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Predicting mate retention behaviors from five-factor personality traits: A dyadic approach☆

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ABSTRACT

Previous research investigated only the intrapersonal effects of personality traits on mate retention behaviors. The current study is the first to implement a dyadic perspective to explore interpersonal effects of personality traits on mate retention. We investigated actor and partner effects of the five-factor personality traits on mate retention using actor–partner interdependence modeling with data secured from both members of 190 heterosexual romantic couples. In a round-robin design, each participant rated their own and their partner's personality traits, and their own mate retention behaviors. Our results demonstrated the largest actor and partner effects of neuroticism on mate retention, particularly on cost-inflicting behaviors, showing that individuals higher on neuroticism reported their more frequent use. Smaller and opposite effects of agreeableness and conscientiousness were found, with higher levels of these traits related to less frequent use of cost-inflicting behaviors. Several effects of these "Big Three" personality traits generalized across self- and partner-reports, indicating that they were not the artifacts of common method variance. The effects of openness were much weaker and none generalized across both data sources. Extraversion did not demonstrate any significant effects. Discussion comments on limitations of the current research and suggests directions for future research.

1. Introduction

Mate retention (MR) behaviors are produced by evolved psychological adaptations designed to solve several adaptive mating problems such as maintaining a bond with a desirable partner, deterring a partner's infidelity, preventing defection from the relationship, and thwarting mate poachers (Buss & Shackelford, 1997). MR is important for both sexes, but for different evolutionary reasons. If unsuccessful in guarding their mates, men may be denied access to a partner's reproductive resources (e.g., cuckoldry), whereas women may lose their partners' economic and social resources (e.g., money, child protection), and both sexes risk losing the time, energy, and resources invested in attracting a partner (Buss, 1988). The majority of research addressing MR is based on data secured using the Mate Retention Inventory (MRI, Buss, 1988). The MRI includes 104 specific acts hierarchically organized into 19 tactics, five categories, two domains (inter-sexual and intra-sexual manipulation), and overall MR. Another conceptualization of MR domains identifies cost-inflicting and benefit-provisioning behaviors (Miner, Starratt, & Shackelford, 2009).

Personality traits, especially neuroticism, agreeableness, and conscientiousness predict the use of MR behaviors. Neuroticism is related to a wide range of relationship outcomes (Allen & Walter, 2018), probably through a cognitive mechanism of negative relationship-specific interpretations (Finn, Mitte, & Neyer, 2013). de Miguel and Buss (2011) hypothesized that neuroticism reflects individual differences in sensitivity to the adaptive problem of social exclusion and, therefore, individuals higher on neuroticism will be more vigilant in assessing the risk of a partner's infidelity. Accordingly, there is evidence that neuroticism positively correlates with both MR domains (de Miguel & Buss, 2011; Holden, Zeigler-Hill, Pham, & Shackelford, 2014; McKibbin, Miner, Shackelford, Ehrke, & Weekes-Shackelford, 2014). However, some studies have reported null relationships of neuroticism with MR (Atari, Barbaro, Sela, Shackelford, & Chegeni, 2017), notably for benefit-provisioning behaviors (Pham et al., 2015; Sela, Shackelford, Pham, & Zeigler-Hill, 2015).

Agreeableness in part signals cooperativeness, and some research has reported negative correlations of agreeableness with cost-inflicting behaviors (de Miguel & Buss, 2011; Holden et al., 2014;McKibbin et al., 2014; Sela et al., 2015). The relationship of agreeableness with benefit-provisioning behaviors is not consistent; some studies have reported

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positive associations (McKibbin et al., 2014; Pham et al., 2015), some negative (e.g., de Miguel & Buss, 2011), and some null associations (Atari et al., 2017; Sela et al., 2015).

Because conscientiousness reflects a long-term strategy of delayed gratification, resource acquisition, and successful hierarchy negotiation, researchers have hypothesized a positive relationship of conscientiousness with benefit-provisioning behaviors (de Miguel & Buss, 2011). Accordingly, some research reports positive correlations of conscientiousness with positive inducements, a category of benefit-provisioning behaviors (de Miguel & Buss, 2011) and with this domain in women (Sela et al., 2015), whereas other research reported null relationships (Atari et al., 2017; Holden et al., 2014; Pham et al., 2015). Additionally, in some studies, conscientiousness is negatively correlated with cost-inflicting behaviors (Atari et al., 2017; de Miguel & Buss, 2011; Holden et al., 2014), whereas in other this relationship is non-significant (McKibbin et al., 2014; Sela et al., 2015).

