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# Actor, partner, and similarity effects of attachment anxiety and avoidance on well-being and health in romantic couples

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## Abstract

Romantic attachment orientations are important predictors of individuals' and their partners' well-being and health. However, less is known about whether *similarity* in attachment between partners predicts better well-being and health outcomes. In two studies (total $N_{couples}$ = 1,602), we tested with actor-partner interdependence and dyadic polynomial regression models if partners' attachment and their similarity were linked to their well-being and health (i.e., life satisfaction, depressive symptoms, self-rated health, medical conditions). Results revealed significant actor effects between anxiety and life satisfaction (Study 1, male partners Study 2), depressive symptoms (both studies), self-rated health (both studies), and medical conditions (Study 2 only). For avoidance, significant actor effects were found for life satisfaction (Study 1, female partners Study 2), depressive symptoms (both studies), and self-rated health (both studies). Partner effects emerged for anxiety and life satisfaction (Study 1, male partners Study 2) and depressive symptoms (Study 1 only) and for avoidance and life satisfaction (Study 1, male partners Study 2), depressive symptoms (both studies), and self-rated health (both studies). The results of dyadic polynomial regression and response surface analyses, however, provided no evidence for any similarity effects of romantic attachment on well-being and health in both studies. In sum, the findings suggest that lower anxiety and avoidance in both partners is generally associated with higher well-being and health. However, similarity in partners' attachment seem unimportant for concurrent well-being and health.

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Implications of the findings are discussed considering attachment theories and relationship processes.

**Keywords**
Actor-partner interdependence model, depressive symptoms, dyadic polynomial regression, life satisfaction, medical conditions, response surface analysis, romantic attachment, self-rated health

## Introduction

People's attachment orientations predict not only their relationship quality but also their general well-being and health (e.g., LaBelle et al., 2020; Pietromonaco et al., 2013). There is, however, a paucity of studies investigating the actor, partner, *and* similarity effects between partners' romantic attachment orientations and their well-being and health outcomes. The present study investigates if both partners' attachment orientations and their similarity predict well-being and health in two cross-sectional studies.

### *Attachment orientations as predictors of well-being and health among individuals*

Attachment orientations consist of two relatively distinct dimensions: anxiety and avoidance (e.g., Fraley et al., 2015). People high in attachment anxiety tend to be hypervigilant regarding relationship threats, have a strong desire for closeness and connection to their partner, and show behaviors to elicit their partner's attention. People high in attachment avoidance strive for distance, independence, and self-reliance when dealing with stressors, often ignoring or denying their emotional needs or states (Mikulincer & Shaver, 2007). Previous literature suggests that attachment orientations are linked to people's well-being and health. In the present study, we focus on four specific indices of well-being and health covering crucial and well-studied aspects of people's subjective well-being (i.e., life satisfaction), mental health (i.e., depressive symptoms), subjective physical health (i.e., self-rated health), and objective health (i.e., medical conditions) (see Pietromonaco & Beck, 2019; Zhang et al., 2022).

There are several reasons why attachment insecurity might be associated with poorer well-being and mental health outcomes (e.g., Bowlby, 1969; Herstell et al., 2021; Smith & South, 2020). The vulnerability-transactional stress theory of depression (Hankin & Abramson, 2001) posits that, among those with cognitive vulnerabilities, experiencing negative events can create negative emotions which spiral into depressive symptomatology and lower well-being. Insecurely attached individuals entertain several maladaptive attributions and biases (e.g., Collins et al., 2006; Finn et al., 2013) which might exacerbate the association between negative events and poorer well-being. These attributional styles—paired with poorer emotion regulation capabilities and increased interpersonal difficulties—might make compromised

well-being more likely (Lopez & Brennan, 2000; Zheng et al., 2020). In line with these theoretical assumptions, meta-analytic findings suggest that attachment anxiety and avoidance are associated with lower life satisfaction and more depressive symptoms (Zhang et al., 2022; Zheng et al., 2020).

Attachment orientations also play a critical role in individuals' physical health. Pietromonaco and colleagues (2013; 2019) theorized that the same stress reactivity and emotion regulation deficits of insecurely attached individuals can accumulate and translate to poorer health. These vulnerabilities promote maladaptive relationship processes and undermine relationship quality. Whether through greater allostatic load or poorer health behaviors, insecure attachment is considered a risk factor for poorer physical health. Insecure attachment has been linked to poorer health, including compromised physiological reactivity and worse health behavior (e.g., Ahrens et al., 2012; Jaremka et al., 2013). People with higher levels of attachment insecurity have worse self-rated health (e.g., Olsson et al., 2010) and lower health satisfaction (Weidmann, Wünsche, et al., 2023). More objective indices of health, such as medical symptoms (e.g., migraines, chronic pains, ulcers), are positively associated with attachment insecurity (e.g., McWilliams, 2017). Reviews of previous research on attachment and health suggests that these effect sizes are stronger for anxiety than for avoidance (LaBelle et al., 2020; Stanton & Campbell, 2014).

### *Partner effects of attachment on well-being and health*

While previous research suggests an association between attachment and well-being and health, it is crucial to move this research into a dyadic context (LaBelle et al., 2020; Pietromonaco et al., 2013). A large body of research has shown that both anxiety and avoidance are linked to poor conflict and relationship processes (e.g., Campbell et al., 2005; Feeney & Karantzas, 2017; Girme et al., 2015; Jayamaha et al., 2016; Overall et al., 2013; Shaver et al., 2019) that may hinder the effectiveness of caregiving and support seeking within romantic relationships (e.g., Collins & Feeney, 2000)—detrimental to partners' general well-being and health. Indeed, partners of insecurely attached individuals generally reported lower life satisfaction (Molero et al., 2017). Attachment anxiety and avoidance were also associated with the partner's depressive symptoms and distress (Gallagher et al., 2017; Parker et al., 2012).

