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Relationship satisfaction and The Big Five – Utilizing longitudinal data covering 9 years

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ABSTRACT

There is abundant evidence linking satisfaction in romantic relationships and the big five personality factors. It is important to distinguish between actor effects (i.e. influence of one's own personality) and partner effects (i.e. influence of the partner's personality). In this study, we utilized three cohorts (born 1991–1993, 1981–1983, and 1971–1973) from a longitudinal data set and estimated an Actor-Partner-Interdependence Model (APIM) to examine the association between personality and relationship satisfaction over a period of 9 years in romantic relationships involving both heterosexual partners ($N = 972$). Our findings revealed significant actor effects, but no partner effects. Specifically, long-lasting relationship satisfaction was found to be associated with lower levels of Neuroticism and higher levels of Conscientiousness. Apart from a negative correlation between Extraversion and relationship satisfaction in women, we did not find any differences between men and women. Over a longer time span the congruence between both persons plays a smaller role than previous studies have assumed. Our results emphasize the contribution of one's own Conscientiousness and Neuroticism to the relationship satisfaction. This could be an important insight for the research into couples therapy or coaching in the context of personal development.

1. Introduction

Increasing life satisfaction is a universal aspiration for most people. When examining factors that contribute to overall life satisfaction, marital satisfaction holds the strongest association ($\rho = 0.51$, $p < .05$), surpassing job satisfaction ($\rho = 0.44$, $p < .05$), health satisfaction ($\rho = 0.35$, $p < .05$), and social satisfaction ($\rho = 0.43$, $p < .05$; Heller et al., 2004). This indicates that the desire for a long-lasting and fulfilling romantic relationship is a common aspiration. However, the question arises whether it makes a difference which factors lead to satisfaction in a short-term relationship and how these differ from a long-term relationship. Therefore, it is crucial not only to assess relationship satisfaction as a static measure but also to examine its dynamics over time and to understand what factors contribute to relationship satisfaction. In this paper, we place special emphasis on exploring the association between personality differences among individuals in romantic relationships and a long-term relationship satisfaction aggregate.

To investigate this association, the widely established Big Five model (Goldberg, 1990; McCrae & Costa, 1999) is commonly used as a framework to assess personality (Donnellan et al., 2004). There is empirical evidence that all five personality traits are linked to satisfaction in romantic relationships (e.g. Barelds, 2005; Dyrenforth et al., 2010; O'Meara & South, 2019), although the strength of association varies.

Previous research distinguished between actor effects and partner effects, with actor effects referring to the impact of one's own personality and partner effects indicating the influence of the partner's personality on relationship satisfaction (Kenny et al., 2006). Results from such studies suggest that actor effects have greater relevance than partner effects regarding relationship satisfaction, both in cross-sectional (Barelds, 2005; Heller et al., 2004; Malouff et al., 2010; Weidmann et al., 2017) and longitudinal designs (Donnellan et al., 2004; Dyrenforth et al., 2010; Solomon & Jackson, 2014). According to a meta-analysis on cross-sectional studies (Heller et al., 2004), the strongest actor effect was found for Neuroticism ($\rho = -0.29$, $p < .05$) and Agreeableness ($\rho = 0.29$, $p < .05$), followed by Conscientiousness ($\rho = 0.25$, $p < .05$). Smaller yet significant effects were reported for Extraversion ($\rho = 0.17$, $p < .05$), and Openness to Experience ($\rho = 0.10$, $p < .05$). In a recent study, similar correlations were reported for cross-sectional data (O'Meara & South, 2019).

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In examining partner effects, meta-analytic data incorporating cross-sectional as well as longitudinal data found similar trends, albeit with consistently lower effect sizes. These correlations ranged from $r = -0.22$ ($p < .05$) for Neuroticism, $r = 0.15$ ($p < .05$) for Agreeableness, $r = 0.12$ ($p < .05$) for Conscientiousness to $r = 0.06$ ($p < .05$) for Extraversion, with no significant partner effect for Openness to Experience (Malouff et al., 2010). The authors further identified moderator effects based on the type of research. While Openness to Experience, Extraversion, and Agreeableness were negatively associated with partners' relationship satisfaction in longitudinal designs, positive correlations were observed in cross-sectional designs. The difference between both types of studies was especially noteworthy for Extraversion and Agreeableness (e.g., Extraversion, $r = -0.10$, $p < .05$ for longitudinal designs and $r = 0.08$, $p < .05$ for cross-sectional designs). These findings should be interpreted cautiously due to possible confounding factors mentioned by the authors (e.g. the choice of measurement). On the other hand, substantive explanations for this finding are conceivable, e.g. that satisfaction in a relationship over a longer time period is predicted by different personality traits than cross-sectionally. For example, couples in longer relationships may no longer place as much value on agreeableness in their partner because they already feel secure and no longer act in an overly assertive way, as they may have done at the beginning of the relationship. Similarly, high extraversion may become problematic in later, quieter phases in a relationship, e.g. after the birth of a child. To sum up, this finding indicates a distinction between relationship satisfaction at a specific time point and enduring relationship satisfaction.

To further explore cross-sectional and longitudinal associations between personality and relationship satisfaction, two studies based on the same data set (HILDA Survey, Wooden & Watson, 2007) can be compared Longitudinal analyses yielded coefficients in the same direction for both actor and partner effects across all personality factors (Dyrenforth et al., 2010; Solomon & Jackson, 2014).