The relationship of openness with MR is weaker, but when obtained, it is negatively associated with cost-inflicting (Atari et al., 2017; Holden et al., 2014), and positively with benefit-provisioning behaviors (McKibbin et al., 2014; Pham et al., 2015; Sela et al., 2015). Extraversion is inconsistently associated with MR. Most research reports null relationships of extraversion with both MR domains (Atari et al., 2017; McKibbin et al., 2014; Sela et al., 2015). However, some research indicates a positive association of extraversion with the five MR categories subsumed under both domains (de Miguel & Buss, 2011), with public signals of possession (a category of the benefit-provisioning behaviors; Holden et al., 2014), and with men's benefit-provisioning behaviors (Pham et al., 2015), and a negative association with intersexual negative inducements (a category of cost-inflicting behaviors) (Holden et al., 2014).

1.1. The present study

Personality traits of a long-term partner are associated with a range of sexual behaviors, including casual sex, infidelity, sexual risk taking, sexual harassment, and sexual aggression (Allen & Walter, 2018); thus, an individual's personality might signal to their partner a need to intensify MR efforts. Most previous research has considered just one person's reports of the relationships of personality with MR. Romantic relationships are dyadic, however, and each partner's personality may be associated with the other partner's MR.

Although data were not collected from both members of a couple, in the first study that included both partners' perspectives, participants reported on their own and their partner's MR and personality (McKibbin et al., 2014). Along with investigating and identifying several intrapersonal associations, the results also documented several interpersonal associations between personality and MR. Men's reports of their partner's conscientiousness positively predicted men's self-reported benefit-provisioning behaviors. Women's reports of their partner's agreeableness and emotional stability negatively predicted women's reports of their partner's cost-inflicting behaviors. Women's reports of their partner's agreeableness positively predicted women's reports of their partner's benefit-provisioning behaviors, whereas women's reports of their partner's emotional stability negatively predicted women's reports of their partner's benefit-provisioning behaviors.

We extended previous research by using a dyadic paradigm and secured data about personality traits of both members of a couple rather than just one member of a couple. The aim of the current research was to investigate actor and partner effects of five-factor personality traits on cost-inflicting behaviors, benefit-provisioning behaviors and overall MR. As couple data are interdependent, we used the Actor–Partner Interdependence Model (APIM) to statistically control for non-independence (Kenny, Kashy, & Cook, 2006). Because actor effects based on self-reported personality traits and partner effects based on partner-reported personality traits are biased by common method variance between the predictor and outcome variables (Kenny & Cook, 1999), we secured both self-reports and partner-reports of personality traits.

Based on previous research we hypothesized the largest positive actor effects of neuroticism on both MR domains, followed by negative actor effects of agreeableness and conscientiousness and weaker actor effects of openness and extraversion on both MR domains. Therefore, we hypothesized that higher level of neuroticism would predict more frequent use of both MR domains, whereas higher level of agreeableness and conscientiousness would predict less frequent use of both MR domains. Theoretical frameworks for interpreting partner effects can be found in social interdependence theory, postulating that relationship outcomes are affected by the actions of both partners (Johnson & Johnson, 2005). Although no previous research has investigated partner effects of personality traits on MR, research addressing other relationship outcomes such as quality, satisfaction, and stability, documents that neuroticism demonstrates the largest partner effects on these outcomes, followed by agreeableness and conscientiousness (Weidmann, Ledermann, & Grob, 2016). Therefore, we hypothesized that these “Big Three” traits will also demonstrate the largest partner effects on MR. Although other-reports are not redundant to self-reports (Vazire & Carlson, 2011), other-reports and self-reports may be similar in predicting behaviors and, therefore, we expected the largest actor and partner effects to generalize across both data sources. Additionally, we hypothesized larger actor effects for self-reports, and larger partner effects for partner-reports.