Regarding physical health, insecurely attached individuals' *un*responsiveness during couple interactions is linked to heightened cortisol levels in their partners (Brooks et al., 2011). The partners of avoidantly attached individuals also report higher perceived stress and poorer cognitive functioning (Weidmann & Chopik, 2022). Previous work has also shown that receiving less support and experiencing low relationship quality are linked to poor health indicators (Callaghan & Morrissey, 1993; Hawkins & Booth, 2005). Thus, insecurely attached individuals' poor support provision and the related stress in the relationship likely affect their partner's physical health negatively (Kiecolt-Glaser & Wilson, 2017; O'Neal & Wickrama, 2020). In sum, previous literature suggests that the insecurely attached individual's need for

reassurance and/or distance might also put their partner at risk for worse well-being and health.

### *The potential role of attachment similarity for well-being and health*

In addition to these actor and partner (i.e., main) effects on well-being and health, partner *similarity* in romantic attachment might also play a role in predicting well-being and health. Despite a lack of direct studies that tested this possibility, we lay out three possibilities based on different streams of research: that there is a positive, negative, or no similarity effect of attachment orientations on well-being and health.

First, partner similarity might increase emotional understanding and empathy between partners, elicit similar conflict responses, and promote intimacy (Anderson et al., 2003; Gonzaga et al., 2007). Attachment similarity particularly is suggested to promote an increased understanding of the partner's emotion regulation and attachment needs (Conradi et al., 2021). People assorting based on similar attachment orientations might also be functional for this reason—that sharing attachment-related thoughts, feelings, and behaviors might facilitate relationship functioning and understanding (Holmes & Johnson, 2009).

Second, and in contrast, the hosts of benefits afforded by attachment security probably are not felt in couples where both share an insecure attachment orientation. Based on the partner buffering literature, partner's positive attributes (including attachment security) can work as a buffer to mitigate the negative influence of a partner's insecure attachment on their relationship and general well-being (e.g., Overall et al., 2022). However, having a partner that also similarly lacks the intrapersonal resources to buffer can exacerbate negative relationship processes. For example, if both partners are avoidant, they are both less likely to connect with the other in times of stress but rather withdraw from conflict, ultimately delaying a constructive conversation to resolve the problem (Domingue & Mollen, 2009). However, if one partner is more securely attached, they might be better able to buffer the negative effects of their partner's attachment insecurity (Overall et al., 2022).

Lastly, instead of a similarity effect, it is possible that attachment has an additive association with well-being and health. Additive effects follow the pattern of *the more, the better*. The more secure (i.e., the less anxious or avoidant) both partners are (instead of varying multiplicative interactions), the higher both partners' well-being and health can be. Studies on other individual differences provide evidence for additive effects, such that both partners higher in agreeableness and emotional stability showed higher relationship and life satisfaction (Weidmann, Purol, et al., 2023), and those both having higher sexual desire reported consistent sexual initiation (rather than being similar on these characteristics; Kim et al., 2021; Pawłowska et al., 2024).

There is sparse evidence on the role of attachment similarity for the well-being and health indicators of the present study. Most studies examined attachment similarity and relationship quality. These studies either found no effect of similarity or a positive effect, with attachment similarity being linked to relationship length, higher relationship quality,

and better communication (e.g., Conradi et al., 2021; Domingue & Mollen, 2009; Luo & Klohnen, 2005).

## The present study

We examined the actor, partner, and similarity effects of romantic attachment on well-being and health in two samples. To examine actor and partner effects, we used actor-partner interdependence models. Based on previous studies, we expected that anxious and avoidant attachment would be negatively associated with the well-being and health indicators of both partners. To test similarity effects, we computed dyadic polynomial regression and response surface analyses. Due to the lack of direct studies on this topic, we explored whether a similarity effect of attachment insecurity existed on well-being and health indicators.

The present study extends previous research in multiple ways. First, we examined various well-being and health indicators (i.e., life satisfaction, depressive symptoms, self-rated health, medical conditions) to gain a better understanding of the specific dyadic associations between these variables and draw conclusions about the generalizability and comparability of the effects of romantic attachment on different well-being and health measures. Second, having a large sample of couples can help quantify the magnitude of attachment—well-being/health associations that can guide future research. Finally, the present study uses state-of-the-art methods to assess similarity effects beyond actor and partner effects and investigates with dyadic polynomial regression and response surface analyses whether attachment similarity predicts both partners' well-being and health.

## Method

### *Participants and procedure*

*Study 1*. Study 1 is comprised of 1,294 female-male romantic couples ($N$ = 2,588 individuals) from two sampling efforts— a smaller sample of $n$ = 335 couples (Purol & Chopik, 2023) and a larger sample of $n$ = 959 couples—recruited through Qualtrics Panels. Both are existing cross-sectional data collections administered online to romantic couples. Because both sampling efforts employed the exact same instruments (except for depressive symptoms and medical conditions, which were not asked in the smaller sample), the data were aggregated to a combined sample (Schimmack, 2012). The materials and data are shared on the OSF (https://osf.io/4gzqr).

The average relationship duration was 30 years ($SD$ = 17.0), and the participants' ages ranged from 19 to 89 ($M$ = 58.1, $SD$ = 15.7). The sample was predominantly White (86.3%), followed by Asian (4.7%), Hispanic/Latino (3.4%), Black (2.7%), and other races/ethnicities (2.9%). In the larger sample ($n$ = 959), participants were also asked about their financial situation ("How difficult would you rate your current financial situation?" from 1 [*extremely easy*] to 7 [*extremely difficult*]). Partners' financial reports were highly correlated ($r$ = .84), with an average couple mean of 2.92 ($SD$ = 1.59).