Also, regarding long-term relationships, Kelly and Conley (1987) found moderate negative effects of Neuroticism on relationship satisfaction after 25 and 50 years of marriage for both men and women. Extraversion and Conscientiousness were positively correlated with the criterion ($r = 0.17$, $p < .05$ for Extraversion after 50 years and $r = 0.22$, $p < .01$ for Agreeableness after 25 years), but only for men, which points out the importance to investigate males and females separately. In a more recent study with couples in enduring relationships (20+ years), the factors Neuroticism, Extraversion, and Conscientiousness were also identified as predictive for relationship satisfaction in a cross-sectional design. For conscientiousness, the partner effect was particularly significant in both directions (Claxton et al., 2012).

To sum up, actor effects appear to be more predictive than partner effects when examining relationship satisfaction. Overall, both actor and partner effects tended to be slightly smaller in longitudinal compared to cross-sectional surveys. However, robust negative actor and partner effects were found for Neuroticism across research types. Similarly, positive correlations were found consistently between the personality factors of Conscientiousness, and Agreeableness, and relationship satisfaction. Even though gender differences were rarely investigated, some studies that examined this factor found differences (Botwin et al., 1997; Claxton et al., 2012; Kelly & Conley, 1987) while others did not (Donnellan et al., 2004; Karney & Bradbury, 1995).

In comparison to cross-sectional studies, there is a notable scarcity of studies specifically examining relationship satisfaction in enduring partnerships. Furthermore, within longitudinal studies the focus has mostly been on relatively shorter time periods, typically not exceeding four to five years (e.g., Donnellan et al., 2004; Kurdek, 1993; Solomon & Jackson, 2014) with few exceptions (e.g. Kelly & Conley, 1987). Currently, to the best of our knowledge, there is no study that has used longitudinal data to estimate a robust estimate of relationship satisfaction which could be associated with all five personality factors beyond the timeframe of four to five years.

The primary objective of this study is to examine the relationship between the Big Five personality traits and multiple measurements of relationship satisfaction, aggregated over a period of 9 years provide a robust estimate for this association. The first assumption is that actor effects can predict relationship satisfaction (hypothesis 1). More specifically, on the one hand, we expect a significant negative effect for Neuroticism (hypothesis 1a), on the other hand, significant positive effects for Conscientiousness (hypothesis 1b), Agreeableness (hypothesis 1c), and Extraversion (hypothesis 1d). As the literature on Openness to Experience is inconclusive, it is included exploratively in our study.

Hypothesis 2 addressed partner effects. We expected small but significant partner effects for Neuroticism (hypothesis 2a) and Conscientiousness (hypothesis 2b) assuming them to be smaller than the respective actor effects. Given the inconsistent findings on partner effects in previous longitudinal studies, our study also incorporated the exploratory examination of partner effects for Extraversion, Agreeableness, and Openness to Experience.

2. Method

Our study utilizes data from the *Panel Analysis of Intimate Relationships and Family Dynamics* (*pairfam*, release 12.0), a nationally representative longitudinal study in Germany (Brüderl et al., 2021). Pairfam was initiated in 2008 and surveys both anchor participants as well as their partners. For more details see Huinink et al. (2011).

2.1. Sample

The pairfam data used in this study were obtained from a representative sample selected through stratified random sampling. The sample consisted of three cohorts: C1 (born 1991–1993), C2 (born 1981–1983), and C3 (born 1971–1973). In wave 1 (2009), 12,402 respondents (anchor respondents) were recruited. All anchor respondents were asked for their consent to interview their partners (3742 partners in wave 1, Brüderl et al., 2021).

For this study, we focused on couples who were in a relationship throughout wave 2 and wave 11, covering a nine-year period. The sample involves 486 couples ($n = 972$ individuals), with 50 % male and 50 % female. Only heterosexual couples were included due to insufficient data on same-sex couples (six male and four female couples).

The sample composition was: 7 couples from the first cohort, 172 from the second cohort and 307 from the third. At wave 2, the average age of male participants was $M_m = 35.02$ ($SD = 5.98$, range = 16–52) years and the average age of females was $M_f = 32.29$ ($SD = 5.52$, range = 15–44) years. The average relationship duration at the timepoint of wave 2 was $M_{reldur} = 10.81$ years, $SD = 6.09$ years, range: 5–403 months.

2.2. Measures

Personality traits were assessed with a short version of the *Big Five Inventory* (*BFI-K*, Rammstedt & John, 2005). At wave 2, both partners were asked to rate themselves on a five-point Likert scale ranging from 1 (*absolutely incorrect*) to 5 (*absolutely correct*). The BFI-K includes four items per trait, except for Openness to Experience, which is measured by five items. Due to inappropriate part-whole correlation of one Agreeableness item and one Neuroticism item, only three items were used for these factors. The reliabilities were $\alpha = 0.79$ for Extraversion, $\alpha = 0.61$ for Agreeableness, $\alpha = 0.62$ for Conscientiousness, $\alpha = 0.74$ for Neuroticism, and $\alpha = 0.65$ for Openness to Experience.

To estimate a stable, robust measure of relationship satisfaction and to balance for usual fluctuations we used the aggregated self-report over 9 time points (wave 3–11). Relationship satisfaction was surveyed annually with one item (*All in all, how satisfied are you with your relationship?*) by both partners. The item is taken from the German version of the *Relationship Assessment Scale* (*RAS*) from Sander and Böcker (1993) and is answered on an 11-point rating scale ranging from 0 (*very dissatisfied*) to 10 (*very satisfied*). Retest reliabilities for relationship

satisfaction were $\alpha = 0.86$ for men and $\alpha = 0.87$ for women.

2.3. Analytical approach

We utilized structural equation modelling (SEM) to estimate the Actor-Partner Interdependence Model (APIM; Kenny et al., 2006) accounting for the dyadic non-independence in the perceptions from both partners. This involves modelling effects of both partners' personality traits on self-reported relationship satisfaction simultaneously (Fig. 1). We also investigated whether the effects on actors and partners differed for male and female partners. Parameter estimates and fit-statistics were estimated using the lavaan package in R software (Rosseel, 2012).

