a correlate of their lower relationship quality (Candel & Turliuc, 2019). This supports research showing how high-quality relationships can buffer against negative outcomes associated with attachment avoidance (e.g., Park, Debrot, et al., 2019; Stanton et al., 2017), and that psychological intimacy can account for the association between attachment avoidance and psychological well-being (Towler & Stuhlmacher, 2013).

Across methods, attachment avoidance was associated with less affectionate touch. This, in turn, resulted in lower well-being in most analyses. Our studies show that disengaging from one's attachment needs (including the need for affectionate touch) undermines one's psychological well-being. As attachment avoidance is associated with loneliness (Givertz et al., 2013), our results suggest that affectionate touch may be a useful tool in mitigating avoidants' feelings of exclusion (Mohr et al., 2017). Future research should investigate which circumstances allow avoidantly attached individuals to be more receptive to touch. For example, the ASEM suggests that touch should be provided sensitively with respect to avoidants' discomfort with emotional interactions (Arriaga et al., 2018). Moreover, more avoidantly attached people have a greater need to control their emotions (Feeney, 1995). Thus, they might also need more control when engaging in touch. Indeed, they benefited *less* from touch when it was provided in a controlled experimental design where partner touch was not spontaneous (Jakubiak & Feeney, 2016), suggesting the importance of allowing the avoidant partner to decide whether and when to engage in touch.

Our results indicate that partners of more avoidantly attached individuals also reported lower well-being, and that lower frequency of touch in the relationship partially accounted for this negative association. This indicates that the lack of affectionate touch from a more avoidant partner deprives both partners from an important source of well-being. Research may need to examine what circumstances encourage more avoidantly attached people to initiate touch. In addition, it is unknown whether the tendency of the more avoidantly attached to touch less is conscious or not. Because they are less conscious of their affective experience (Lech et al., 2012), they might not realize that they impede touch in their relationship. Hence, a potential avenue to support people with higher attachment avoidance would be to help them be more conscious of how they create interpersonal distance.

Interestingly, age and relationship length moderated the association between attachment avoidance and both well-being (Study 1) and touch (Studies 1 and 3), such that with increased age and relationship duration, the stronger the negative association of attachment avoidance with these outcomes. This supports previous research showing that attachment avoidance has a stronger negative association with well-being in older age (Kafetsios & Sideridis, 2006), and underlines the necessity to develop targeted interventions for people with higher attachment avoidance. However, with only one exception, no gender differences emerged, in line with existing research which also found a great deal of similarity across gender in close relationship processes (Impett et al., 2014).

Finally and importantly, all the investigated processes held when controlling for sexual activity, suggesting that, even if physical affection might precede or follow sexual activity (Muise et al., 2014; van Anders et al., 2013), it is

differently associated with well-being and attachment avoidance than is sexual activity.

Limitations and Future Directions

The small sample size of Study 2 made it hard to detect our medium-sized effects, and some results in Studies 1 and 3 were not replicated. Moreover, in Study 2, some results did not hold when controlling for age or relationship length. As the results of Studies 1 and 3 were similar, they might replicate if Study 2 had a larger sample.

Without an experimental manipulation of touch, we cannot make strong claims about causality. However, temporal precedence, as found in Studies 2 and 3, is a strong indicator of directionality (Bolger & Laurenceau, 2013). In addition, lacking an experimental manipulation prevented us from determining whether different kinds of touch would yield different consequences. Touch receivers perceive touch differently when it has different characteristics such as speed and temperature (Ackerley et al., 2014); different kinds of touch might therefore be differently associated with well-being. Assessing how affectionate the touch is perceived to be could have important implications; we can speculate that attachment avoidance is associated with less affectionate perceptions of touch, as attachment avoidance is associated with lower perceive support (Kafetsios & Sideridis, 2006). However, our project had the advantage of assessing spontaneous touch and thus has high ecological validity. Moreover, an experimental design would have the notable disadvantage of forcing participants to touch, which could particularly affect people higher in attachment avoidance who strongly value autonomy (Overall et al., 2013).

The present study used different measures of well-being. Most of them assessed hedonic and affective well-being, but we only had one measure of eudemonic well-being (Psychological Well-being in Study 1; Ryff, 1989; see Supplemental Material H). Although we found similar results with this measure, future research should confirm these findings using diverse methods.