*Study 2.* Study 2 is comprised on 308 female-male romantic couples ($N = 616$ individuals) from the Longitudinal internet Studies for the Social Sciences (LISS) panel (Scherpenzeel, 2011). The LISS is a large, nationally representative sample of the Netherlands with monthly background checks and annual assessment waves. The study consists of 5,000 households, including approximately 7,500 individuals, and is based on a true probability sample of households drawn from the population register by Statistics Netherlands. In 2010, a subsample of the LISS ($n = 5{,}339$) participated in the *Inter-personal effects of crying* assembled study that included questions about aggression, empathy, social bonding, and, importantly, participants' romantic attachment. The attachment scale was only administered to participants if they indicated that they had been in at least one relationship prior to their current one[1]. Because the missingness was not at random, we selected couples in which both partners provided responses for attachment orientation. The data and materials can be accessed via https://www.dataarchive.lissdata.nl/.[2]

All participants of Study 2 were married and living together, with an average relationship duration of 23.1 years ($SD = 16.3$). The participants' ages ranged from 25 to 88 ($M = 51.8$, $SD = 12.5$). The LISS panel did not record participants' race but collected their immigration background. Sixty participants (9.7%) were born outside the Netherlands, and 20 participants (3.2%) reported not having Dutch nationality. Mean gross household income was EUR 4471.5 ($SD = 1960.4$). Compared to Study 1, Study 2's measures were not concurrently assessed. Romantic attachment was assessed in October 2010, depressive symptoms, self-rated health, and medical conditions in November and December 2010, and life satisfaction in May and June 2011. Despite these measures not being assessed contemporaneously, we treat these analyses cross-sectionally.

## Measures

### Attachment orientations

*Study 1.* Attachment orientations were measured with the 9-items Experiences in Close Relationships–Revised questionnaire (Fraley et al., 2011) with a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Three items capture the attachment dimension of anxiety, six items measure avoidance. An example item for anxiety includes, "I am afraid my partner may abandon me"; an example item for avoidance includes, "I don't feel comfortable opening up to my partner". Reliabilities for anxiety and avoidance were $\alpha = .84$ and .92 for female, and .84 and .90 male partners, respectively. 59.5% of the couples' anxiety and 48.8% of the couples' avoidance ratings showed an overlap within one half of the grand standard deviation (see Supplement for details).

*Study 2.* In the LISS, participants rated 12 items, which originated the Experiences in Close Relationships Scale – Short Form (Wei et al., 2007) on a 7-point scale ranging from 1 (*very much disagree*) to 7 (*very much agree*). Six items represent anxiety, and six items represent avoidance. Example items include: "I worry that romantic partners won't care about me as much as I care about them" (i.e., anxiety) and "I usually discuss my problems and concerns with my partner" (i.e., avoidance, reverse coded). Based on reliability

concerns, we removed one item per attachment orientation (see Supplement for details). Reliabilities for anxiety and avoidance were α = .70 and .73 for female, and .65 and .74 for male partners, respectively. For both studies, mean scores of each dimension were computed, with higher levels signifying higher levels of anxiety or avoidance, respectively. 35.1% of the anxiety and 40.6% of the avoidance ratings for the couples overlapped within one half of the grand standard deviation from each other, while it was 40.6% for avoidance (see Supplement).

### *Life satisfaction*

*Study 1.* A single item indicator of life satisfaction was administered that asked, "How satisfied with your life as a whole are you these days?" The item was answered on a 5-point scale ranging from 1 (*not at all satisfied*) to 5 (*completely satisfied*). The validity of single-item measures of life satisfaction have comparable validity to longer form measures (Cheung & Lucas, 2014).

*Study 2.* Life satisfaction was measured with the 5-item Satisfaction with Life Scale (Diener et al., 1985), which was rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). An example item was: "The conditions of my life are excellent". Reliabilities were .90 for female and male partners. Items were averaged to yield a composite for life satisfaction with higher scores indicating greater life satisfaction.

### *Depressive symptoms*

*Study 1.* Depressive symptoms were measured with the 8-item version of the Center of Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977). Participants were asked "How much of the time during the past week…" with an example item following: "… did you feel depressed?" The items were rated on a 4-point scale, ranging from 1 (*Rarely or none of the time [less than 1 day]*) to 4 (*Most or all of the time [5-7 days]*). These items were only asked in the larger sample of Study 1 ($n$ = 959 couples) and averaged. Reliabilities were α = .88 for female and .86 for male partners.

*Study 2.* Depressive symptoms were measured with five items, oroginating the Mental Health Index-5 (cf. Ware & Sherbourne, 1992). The items were preceded with the following statement: "The following questions are about how you felt over the past month. For every question, please choose the answer that best describes how you felt during this past month. This past month ….". An example items includes: "I felt depressed and gloomy". The items were rated on a 6-point scale ranging from 1 (*never*) to 6 (*continuously*). Average scores were computed, with higher scores meaning more depressive symptoms. Reliabilities were α = .88 for female and .87 for male partners.

### *Self-rated health*

*Study 1 and study 2.* Self-rated health was assessed with a one-item scale that asked: "Would you say your health is…?" with answer options ranging from 1 (*poor*) to 5 (*excellent*).

### *Medical conditions*

*Study 1 and study 2.* Medical conditions were measured based on a list of diagnoses. Participants were asked if a physician had ever told them they had any of the following diseases or problems. They were then presented with a list of 18 diagnoses. This question was only asked in the larger sample ($n = 959$ couples) of Study 1. Medical conditions were combined into a sum score for Studies 1 and 2.

## *Analytic strategy*

To examine the actor and partner effects of romantic attachment on well-being and health indicators, we ran four actor-partner interdependence models (APIMs; Kenny et al., 2006) with anxiety and avoidance of both partners as predictors of one well-being or health indicator (i.e., life satisfaction, depressive symptoms, self-rated health, medical conditions).