Several fit indices were used to evaluate the models, including the comparative fit (*CFI*) and the Tucker-Lewis Index (*TLI*), standardized root mean square residual (*SRMR*), and *RMSEA* (Kenny et al., 2006; Lei & Wu, 2007).

Initially, a complete model considering all possible paths between the observed and latent variables was estimated. However, this model was deemed too complex given the limited sample size, leading to poor fit indices. Consequently, non-significant variables and paths were omitted in subsequent model modifications to reduce complexity. Fig. 2 shows the latent modelling, including manifest and latent variables.

3. Results

Table 1 summarizes means and standard deviations for the personality factors by gender. *t*-Tests indicated that women had significantly higher mean values compared to men in every personality factor, except Openness to Experience. Cohen's *d* indicated medium-sized differences for Neuroticism and small differences for other traits.

Regarding congruence, the correlations between the respective personality traits of both partners were $0.00 \leq r \leq 0.15$, indicating that personality traits were largely independent. Only Conscientiousness showed a small significant correlation between partners ($r = 0.15$, $p = .024$).

Table 2 presents relationship satisfaction results. Differences between genders were minimal. Across all assessments, relationship satisfaction was $M = 8.03$ ($SD = 1.09$). Correlations (*ICC*) between relationship satisfaction scores within couples at the same time point were of moderate to medium size, averaging at $ICC = 0.43$. Additional t-tests for mean differences between both genders showed no effect (see Table A4, Appendix).

Besides the aggregate of the *ICC*, we considered the average concurrent correlation between the relationship satisfaction of both dyadic partners, which was $0.07 \leq r \leq 0.37$ (first order correlation). Within each of two consecutive waves (1-year stability), the average retest reliability of the relationship satisfaction scores were $0.28 \leq r_{tt} \leq 0.55$ for males and $0.40 \leq r_{tt} \leq 0.62$ for females, suggesting interdependence as well as stability of relationship satisfaction data between partners and across successive waves. We addressed this finding in the estimation of the structural equation model, as we allowed the correlation of the residuals of the annual satisfaction surveys between the two genders at one point in time, and within gender from one point in time to the next. These showed up as unsystematic influences.

Fig. 2 presents the structural equation model results. The Fit indices for the structural equation model were $CFI = 0.94$, $TLI = 0.93$, $SRMR = 0.050$, $RMSEA = 0.031$, *CI* of *RMSEA* [0.03; 0.04]. Neuroticism and Conscientiousness significantly predicted relationship satisfaction aggregate over 9 years. Overall, the total variance explanation for relationship satisfaction by the personality factors in the model was 12.4 % for women and 13.6 % for men. Specifically, for Neuroticism, a small actor effect ($\beta = -0.14$, $p < .05$) was observed for male participants and a moderate actor effect ($\beta = -0.25$, $p < .01$) for female participants, supporting hypothesis 1a.

Conscientiousness had moderate positive effects ($\beta = 0.31$, $p < .01$ for males and $\beta = 0.25$, $p = .001$ for females) supporting hypothesis 1b. Since we did not find any significant predictions of Agreeableness on relationship satisfaction, hypothesis 1c was rejected. For Extraversion, a negative effect ($\beta = -0.12$, $p < .05$) was observed for female participants, contradicting hypothesis 1d. There were no actor effects for Openness to Experience or partner effects for any traits, rejecting hypothesis 2. The latent correlation between relationship satisfaction aggregates was $r = 0.54$.

4. Discussion

Numerous studies have examined the link between personality traits and relationship satisfaction. It can be assumed, that relationship satisfaction underlies fluctuations e.g., due to circumstances such as family, job, and financial issues or physical condition, which is why we investigated an aggregate over a 9-year-period. Using APIM, actor effects for male and female participants were identified showing negative correlations between the personality factor Neuroticism and relationship satisfaction confirming hypothesis 1a. Additionally, Conscientiousness predicted higher relationship satisfaction for both genders confirming hypothesis 1b. However, contrary to our hypothesis 1c, Agreeableness did not correlate with relationship satisfaction and effects for Extraversion (hypothesis 1d) were found only for women, displaying an unexpected negative association. No significant partner effects were found (hypothesis 2).

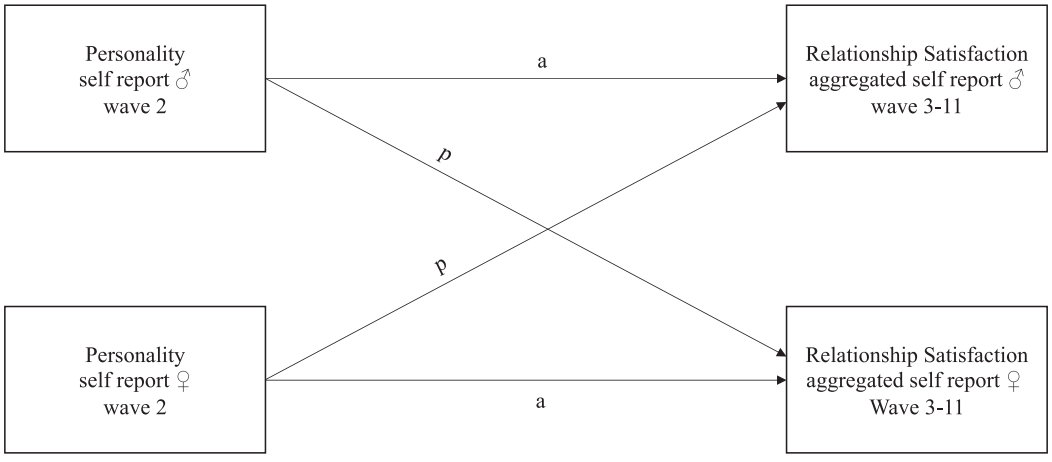

Fig. 1. Conceptual model for basic APIM for distinguishable dyads.
Notes: a = actor effect, p = partner effect.