Next, we assessed attachment only with self-report measures. Despite their reliability and validity, these instruments solely measure conscious attitudes toward relationships and cannot identify when cognitive distortions alter responses (Ravitz et al., 2010). Moreover, given the more objective nature of touch, one might expect higher correlations between both partners' reports. Future research should investigate accuracy and bias in partners' perceptions of touch. Finally, future research could also investigate what proportion or type of touch is unwanted, and whether this varies as a function of attachment.

Conclusion

The present set of studies suggests that more avoidantly attached individuals benefit from touch in their romantic relationships when they experience it. However, there was a robust tendency among them to exchange less physical touch with their partner. This was one key reason why they reported poorer well-being than those lower in attachment avoidance. Because they benefited from touch despite their negative attitudes toward it, finding methods to increase openness to affectionate touch among people higher in attachment avoidance is an important avenue for further research.

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Data Availability Statement

The hypotheses and data analytic plan for main analyses were preregistered on the Open Science Framework before conducting the analyses (https://osf.io/vbfzw/?view_only=24fa2741753b411790abab11371e089a). The data and syntax are available here (https://www.dropbox.com/sh/2yfdwfjs5orl0nk/AAAPbhUOoEJwND0yLKyoddura?dl=0).

Supplemental Material

Supplemental material is available online with this article.

Notes

1. See https://osf.io/vbfzw/?view_only=24fa2741753b411790abab11371e089a
2. In Study 3, women's attachment avoidance was not significantly associated with their partner's daily positive affect, $\beta = -.12$, $SE = .11$, $p = .28$, but men's attachment avoidance was, $\beta = -.32$, $SE = .08$, $p < .001$, $\chi^2_{diff}(1) = 4.18$, $p = .04$.
3. The results regarding attachment anxiety are reported in Table C1 in the Supplemental Material.
4. The association between given and received touch was very high ($r = .93$, $p < .001$). We tested separate models for each dimension, but the pattern of results did not differ for any hypothesis.
5. Initial analyses revealed only minimal differences across well-being measures (see Supplemental Material H). Because we had no specific hypotheses regarding differences across measures, we computed the mean of all well-being measures.
6. The association between attachment avoidance and well-being was more strongly negative the older the participants,

$b = -.004$, $SE = .002$, $p = .009$, and the longer their relationship, $b = -.0005$, $SE = .0002$, $p = .017$. The association between attachment avoidance and touch was more strongly negative the older the participants, $b = -.009$, $SE = .003$, $p = .012$, and the longer their relationship, $b = -.0009$, $SE = .0004$, $p = .022$.

7. On average 2.8 days passed between the survey completion and the lab visit ($SD = 3.2$, $min = 0$, $max = 15$).
8. The correlation was higher in couples who touched less (mean frequency <5.4), $r = .56$, $p < .05$, than in couples who touched more (mean frequency ≥ 5.8), $r = .33$, $p < .06$.
9. We selected items assessing self-related positive affect, as we focus on *psychological* well-being. We ran the same analyses with other-related positive affect and with the mean of all positive affect items (see Supplemental Material H) and found similar results.
10. For details about the coding instructions and the reliability determination, see Supplemental Material A.
11. Posterior standard deviation (*PSD*) corresponds to the Standard Deviation for Bayesian Models (van de Schoot et al., 2014).
12. As attachment anxiety did not moderate the association between touch and well-being, $\beta = .19$, $PSD = .32$, $p = .64$, we removed this moderation term from the model, which resulted in an increased model fit.
13. We tested the partner effects of attachment avoidance and anxiety. The model for the *love* conversations revealed no significant association and its fit decreased. The model for the *suffering* conversations revealed a partner effect of attachment avoidance, but it had a very bad fit. We thus did not retain them.
14. The items came from Carmichael et al. (2020). We selected items based on a pilot study by selecting the most frequent behaviors.
15. We asked participants whether each touch behavior was initiated by themselves, their partner, or mutually. The majority reported mutual initiation ($M = 2.47$, $SD = 1.84$ vs. $M = 0.90$, $SD = 1.23$ for self-initiated touch, and $M = 0.84$, $SD = 1.18$ for partner-initiated touch).
16. We conducted additional lagged-day analyses to determine the direction of the association between touch and positive affect. Touch on one day did not predict next day's affect, nor did affect predict next day's touch.
17. We also conducted the analyses of all studies with relational well-being as an outcome (see Supplemental Material E). In Study 1, contrary to Carmichael et al. (2020), attachment avoidance did moderate the association between touch and relationship quality, showing that the link was stronger in individuals high (vs. low) in attachment avoidance. However, this pattern was not replicated in Studies 2 or 3.

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