To examine the link between attachment similarity and well-being and health, we used dyadic polynomial regression models (DPRMs) and response surface analyses (RSAs) (Barranti et al., 2017; Edwards, 2002; Humberg et al., 2019; Schönbrodt et al., 2018). We used robust maximum likelihood (MLR) estimators for the APIMs and DPRMs, and ML estimators with 10,000 bootstrapping samples for the final reported DPRMs. A full-information maximum likelihood approach was used to handle missing data (Allison, 2003). The DPRMs were based on dyadic path models with regression coefficients of female (X) and male (Y) partners' anxiety or avoidance attachment dimensions, their interaction (XY), and both of their higher-order terms ($X^2$, $Y^2$). Both partners' well-being/health outcomes ($Z_F$, $Z_M$) were regressed on the polynomial predictors of both partners (i.e., one outcome type per model). Equation (1) describes these dyadic second-order polynomial regressions with one attachment dimension as predictor:

$$\begin{aligned} Z_F &= b0_F + b1_F X + b2_F Y + b3_F X^2 + b4_F XY + b5_F Y^2 + e_F \\ Z_M &= b0_M + b2_M X + b1_M Y + b5_M X^2 + b4_M XY + b3_M Y^2 + e_M \\ e_F &\sim \sim e_M \end{aligned} \tag{1}$$

In equation (1), the coefficients $b1_F$ and $b1_M$ as well as $b3_F$ and $b3_M$ indicate actor effects (intrapersonal effects from one partner's predictor variable to that same partner's outcome). The coefficients $b2_F$ and $b2_M$, as well as $b5_F$ and $b5_M$, indicate partner effects (interpersonal effects from one partner's predictor variable to the other partner's outcome). The coefficients $b4_F$ and $b4_M$ indicate the interaction terms.

To obtain three-dimensional response surface plots, surface parameters were obtained ($a1$, $a2$, $a3$, $a4$, $a5$), which are based on the parameters of the dyadic polynomial regressions depicted in equation (1). The response surface plots include the line of congruence (LOC; X = Y) and the line of incongruence (LOIC; X = -Y), which display the effects and inform about whether a similarity effect is detectable. The line of congruence is based on the parameters $a1$ and $a2$. The $a1$ parameter signifies whether the LOC is above the point (0,0) and is based on the polynomial regression coefficients $b1$+$b2$ for

both partners. The *a*2 parameter signifies whether the LOC is linear or curvilinear and is based on the polynomial regression coefficients *b*3+*b*4+*b*5 for both partners. If *a*2 = 0, the *a*1 parameter indicates the slope of a linear line. Similarly, the LOIC is based on the parameters a3 and a4. The *a*3 parameter is based on *b*1–*b*2 for both partners, while the *a*4 parameter is based on *b*3-14+*b*5 for both partners. Similar to the parameters *a*1 and *a*2, the *a*3 parameter indicates whether the LOIC is above the point (0,0) and the *a*4 parameter indicates whether the LOIC on the surface is linear or curvilinear. The parameter *a*5 is built on *b*3–*b*5 and when *a*5 = 0 it signifies that the ridge line equals the LOC (see Schönbrodt et al., 2018).

To draw valid conclusions about whether a strict similarity effect was present, we followed the guidelines by Humberg and colleagues (2019). Based on the regression coefficients provided by the dyadic polynomial regressions, we computed the RSA parameters *a*1-*a*5 and the parameters *p*10 and *p*11. A strict congruence or similarity effect is present if (1) the *p*10 parameter is non-significant, (2) the confidence interval of *p*11 includes 1, (3) the *a*4 parameter is significantly negative, (4) the *a*3 parameter is non-significant, (5) if the *a*2 parameter is non-significant, and (6) if the *a*1 parameter is non-significant. (Humberg et al., 2019). The more stringent criteria provided by Humberg et al. (2019) provide a comprehensive checklist for correctly identifying strict similarity effects that are present on all levels of the attachment dimension. An example of a strict similarity effect is depicted in Figure 1(a).

We also tested whether the data were best depicted by a similarity effect with criteria that are more lenient. In other words, these criteria focused on the *a*3, *a*4, and *a*5 parameters and allow main effects of attachment orientations to influence the shape of the response surface (Humberg et al., 2023; Schönbrodt et al., 2018). This can be the case when a similarity effect is present but also an additive effect (or rising ridge effect) of both partners' attachment orientations. Figure 1(b) depicts such a similarity effect as an example.

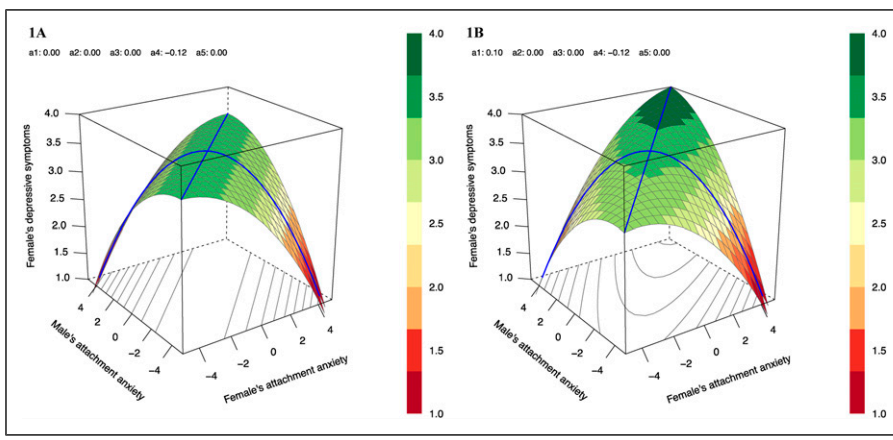


**Figure 1.** Response surfaces for a strict and lenient similarity effect.

First, we estimated APIMs for each well-being and health dimension separately including both attachment dimensions as simultaneous predictors. Afterwards, we estimated all DPRMs for each well-being and health outcomes with both attachment dimensions as simultaneous predictors. We then compared the models via chi-square model difference tests. If the more complex DPRM was significantly worse than the APIM, this was evidence that a similarity effect was not worth examining, and we retained the more parsimonious APIM. In all these analyses, couple members were treated as distinguishable. For the final reported models, we tested whether actor and partner effects could be set equal across women and men.