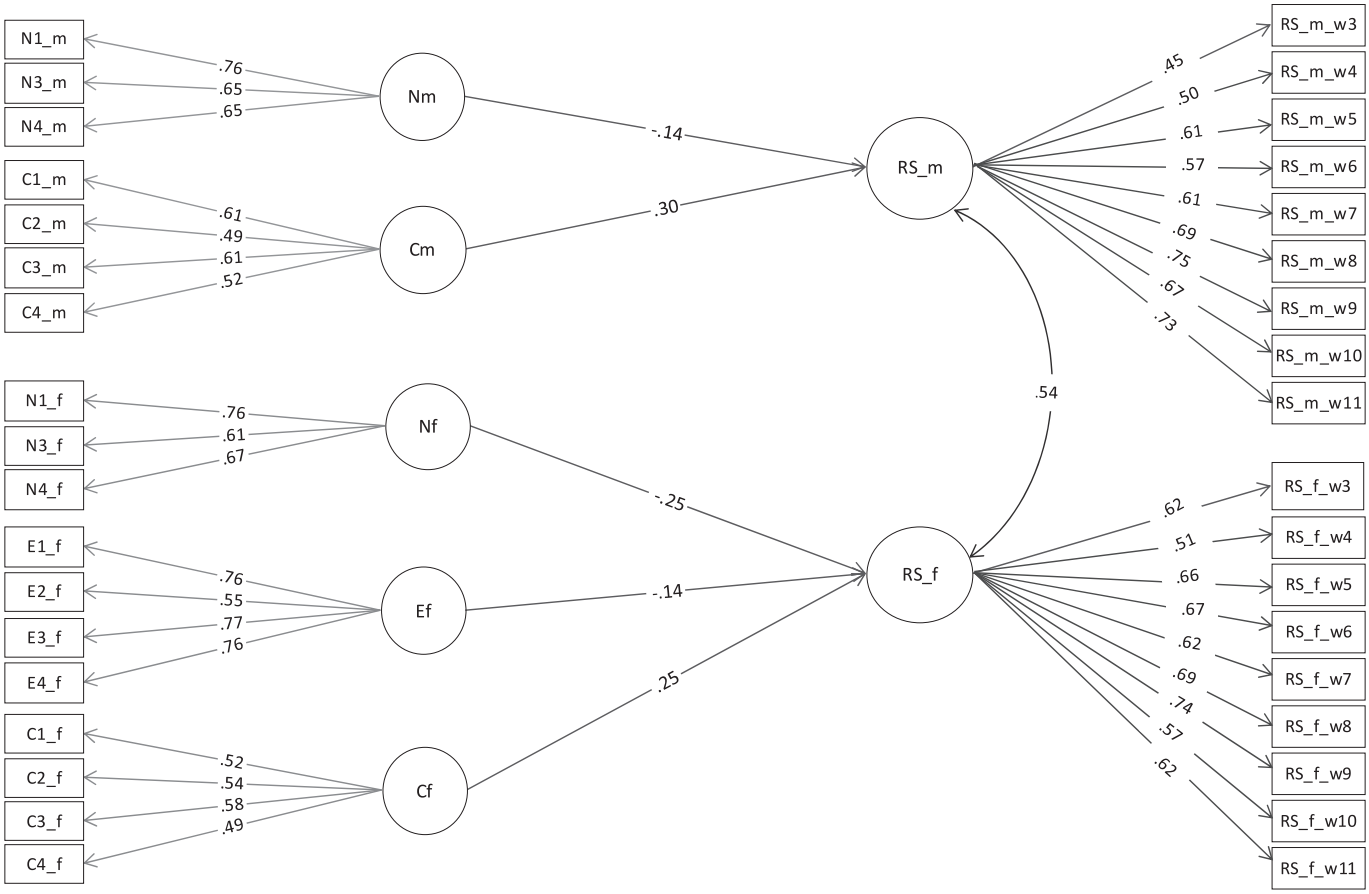

Fig. 2. Graphic illustration of the SEM with standardized estimates.
Note: N1_m – C4_f = BFI-K Items. N = Neuroticism, C = Conscientiousness, E = Extraversion, m = male, f = female, RS = relationship satisfaction, RS_m_w3 – RS_m_w11 = aggregate of relationship satisfaction for males (wave 3–11), RS_f_w3 – RS_f_w11 = aggregate of relationship satisfaction for females (wave 3–11). The coefficients of the correlated residuals between the satisfaction items were omitted for clarity but are available in the appendix (Table A1).

Table 1
Means and standard deviations for the five factors.

	Male		Female			
	M	SD	M	SD	t	*d*
Neuroticism	2.43	0.72	2.84	0.83	8.26***	0.53
Extraversion	3.41	0.83	3.54	0.87	2.29*	0.15
Openness to Experience	3.64	0.62	3.70	0.68	1.30	0.08
Agreeableness	3.13	0.79	3.29	0.81	3.25***	0.21
Conscientiousness	3.88	0.61	4.06	0.56	4.81***	0.31

Note. Data separated by gender, t-tests for differences in means, effect size Cohen's d, $N = 486$ couples, * = $p < .05$, ** = $p < .01$, *** = $p < .001$..

Table 2
Means and standard deviations for relationship satisfaction.