We controlled for age in our analyses. For the APIMs and the initial DPR models, which we compared to the APIMs, we used maximum likelihood estimation with robust standard errors (MLR). For the final reported DPR model, we used an ML estimator with bootstrapped standard errors and *p*-values using 10,000 replications.[3]

*Power analysis.* We conducted power analyses for APIM and DPRMs while considering the magnitude of associations from prior research (see Supplement for details). Based on these analyses, we conclude that for the APIMs with a sample of 1,294 couples, we could obtain actor and partner effects as small as $\beta = .06$, while with a sample of 308 we could obtain effects of $\beta = .12$ with power over 80%. The power to detect significant squared and interaction effects with missing main effects ($R^2 = .12$) was >99% with both studies.

## Results

The descriptive statistics for Studies 1 and 2 are reported in the Supplement.

### *Actor-partner interdependence models*

In all cases, the constrained APIMs were not significantly worse than the unconstrained APIMs (see Supplement), except for the model with anxiety and life satisfaction in Study 2, for which we report the unconstrained regression coefficients separately for women and men.

Across both studies, actor effects emerged for anxiety and avoidance on depressive symptoms and self-rated health, and partner effects emerged for avoidance on depressive symptoms and self-rated health (see Table 1). In other words, couple members with higher anxiety and avoidance tended to report more depressive symptoms and lower self-rated health. Partners of avoidantly attached individuals also tended to report more depressive symptoms and lower self-rated health.

Some effects emerged inconsistently across samples (see Table 1): Actor effects emerged for anxiety and lower life satisfaction (Study 1 and male partners Study 2), and for avoidance and lower life satisfaction (Study 1 and female partners Study 2). Anxiety was also associated with more medical conditions in Study 2. Regarding partner effects, anxiety was associated with lower life satisfaction in partners (Study 1 and male partners Study 2). Anxiety was also linked to partners' depressive symptoms in Study 1.

**Table 1.** Actor-partner interdependence model results with both attachment dimensions as simultaneous predictors.

| Model | | | Actor effect | | | | Partner effect | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Anxiety | *Sample* | $N_{couples}$ | β | *b* | 95% CI | *p* | β | *b* | 95% CI | *p* |
| Life satisfaction | 1 | 1,294 | **−.14/ −.13** | −0.08 | [−.12, −.05] | <.001 | **−.13/ −.14** | −0.08 | [−.12, −.05] | <.001 |
| | 2, female | 308 | −.05 | −0.05 | [−.18, .07] | .420 | .07 | 0.08 | [−.05, .20] | .237 |
| | 2, male | 308 | **−.15** | −0.16 | [−.29, −.03] | .014 | −.05 | −0.05 | [−.17, .07] | .391 |
| Depressive symptoms | 1 | 959 | **.29/.29** | 0.11 | [.09, .14] | <.001 | **.16/.17** | 0.06 | [.04, .09] | <.001 |
| | 2 | 308 | **.22/.21** | 0.17 | [.10, .24] | <.001 | −.01/ −.01 | −0.01 | [−.08, .06] | .791 |
| Self-rated health | 1 | 1,294 | **−.13/ −.12** | −0.08 | [−.12, −.05] | <.001 | −.02/ −.02 | −0.02 | [−.05, .02] | .387 |
| | 2 | 308 | **−.19/ −.16** | −0.12 | [−.18, −.06] | <.001 | .03/.03 | 0.02 | [−.04, .08] | .555 |
| Medical conditions | 1 | 959 | .04/.04 | 0.03 | [−.02, .08] | .177 | **.06/.06** | 0.05 | [.00, .10] | .048 |
| | 2 | 308 | **.12/.10** | 0.12 | [.02, .22] | .021 | −.05/ −.05 | −0.05 | [−.15, .05] | .302 |
| Life satisfaction | 1 | 1,294 | **−.21/ −.21** | −0.18 | [−.22, −.14] | <.001 | **−.15/−.15** | −0.13 | [−.17, −.09] | <.001 |
| | 2, female | 308 | **−.31** | −0.33 | [−.49, −.17] | <.001 | −.08 | −0.09 | [−.21, .04] | .190 |
| | 2, male | 308 | −.09 | −0.11 | [−.24, .03] | .131 | **−.18** | −0.19 | [−.34, −.05] | .007 |
| Depressive symptoms | 1 | 959 | **.10/.10** | 0.06 | [.03, .08] | <.001 | **.06/.06** | 0.04 | [.01, .06] | .017 |
| | 2 | 308 | **.17/.17** | 0.15 | [.08, .23] | <.001 | **.09/.10** | 0.08 | [.01, .15] | .031 |
| Self-rated health | 1 | 1,294 | **−.05/ −.06** | −0.05 | [−.09, −.001] | .044 | **−.14/ −.14** | −0.12 | [−.17, −.08] | <.001 |
| | 2 | 308 | **−.04/ −.03** | −0.03 | [−.09, .04] | .440 | **−.10/ −.10** | −0.08 | [−.14, −.02] | .013 |
| Medical conditions | 1 | 959 | −.03/ −.03 | −0.04 | [−.11, .03] | .260 | .02/.02 | 0.02 | [−.05, .09] | .516 |
| | 2 | 308 | −.02/ −.01 | −0.02 | [−.14, .11] | .781 | .03/.03 | 0.04 | [−.07, .15] | .503 |

*Note.* Partner effects of female partners denote the effects of male partner's attachment on female partner's outcomes. Similarly, partner effects of male partners denote the effects of female partner's attachment on male partner's outcomes. Regression coefficients for female partners are shown first, then regression coefficient for male partners. The model with life satisfaction as outcome using data from Study 2 could not be constrained to be equal across female and male partners, based on a significant chi-square difference test ($p = .024$; see Supplement). Therefore, these coefficients are reported separately. Coefficients in bold are significant ($p < .05$). Model fits for constrained models: CFIs >.999, RMSEAs <.001, SRMRs ≤.016. Average couple age was entered as covariate in Study 1 and 2.

In sum, we found consistent actor effects between anxiety and avoidance and depressive symptoms and self-rated health, and partner effects between avoidance and depressive symptoms and self-rated health.

### *Dyadic polynomial regression analyses*

Of the eight model comparisons, only two DPRMs performed significantly better compared to their APIM counterparts (see Supplement). The two models included self-rated health as outcome for Studies 1 and 2. Thus, for the other six models, modeling only the main actor and partner effects of attachment on well-being and health was a statistically better fit.

The DPRM effects are pooled across both partners and the results are displayed in Table 2 and the Supplement. Following Humberg and colleagues' (2019) criteria, we find that none of these two models satisfied the conditions for a strict (Table 3) or a non-strict similarity effect (Table 4). This also becomes evident when inspecting Figure 2 which displays the response surfaces for predicting self-rated health. None of these four response surfaces are comparable to Figure 1(a) or (b). In sum, we did not find any evidence for a similarity effect of attachment anxiety and avoidance.

## Discussion

The present study suggests consistent actor effects between attachment anxiety and avoidance with depressive symptoms and lower self-rated health across both studies. The findings also suggest partner effects between avoidance and depressive symptoms and self-rated health across both studies. Some inconsistent findings emerged for life satisfaction—Study 2 obtained different results for female and male partners. We also obtained inconsistent effects for medical conditions—we only found significant effects in one of the two studies for anxiety but no effects for avoidance across both studies. Similarity in romantic attachment was not associated with all well-being and health indicators.

### *Romantic attachment and well-being and health: Actor and partner effects*

In line with a recent meta-analysis (Zhang et al., 2022), we found that attachment anxiety and avoidance were linked to both partners 'lower life satisfaction and depressive symptoms (except for women's anxiety on men's life satisfaction in Study 2). The effect sizes ranged from medium to occasionally large for actor effects and small to medium for partner effects (Funder & Ozer, 2019). It is possible that the negative relationship processes due to both partners' insecure attachment (e.g., Feeney & Karantzas, 2017) dampen individuals' well-being. Experiencing more negative relational events might place the insecurely attached at risk of experiencing more negative affect and depressive symptoms (Hankin & Abramson, 2001). Our findings corroborate that individuals with insecure attachment and their partners are at a higher risk of experiencing depressive symptoms.

**Table 2.** Dyadic polynomial regression coefficients (constrained) with both attachment dimensions as simultaneous predictors.

| Model | Study | *b1* (actor effect) | | | | *b2* (partner effect) | | | | *b3* (actor effect²) | | | | *b4* (actor x partner effect) | | | | *b5* (partner effect²) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Anxiety | | β | *b* | 95% CI | *p* | β | *b* | 95% CI | *p* | β | *b* | 95% CI | *p* | β | *b* | 95% CI | *p* | β | *b* | 95% CI | *p* |
| Life satisfaction | 1 | **-.24 / -.23** | -0.15 | [-.19, -.11] | <.001 | **-.14 / -.14** | -0.09 | [-.13, -.05] | <.001 | **.11 / .12** | 0.03 | [.01, .05] | .002 | .01 /.01 | 0.00 | [-.02, .03] | .890 | .02 /.02 | 0.00 | [-.01, .02] | .631 |
| | 2 | -.09 / -.08 | -0.08 | [-.18, .01] | .083 | .02 / .02 | 0.02 | [-.07, .11] | .692 | -.05 / -.04 | -0.04 | [-.09, .02] | .242 | .01 / .01 | 0.01 | [-.10, .10] | .895 | -.06 / -.07 | -0.05 | [-.11, .01] | .119 |
| Depressive symptoms | 1 | **.29 / .30** | 0.12 | [.09, .14] | <.001 | **.09 / .09** | 0.04 | [.01, .06] | .016 | .01 / .01 | 0.00 | [-.01. .02] | .816 | -.02 / -.02 | -0.01 | [-.03, .01] | .579 | **.09 / .09** | 0.02 | [.002, .03] | .026 |
| | 2 | **.21 / .20** | 0.16 | [.10, .23] | <.001 | -.03 / -.03 | -0.02 | [-.09, .05] | .541 | .05 / .05 | 0.03 | [-.02, .09] | .253 | -.03 / -.03 | -0.02 | [-.09, .05] | .528 | .06 / .07 | 0.04 | [-.01, .09] | .151 |
| Self-rated health | 1 | **-.19 / -.18** | -0.12 | [-.16, -.07] | <.001 | .02 / .02 | 0.01 | [-.03, .06] | .564 | .06 / .06 | 0.02 | [-.003, .03] | .092 | .03 / .03 | 0.01 | [-.01, .04] | .373 | -.06 / -.06 | -0.02 | [-.03, .004] | .131 |
| | 2 | **-.18 / -.15** | -0.11 | [-.17, -.05] | <.001 | .04 / .04 | 0.03 | [-.03, .09] | .378 | **-.11 / -.09** | -0.05 | [-.09, -.01] | .012 | .09 / .09 | 0.05 | [-.01, .10] | .051 | **-.10 / -.11** | -0.05 | [-.10, -.01] | .019 |
| Medical conditions | 1 | .01 / .01 | 0.01 | [-.07, .08] | .890 | -.02 / -.02 | -0.02 | [-.09, .05] | .610 | .07 / .06 | 0.02 | [-.004, .05] | .092 | -.05 / -.05 | -0.02 | [-.05, .01] | .143 | **.13 / .11** | 0.04 | [.02, .07] | .002 |
| | 2 | **.13 / .11** | 0.12 | [.03, .22] | .009 | -.05 / -.05 | -0.05 | [-.15, .05] | .331 | .03 / .02 | 0.02 | [-.05, .09] | .512 | -.10 / -.09 | -0.09 | [-.18, .03] | .106 | .08 / .09 | 0.07 | [-.02, .15] | .090 |
| Avoidance | | | | | | | | | | | | | | | | | | | | | |
| Life satisfaction | 1 | **-.17 / -.17** | -0.15 | [-.19, -.10] | <.001 | **-.14 / -.13** | -0.12 | [-.16, -.07] | <.001 | **-.10 / -.09** | -0.04 | [-.08, -.01] | .028 | .10 / .10 | 0.06 | [-.003, .12] | .070 | -.06 / -.06 | -0.03 | [-.07, .01] | .150 |
| | 2 | **-.22 / -.21** | -0.23 | [-.34, -.13] | <.001 | **-.11 / -.11** | -0.12 | [-.23, -.02] | .018 | -.04 / -.03 | -0.02 | [-.11, .07] | .619 | **.15 / .15** | 0.16 | [.05, .29] | .007 | -.07 / -.10 | -0.06 | [-.13, .02] | .108 |
| Depressive symptoms | 1 | **.10 / .11** | 0.06 | [.03, .09] | <.001 | **.08 / .08** | 0.04 | [.01, .07] | .004 | .02 / .02 | 0.01 | [-.01, .03] | .591 | -.05 / -.06 | -0.02 | [-.06, .02] | .261 | .01 / .01 | 0.00 | [-.02, .03] | .845 |
| | 2 | **.17 / .17** | 0.15 | [.06, .24] | .001 | **.11 / .12** | 0.10 | [.01, .19] | .025 | .00 / .00 | 0.00 | [-.06, .06] | .939 | -.02 / -.02 | -0.02 | [-.12, .07] | .707 | -.02 / -.04 | -0.02 | [-.07, .03] | .506 |
| Self-rated health | 1 | **-.07 / -.08** | -0.07 | [-.12, -.02] | .008 | **-.13 / -.13** | -0.12 | [-.17, -.07] | <.001 | .02 / .01 | 0.01 | [-.03, .04] | .681 | .08 / .08 | 0.05 | [.00, .10] | .064 | -.03 / -.04 | -0.02 | [-.05, .02] | .330 |
| | 2 | -.04 / -.04 | -0.03 | [-.11, .05] | .460 | -.10 / -.10 | -0.07 | [-.15, .001] | .052 | -.01 / -.01 | 0.00 | [-.05, .04] | .856 | .04 / .04 | 0.03 | [-.04, .10] | .436 | -.02 / -.03 | -0.01 | [-.05, .03] | .520 |
| Medical conditions | 1 | -.02 / -.02 | -0.02 | [-.11, .06] | .606 | .02 / .02 | 0.02 | [-.05, .10] | .569 | -.01 / -.01 | 0.00 | [-.04, .04] | .859 | -.01 / -.01 | -0.01 | [-.08, .06] | .826 | .02 / .02 | 0.02 | [-.03, .07] | .561 |
| | 2 | -.08 / -.07 | -0.08 | [-.21, .03] | .180 | .00 / .00 | 0.00 | [-.11, .12] | .981 | .12 / .08 | 0.08 | [-.02, .18] | .130 | -.03 / -.03 | -0.03 | [-.17, .09] | .631 | .07 / .09 | 0.06 | [-.02, .14] | .144 |