	Relationship satisfaction				
	Male		Female		
	M	SD	M	SD	ICC
Wave 3	8.23	1.90	8.30	1.79	0.25***
Wave 4	8.17	1.82	8.02	2.05	0.07
Wave 5	7.99	1.91	8.12	1.81	0.33***
Wave 6	7.97	1.92	8.06	1.88	0.19***
Wave 7	7.93	2.00	8.03	1.85	0.21***
Wave 8	8.03	1.79	7.98	1.80	0.36***
Wave 9	8.03	1.74	8.05	1.76	0.37***
Wave 10	7.85	1.94	7.89	1.88	0.37***
Wave 11	7.98	1.87	7.90	1.80	0.30***
	8.02	1.29	8.04	1.29	0.43***

Note. Data separated by gender, M = mean, SD = standard deviation, *** = p < .001. ICC = intraclass correlation. Values averaged over the total time of the surveys and the ICC of the aggregate in the final line.

The negative association between Neuroticism and relationship satisfaction for both men and women was in line with several earlier studies (Donnellan et al., 2004; Dyrenforth et al., 2010; Heller et al., 2004; Karney & Bradbury, 1995; Kreuzer & Gollwitzer, 2021). Since individuals with high scores in Neuroticism are characterized as more impulsive, anxious, and vulnerable, the effect on relationship satisfaction is plausible. Kreuzer and Gollwitzer (2021) explicated how cognitive (e.g., hostile attributions or perceived insecurity), emotional (e.g., fear of love withdrawal), and behavioral processes (e.g., passive-aggressive behavior) may underly the association of neuroticism and relationship satisfaction. We found that neuroticism measured in an earlier stage of a relationship remains a significant predictor throughout the following nine years. This supports the enduring dynamics model (e.g. Solomon & Jackson, 2014), which assumes, that personality traits have a sustainable, time-lasting influence on relationship satisfaction.

Regarding Conscientiousness, we also found actor effects for both genders in line with earlier studies (Donnellan et al., 2004; Karney & Bradbury, 1995). The effect sizes in this study were larger than in previous research (Karney & Bradbury, 1995; Solomon & Jackson, 2014), which may imply that Conscientiousness plays a stronger role in one's longer-term relationship satisfaction. Conscientiousness in general is associated with a sense of responsibility, orderliness, and thoughtfulness. A stable, long-term relationship in which both partners know each other very well and for a long time could make dyadic situations and

interactions expectable for the conscientious partner and thus explain the higher relationship satisfaction. Additionally, Conscientiousness is the only trait for which we identified congruence ($r = 0.15$), albeit rather low compared to previous findings (Rammstedt & Schupp, 2008). However, it is conceivable that even these small similarity effects on conscientiousness could additionally strengthen the effects on relationship satisfaction, as the expectations of both relationship partners may be similar.

Previous studies reported positive associations between Agreeableness and relationship satisfaction (Donnellan et al., 2004; Heller et al., 2004), what we have not discovered On the one hand, Agreeableness could become less important for relationship satisfaction over several years. It is possible that in the early stages of a relationship, people are more likely to compromise and create a sustainable basis. After an advanced time in the relationship, however, agreeableness no longer necessarily leads to higher relationship satisfaction since this basis already exists.

Surprisingly, Extraversion showed a small negative prediction of relationship satisfaction for women, contradicting our hypothesis. Previous studies reported no significant effects or positive correlations from $r = 0.03$ (Karney & Bradbury, 1995; Solomon & Jackson, 2014) to $r = 0.18$, $p < .05$ (Donnellan et al., 2004). Only Malouff et al. (2010) discovered negative partner effects for Extraversion regarding long-term studies. It is possible that by family circumstances in the sample used could lead to this, for example, an extraverted woman could be limited in her ability to pursue her need for sociability after childbirth, which could turn the correlation into a negative one.

Despite expectations of partner effects based on past research (Dyrenforth et al., 2010; Malouff et al., 2010; Solomon & Jackson, 2014), our data suggest that a partner's personality traits have little direct influence on satisfaction – at least in terms of a covariation between specific personality traits and satisfaction levels. It seems more likely that satisfaction arises from "compatible dyadic constellations" of personality traits or from factors beyond personality, such as shared values or beliefs.

It is worth noting that the average relationship duration at wave 2 was 10.81 years which implies that our sample includes many long-lasting relationships. Our data included people whose relationship duration varied between one year and 33 years at wave 2 ($SD = 6.09$ years), which can be seen as a strength of the sample. Additionally, our sample was large enough to discover realistically substantial effects, as a minimum sample size of 250 has been proposed for personality associations (Schönbrodt & Perugini, 2013). To test the robustness of our results, we correlated relationship duration at wave 2 with personality variables and satisfaction variables. Since we did not find any correlations, we concluded that this factor was negligible here.

Finally, some limitations need to be acknowledged. Firstly, despite the benefits of randomized longitudinal surveys, they usually must deal with retention problems. Over the period of the 9-year-timeframe we examined, there was substantial dropout (see Table A2, Appendix) e.g., due to separation, withdrawal from the study or randomly missing values. One could assume that separations are caused, at least in part, by a decrease in relationship satisfaction, however, there is no data to differentiate between those participants who broke up versus those who dropped out for other reasons. Our decision to focus on dyads with complete relationship satisfaction data most likely comes at the cost of some restriction of variance in relationship satisfaction and also limits the generalizability of our findings. However, our straightforward approach is free from the ambiguity regarding the interpretation of dropout and separation. Additionally, judging by the mean value of satisfaction ($M = 8.03$), a bias towards more satisfied couples appears to exist in the present sample, as couples in a crisis possibly might not have the psychological resources to continue participating in the study. Additional analyses of the effects of gender, cohort, age or relationship duration showed no systematic significant effects on relationship satisfaction.