*Note.* Regression coefficients for female partners are shown first, then regression coefficient for male partners. All models were constrained to be equal across female and male partners. Coefficients in bold are significant ($p < .05$). Model fits for constrained models: CFIs ≥. 958, RMSEAs ≤ .046, SRMRs ≤ .020. Average couple age was entered as a covariate in Study 1 and 2. Results in gray are correspond to DPRMs that did not perform significantly better than the respective APIMs.

**Table 3.** Checking the Humberg et al. (2019) criteria for a strict similarity effect with attachment anxiety and avoidance.

| Humberg et al. (2019) criteria | Life satisfaction | | Depressive symptoms | | Self-rated health | | Medical conditions | |
|---|---|---|---|---|---|---|---|---|
| Anxiety | Study 1 | Study 2 | Study 1 | Study 2 | Study 1 | Study 2 | Study 1 | Study 2 |
| (1) p10 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (2) the confidence interval of p11 includes 1 | × | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ |
| (3) the a4 parameter is significantly negative | × | × | × | × | × | ✓ | × | × |
| (4) the a3 parameter is non-significant | × | × | × | × | × | × | ✓ | × |
| (5) the a2 parameter is non-significant | × | ✓ | ✓ | ✓ | ✓ | ✓ | × | ✓ |
| (6) the a1 parameter is non-significant | × | ✓ | × | × | × | ✓ | ✓ | ✓ |
| Avoidance | | | | | | | | |
| (1) p10 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (2) the confidence interval of p11 includes 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (3) the a4 parameter is significantly negative | × | ✓ | × | × | × | × | × | × |
| (4) the a3 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (5) the a2 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ |
| (6) the a1 parameter is non-significant | × | × | × | × | × | ✓ | ✓ | ✓ |

*Note.* Results in gray correspond to DPRMs that did not perform significantly better than the respective APIMs.

We also found negative actor and partner effects of anxiety and avoidance on self-rated health (except for a missing partner effect of anxiety in Study 2). For anxiety, the actor effects ranged from small to medium, and the partner effects were very small. For avoidance, both the actor and partner effects were small. The theorized pathways between romantic attachment and physical health are many, including relationship and health behaviors, relationship outcomes, and physiological reactivity in partners (e.g., Pietromonaco et al., 2013). It could be that the stress experienced by partners with insecure attachment styles (Weidmann & Chopik, 2022) affects their physical health, which is reflected in lower health ratings.

A less consistent picture emerged for medical conditions. We found actor and partner effects for anxiety on medical conditions only in one study, and we found a partner effect of avoidance only in one study (but no actor effect). It could be that romantic attachment might not translate to more tangible medical diagnoses but only to people's health perceptions (similar to neuroticism and symptom reporting; Ellington & Wiebe, 1999). Alternatively, it could be that the effect of romantic attachment on medical conditions could emerge later in life (i.e., during partners' terminal decline) when medical conditions are more likely to accumulate.

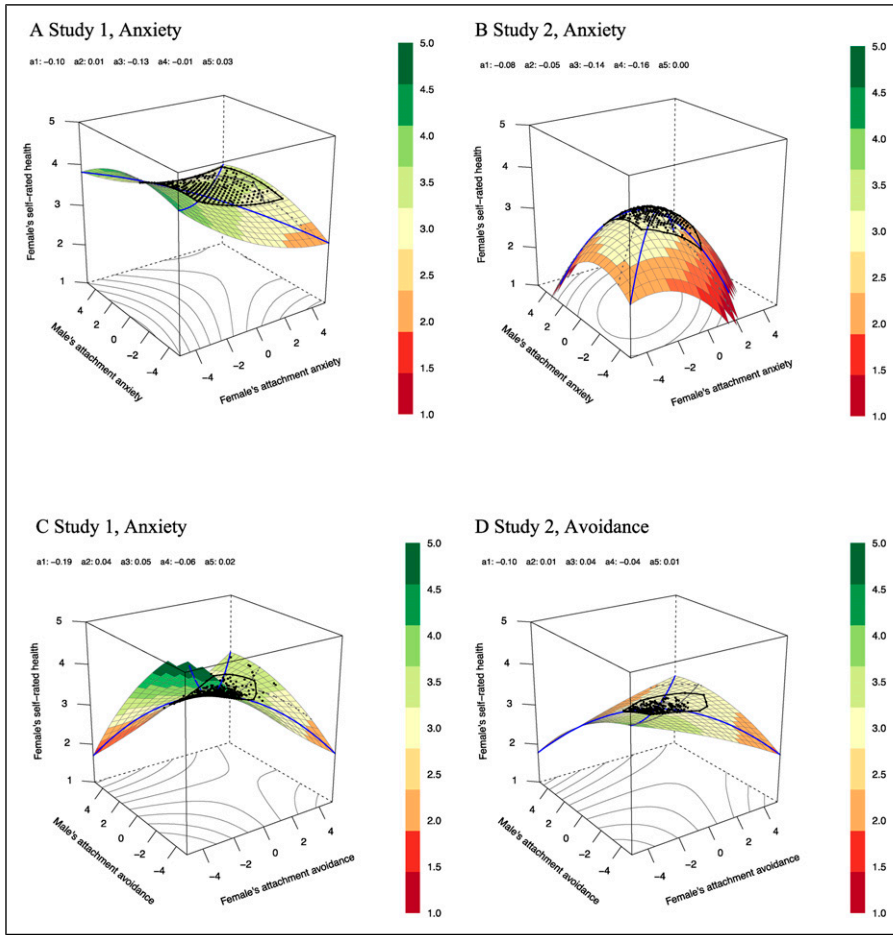


**Figure 2.** Response surfaces of the dyadic models predicting self-rated health.

## *No similarity effects for romantic attachment*

Based on strict and more lenient sets of criteria, we were not able to detect a similarity effect of attachment anxiety and avoidance on any of the well-being and health outcomes. It is possible that there simply is no similarity effect, in line with previous findings on personality similarity in couples (e.g., Weidmann, Purol, et al., 2023). In many cases, actor and partner effects were statistically sufficient to describe the data of the present study. However, the benefits and drawbacks of attachment similarity could potentially balance each other out, resulting in an overall null association. For example, one of the theorized benefits of similarity—emotional understanding (e.g., Anderson et al., 2003)—could be overshadowed by one of the theorized drawbacks—lack of buffering (e.g.,

**Table 4.** Checking evidence for a non-strict similarity effect.

| Humberg et al. (2019) criteria | Life satisfaction | | Depressive symptoms | | Self-rated health | | Medical conditions | |
|---|---|---|---|---|---|---|---|---|
| Anxiety | Study 1 | Study 2 | Study 1 | Study 2 | Study 1 | Study 2 | Study 1 | Study 2 |
| (1) the a4 parameter is significantly negative | × | × | × | × | × | ✓ | × | × |
| (2) the a3 parameter is non-significant | × | × | × | × | × | × | ✓ | × |
| (3) the a5 parameter is non-significant | × | ✓ | ✓ | ✓ | × | ✓ | ✓ | ✓ |
| Avoidance | | | | | | | | |
| (1) the a4 parameter is significantly negative | × | ✓ | × | × | × | × | × | × |
| (2) the a3 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| (3) the a5 parameter is non-significant | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

*Note.* Results in gray are correspond to DPRMs that did not perform significantly better than the respective APIMs.

Overall et al., 2022). Thus, a romantic couple similarly avoidantly attached might have a high understanding of each other's levels of avoidance. However, during a conflict, their higher avoidance levels might prevent them from providing necessary caretaking that prevents translating the emotional understanding to better well-being and health.

## *Limitations and conclusion*

The present study is not without limitations. The cross-sectional evidence cannot inform on the causality between the key variables, which could be reversed (e.g., being sick predicting attachment changes, Fraley et al., 2021). Also, our sample was limited to female-male couples residing in the Netherlands. This precludes our ability to make general claims about the lack of attachment similarity's role in couple's well-being and health. Future research should more deliberately sample diverse partnered populations and model the mechanisms linking attachment orientations to well-being and health in couples.

## Declaration of Conflicting Interests

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## Open research statement

As part of IARR's encouragement of open research practices, the authors have provided the following information: This research was not pre-registered. The data and materials of Study 1 is publicly shared (https://osf.io/4gzqr/?view_only=d4ea7aa63c4444af980fbd6e12268d60), the data and materials of Study 2 is publicly available upon registration (https://www.lissdata.nl/).

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## Supplemental Material

Supplemental material for this article is available online.

## Notes

1. Our initial pre-registered plans with Study 2 were to examine the actor, partner, and similarity effects of romantic attachment on well-being and health trajectories across 9 years. However, there was an unforeseen large missingness in the attachment measure because many participants were filtered out (i.e., they have had no prior relationships). Thus, our sample was too small to conduct the planned longitudinal analyses.
2. For more details regarding the LISS panel, including direct links to the data, see the Supplement.
3. We analyzed the data in R (R Core Team, 2021) and used the following packages for the main analyses: lavaan (Rosseel, 2012) and RSA (Schönbrodt & Humberg, 2021).

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