In addition to many advantages (e.g. sample size, repeated annual surveys, actor and partner surveys), the use of a broad-based, comprehensive longitudinal study always comes at a price as broad survey instruments are employed. The utilization of broad personality traits, however, because the choice of items to assess latent variables is made against the background of a trade-off between internal consistency and validity (Revelle, 2024). It is important to emphasize that personality models are always only approximations of reality and that surveys utilizing short scales have only a limited degree of concreteness (Mõttus, 2016).

Additionally, the BFI-K (Rammstedt & John, 2005), as a short form of the BFI showed partly lower reliabilities due to the very short scales, which correspond to the reports of Rammstedt and John (2005). Note that a higher reliability and facets of the personality factors would be desirable to yield more essential predictions.

5. Conclusion

In this study we used an aggregate of relationship satisfaction that encompasses yearly measurements over nine years to estimate the association of this construct with the partners' personalities. The findings suggest that long-term relationship satisfaction is primarily influenced by one's own traits (Neuroticism, Conscientiousness, and Extraversion for women), while partner effects and gender differences are negligible. We found little congruence between the two partners, which is at odds with other research that reported couples to become more similar over time (Rammstedt & Schupp, 2008). Contrary to this research, our study provides some evidence that similarity effects are not crucial, which could be a relevant finding for couples therapy or coaching sessions. However, since one's own personality traits do make a difference, it is worthwhile to aim for a reduction of neuroticism and an improvement of conscientiousness in the context of personal development.

CRediT authorship contribution statement

Kathrin Bach: Writing – review & editing, Writing – original draft, Visualization, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Marco Koch:** Writing – review & editing, Methodology, Formal analysis, Conceptualization. **Frank M. Spinath:** Writing – review & editing, Supervision, Methodology, Conceptualization.

Declaration of competing interest

None.

Data availability

The authors do not have permission to share data.

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Data access

The dataset presented in this study can be found online (https://www.pairfam.de/en/data/data-access/). Supplementary materials and our analysis script are available online at https://osf.io/8ht4y/?view_only=7e33e01eb6b84d72a55a5590a629b2eb.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work the authors used ChatGPT (OpenAI, 2023) to improve language and readability. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Appendix A

Table A1
Coefficients of the correlated residuals between the relationship satisfaction items.

	rsm3	rsm4	rsm5	rsm6	rsm7	rsm8	rsm9	rsm10	rsm11	rsf3	rsf4	rsf5	rsf6	rsf7	rsf8	rsf9	rsf10	rsf11
rsm3		0.06																
rsm4			0.17															
rsm5				0.03														
rsm6					0.22													
rsm7						0.10												
rsm8							0.03											
rsm9								−0.16										
rsm10									0.11									
rsm11																		
rsf3	0.10										0.11							
rsf4		0.06										0.18						
rsf5			0.32										0.09					
rsf6				0.00										0.20				
rsf7					0.02										0.11			
rsf8						0.10										0.08		
rsf9							0.11										0.08	
rsf10								0.09										0.39
rsf11									0.05									

Note. rsm = relationship satisfaction items for male participants, rsf = relationship satisfaction for female participants.
Numbers correspond to the waves.

Table A2
Overview dropout and separations per wave.

	Actor		Partner		Relationship with Partner P1 – P5					
	n	Dropout between the waves	n	Dropout between the waves	P1	Separations of P1 between the waves	P2	P3	P4	P5
W1	12,402	−3333	3743	−1056	7234	−2965				
W2	9069	+5	2687	−252	4269	+1274	1138	0	1	0
W3	9074	−1001	2939	−792	5543	−344	247	15	3	0
W4	8073	−825	2731	−202	5199	−343	200	7	1	0
W5	7248	−674	2529	−172	4856	−363	185	4	0	0
W6	6574	−655	2357	−187	4492	−350	145	3	0	0
W7	5919	−458	2170	−119	4143	−247	121	3	0	0
W8	5461	−334	2051	−105	3896	−165	108	1	0	0
W9	5127	−377	1946	−147	3731	−220	79	1	0	0
W10	4750	+4685	1799	+296	3511	+2309	74	1	1	0
W11	9435		2695		5820		116	14	3	1

Note. P1-P5 = partner 1 – partner 5 surveyed in PairFam.

Table A3
Bivariate correlations between Personality factors and Relationship satisfaction, per wave.

Variable	*n*	*M*	*SD*	N_m	E_m	O_m	V_m	G_m	N_f	E_f	O_f	V_f	G_f
n				5794	5797	5795	5789	5798	5900	5896	5899	5882	5901
M				2.49	3.46	3.69	3.02	3.72	2.84	3.65	3.80	3.16	3.90
SD				0.85	0.82	0.68	0.84	0.70	0.91	0.83	0.67	0.85	0.65
				Actor Effects Male					Partner Effects Female ➔ Male				
rs_m_w3	2846	8.11	1.92	−0.12** [−0.16, −0.08]	0.08** [0.04, 0.11]	0.07** [0.04, 0.11]	0.08** [0.04, 0.11]	0.10** [0.06, 0.13]	−0.07** [−0.11, −0.02]	0.07** [0.02, 0.11]	0.02 [−0.03, 0.07]	0.09** [0.05, 0.14]	0.06** [0.02, 0.11]
rs_m_w4	2633	7.89	2.15	−0.11** [−0.15, −0.08]	0.10** [0.07, 0.14]	0.04* [0.00, 0.08]	0.07** [0.03, 0.10]	0.10** [0.06, 0.14]	−0.07** [−0.12, −0.02]	0.08** [0.03, 0.12]	0.06** [0.02, 0.11]	0.07** [0.02, 0.11]	0.10** [0.06, 0.15]
rs_m_w5	2429	7.92	2.04	−0.13**	0.08**	0.04	0.09**	0.07**	−0.07**	0.06*	0.07*	0.09**	0.09**

(*continued on next page*)

Table A3 (*continued*)

Variable	*n*	*M*	*SD*	N_m	E_m	O_m	V_m	G_m	N_f	E_f	O_f	V_f	G_f
				[−0.17, −0.09]	[0.04, 0.12]	[−0.00, 0.08]	[0.05, 0.13]	[0.03, 0.11]	[−0.12, −0.02]	[0.01, 0.11]	[0.02, 0.12]	[0.04, 0.14]	[0.04, 0.14]
rs_m_w6	2247	7.87	1.98	−0.11** [−0.15, −0.07]	0.13** [0.09, 0.17]	0.10** [0.06, 0.14]	0.06** [0.02, 0.10]	0.09** [0.05, 0.13]	−0.08** [−0.13, −0.03]	0.06* [0.01, 0.11]	0.02 [−0.03, 0.08]	0.07* [0.01, 0.12]	0.08** [0.03, 0.13]
rs_m_w7	2046	7.88	2.01	−0.11** [−0.16, −0.07]	0.11** [0.07, 0.15]	0.05* [0.01, 0.09]	0.09** [0.04, 0.13]	0.08** [0.04, 0.12]	−0.06* [−0.12, −0.01]	0.07* [0.01, 0.12]	0.05 [−0.00, 0.11]	0.02 [−0.04, 0.07]	0.08** [0.02, 0.13]
rs_m_w8	1947	7.89	1.94	−0.12** [−0.16, −0.08]	0.09** [0.04, 0.13]	0.04 [−0.00, 0.09]	0.07** [0.02, 0.11]	0.07** [0.03, 0.12]	−0.02 [−0.08, 0.03]	0.06* [0.00, 0.11]	0.05 [−0.01, 0.11]	0.02 [−0.04, 0.08]	0.09** [0.03, 0.14]
rs_m_w9	1818	7.91	1.91	−0.11** [−0.15, −0.06]	0.07** [0.02, 0.11]	0.05* [0.01, 0.10]	0.07** [0.03, 0.12]	0.06** [0.02, 0.11]	−0.04 [−0.10, 0.02]	0.03 [−0.03, 0.09]	0.06 [−0.00, 0.12]	0.04 [−0.02, 0.10]	0.09** [0.03, 0.15]
rs_m_w10	1775	7.88	1.92	−0.11** [−0.16, −0.07]	0.09** [0.04, 0.13]	0.05* [0.01, 0.10]	0.07** [0.03, 0.12]	0.07** [0.03, 0.12]	−0.05 [−0.11, 0.01]	0.04 [−0.02, 0.10]	0.05 [−0.01, 0.11]	0.01 [−0.05, 0.07]	0.08** [0.02, 0.14]
rs_m_w11	1618	7.93	1.86	−0.08** [−0.13, −0.03]	0.08** [0.03, 0.13]	0.05 [−0.00, 0.09]	0.09** [0.04, 0.14]	0.06* [0.01, 0.10]	−0.08* [−0.14, −0.01]	0.05 [−0.01, 0.12]	0.04 [−0.02, 0.11]	0.03 [−0.03, 0.09]	0.04 [−0.02, 0.10]

Variable	*n*	*M*	*SD*	N_m	E_m	O_m	V_m	G_m	N_f	E_f	O_f	V_f	G_f
				Partner Effects Male ➔ Female					Actor Effects Female				
rs_w_w3	3399	7.99	2.08	−0.09** [−0.14, −0.05]	0.04 [−0.01, 0.08]	0.09** [0.04, 0.13]	0.09** [0.05, 0.14]	0.03 [−0.01, 0.08]	−0.16** [−0.19, −0.13]	0.10** [0.06, 0.13]	0.04* [0.01, 0.08]	0.07** [0.04, 0.11]	0.08** [0.05, 0.11]
rs_w_w4	3162	7.74	2.23	−0.09** [−0.13, −0.04]	0.06* [0.01, 0.10]	0.06* [0.01, 0.11]	0.06* [0.01, 0.10]	0.02 [−0.02, 0.07]	−0.09** [−0.13, −0.06]	0.06** [0.02, 0.09]	0.03 [−0.01, 0.06]	0.07** [0.04, 0.11]	0.05** [0.01, 0.08]
rs_w_w5	2952	7.78	2.15	−0.08** [−0.12, −0.03]	0.02 [−0.03, 0.07]	0.03 [−0.02, 0.08]	0.06* [0.01, 0.10]	−0.00 [−0.05, 0.05]	−0.15** [−0.19, −0.12]	0.08** [0.04, 0.12]	0.04* [0.01, 0.08]	0.09** [0.06, 0.13]	0.07** [0.04, 0.11]
rs_w_w6	2730	7.80	2.04	−0.06* [−0.11, −0.01]	0.06* [0.01, 0.12]	0.07** [0.02, 0.12]	0.04 [−0.01, 0.09]	0.03 [−0.02, 0.08]	−0.13** [−0.16, −0.09]	0.11** [0.07, 0.15]	0.07** [0.04, 0.11]	0.08** [0.04, 0.11]	0.07** [0.04, 0.11]
rs_w_w7	2524	7.77	2.08	−0.08** [−0.13, −0.03]	0.08** [0.03, 0.13]	0.04 [−0.01, 0.09]	0.06* [0.01, 0.11]	0.05 [−0.01, 0.10]	−0.11** [−0.15, −0.08]	0.07** [0.03, 0.11]	0.06** [0.02, 0.10]	0.06** [0.02, 0.09]	0.05* [0.01, 0.09]
rs_w_w8	2366	7.80	2.02	−0.09** [−0.14, −0.03]	0.06* [0.00, 0.11]	0.03 [−0.03, 0.08]	0.04 [−0.01, 0.10]	−0.00 [−0.06, 0.05]	−0.09** [−0.13, −0.05]	0.06** [0.02, 0.10]	0.05** [0.01, 0.09]	0.06** [0.02, 0.10]	0.03 [−0.01, 0.07]
rs_w_w9	2230	7.88	1.95	−0.07* [−0.12, −0.01]	0.03 [−0.03, 0.08]	0.03 [−0.03, 0.09]	0.05 [−0.01, 0.11]	0.03 [−0.03, 0.09]	−0.09** [−0.13, −0.05]	0.05* [0.01, 0.09]	−0.01 [−0.05, 0.03]	0.08** [0.04, 0.12]	0.05* [0.01, 0.09]
rs_w_w10	2193	7.87	1.97	−0.06* [−0.12, −0.01]	0.02 [−0.04, 0.08]	0.04 [−0.02, 0.09]	0.05 [−0.01, 0.11]	0.04 [−0.01, 0.10]	−0.09** [−0.13, −0.05]	0.06** [0.02, 0.10]	0.02 [−0.03, 0.06]	0.07** [0.03, 0.11]	0.05* [0.01, 0.09]
rs_w_w11	1991	7.87	1.95	−0.07* [−0.13, −0.01]	0.05 [−0.01, 0.11]	0.02 [−0.05, 0.08]	0.07* [0.01, 0.13]	0.06 [−0.01, 0.12]	−0.09** [−0.13, −0.04]	0.08** [0.04, 0.12]	0.04 [−0.01, 0.08]	0.02 [−0.02, 0.07]	0.03 [−0.01, 0.08]

Note. rs = relationship satisfaction, w3-w11 = wave 3 – wave 11, N = Neuroticism, E = Extraversion, O = Openness for Experience, A = Agreeableness, C = Conscientiousness, m = male, f = female, *$p < .05$, ** $p < .005$. $N = 9086$ Anchors.

Table A4
t-tests for mean differences between the genders in each wave and cohort.

	Relationship satisfaction				
	Male		Female		
	M	SD	M	SD	*t*-test
wave 3	*8.23*	*1.90*	*8.30*	*1.79*	$t = -0.63$, $p = .53$
C1	8.29	1.11	9.00	1.15	$t = -1.18$, $p = .26$
C2	8.26	1.93	8.55	1.65	$t = -1.51$, $p = .13$
C3	8.21	1.90	8.14	1.87	$t = 0.41$, $p = .68$
wave 4	*8.17*	*1.82*	*8.02*	*2.05*	$t = 1.18$, $p = .24$
C1	8.43	1.35	8.57	1.72	$t = -0.18$, $p = .86$
C2	8.38	2.13	8.25	2.14	$t = 0.62$, $p = .54$
C3	8.04	1.80	7.88	2.00	$t = 1.04$, $p = .30$
wave 5	*7.99*	*1.91*	*8.12*	*1.81*	$t = -1.09$, $p = .28$
C1	7.86	1.35	8.86	1.07	$t = -1.53$, $p = .15$
C2	7.94	2.13	8.35	1.56	$\mathbf{t = -2.08, p < .05}$
C3	8.03	1.80	7.88	1.93	$t = 0.35$, $p = .73$
wave 6	*7.97*	*1.92*	*8.06*	*1.88*	$t = -0.73$, $p = .47$
C1	8.29	1.11	9.00	1.00	$t = 1.26$, $p = .23$
C2	8.12	1.72	8.13	1.80	$t = -0.09$, $p = .93$
C3	7.88	2.03	7.99	1.93	$t = -0.07$, $p = .48$
wave 7	*7.93*	*2.00*	*8.03*	*1.85*	$t = -0.78$, $p = .43$
C1	8.29	0.76	9.00	1.00	$t = -1.51$, $p = .16$
C2	7.97	2.00	8.19	1.75	$t = -1.09$, $p = .28$
C3	7.90	2.02	7.91	1.91	$t = -0.08$, $p = .94$
wave 8	*8.03*	*1.79*	*7.98*	*1.80*	$t = -0.47$, $p = .64$
C1	8.29	0.76	8.86	0.90	$t = -1.29$, $p = .23$
C2	8.29	1.56	8.03	1.69	$t = 1.47$, $p = .14$
C3	7.88	1.91	7.93	1.87	$t = -0.30$, $p = .77$
wave 9	*8.03*	*1.74*	*8.05*	*1.76*	$t = -0.16$, $p = .87$
C1	8.57	0.79	8.57	1.13	$t = 0.00$, $p = 1.0$
C2	8.23	1.61	8.25	1.52	$t = -0.10$, $p = .92$
C3	7.90	1.81	7.92	1.86	$t = -0.13$, $p = .89$
wave 10	*7.85*	*1.94*	*7.89*	*1.88*	$t = -0.35$, $p = .73$
C1	8.14	1.13	8.57	1.13	$t = -0.68$, $p = .51$
C2	8.07	1.75	8.01	1.80	$t = 0.30$, $p = .76$
C3	7.71	1.94	7.80	1.94	$t = -0.57$, $p = .57$
wave 11	*7.98*	*1.87*	*7.90*	*1.80*	$t = 0.66$, $p = .51$
C1	8.57	1.13	8.71	1.13	$t = -0.24$, $p = .82$
C2	8.15	1.75	8.04	1.80	$t = 0.60$, $p = .55$
C3	7.87	1.94	7.80	1.94	$t = 0.42$, $p = .68$

Note. Mean values and standard deviations for the relationship satisfaction values, sorted by gender, wave and cohort. $N = 486$ couples (486 males and 486 females).

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