2. Method

2.1. Participants and procedure

Participants comprised a convenience sample of 190 Croatian, heterosexual, dating (70%) and cohabiting (30%) urban couples. We used the snowball method to facilitate identifying a sufficient number of participating couples. Research assistants distributed the research announcement to their friends and colleagues. Individuals at least 18 years old and currently in a romantic relationship lasting at least three months were invited to participate. Participant age ranged from 18 to 35 years (M = 25.06 years, SD = 4.16 for men; M = 22.92 years, SD = 3.28 for women), and relationship length from three months to 15 years (M = 3.11 years, SD = 2.56). Nearly half of men (47.6%) and the majority of women (65.9%) had a bachelor degree, 53.7% of men and 28.9% of women were employed, and 38.9% of men and 62.1% of women were graduate students. Two research assistants administered the questionnaires to each couple in the couple's home or in a university laboratory room. All participants first provided verbal informed consent and then rated their own and their partner's five-factor personality traits, along with their own MR behaviors. Partners were seated apart from each other while completing the questionnaires. To ensure confidentiality they returned the questionnaires via sealed envelope. At the end of the procedure they were informed about the aims and hypotheses of the study.

2.2. Measures

We measured five-factor personality traits with the Big Five Inventory (BFI; Benet-Martinez & John, 1998). Participants rated each of 44 items on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Intention to retain a mate was measured by MRI (Buss, 1988). Participants indicated how frequently they performed each act within the past year, ranging from 0 (*never*) to 3 (*often*). We used the two MR domains identified by Miner et al. (2009), cost-inflicting MR (e.g., “Threatened to break-up if my partner ever cheated on me”) and benefit-provisioning MR (e.g., “Displayed greater affection for my partner.”), as well as an overall MR score. Cronbach's alpha reliability coefficients for all measures range from 0.68 to 0.94, and they are presented in Table S1 in Supplementary online material. The level of

self-partner agreement for personality traits are similar to those usually obtained (from 0.38 for conscientiousness to 0.54 for openness in men, and from 0.39 for agreeableness to 0.60 for extraversion in women).

2.3. Statistical procedure

As a framework for analyzing dyadic data, we used APIM (Kenny et al., 2006). This procedure allowed simultaneous examination of the relationship between individuals' trait and their own outcome (actor effect) and the relationship between individuals' trait and their partners' outcome (partner effect). To determine the most likely dyadic pattern that describes dyadic relationships, we computed the parameter k, which equals the partner effect divided by the actor effect (Kenny & Ledermann, 2010). We interpreted k parameters whose standardized values of the actor effect were greater than 0.10, and when both were statistically significant. For these analyses we used the free web-based application APIM_SEM (Stas, Kenny, Mayer, & Loeys, 2018). Given that the correlation between partners is $r = 0.10$, and the correlation between errors is $r = 0.40$, the power of detecting actor effects of 0.20 is 0.97, and the power of detecting partner effects of 0.15 is 0.84 (Ackerman & Kenny, 2016).

3. Results

Descriptive statistics for all measures and within-sex and between-sex correlations among variables are presented in Tables S1 and S2 in Supplementary online material. Assortative correlations for personality traits are low (from −0.02 for extraversion to 0.16 for openness) and on the levels usually obtained for these traits.

The results presented in Tables S1 and S2 show that both men's and women's self-reported and partner-reported neuroticism was the most strongly and positively related to their own and their partners' MR behaviors. Men's and women's self-reported agreeableness negatively correlated with their own MR behaviors, especially with the cost-inflicting behaviors, but not to their partners' MR behaviors. Only partner-reported agreeableness in men correlated with their own MR behaviors, and especially with the cost-inflicting domain, whereas both men's and women's partner-reported agreeableness negatively correlated with their partners' cost-inflicting behaviors. Only women's self-reported and partner-reported conscientiousness correlated negatively with their partners' cost-inflicting behaviors. Self-reported openness negatively correlated with women's own cost-inflicting behaviors and positively with men's own benefit-provisioning behaviors. Self-reported and partner-reported extraversion for both men and women did not significantly correlate with participants' own or their partners' MR behaviors.

Next, we investigated whether men's and women's self-reported and partner-reported five-factor personality traits predicted the two MR domains and overall MR in men and women. The results obtained by APIM analyses from self-reports are presented in Table 1, whereas those obtained on partner-reports are presented in Table 2.

Tables 1 and 2 show that self-reported and partner-reported extraversion did not exert significant actor or partner effects on cost-inflicting and benefit-provisioning domains. Men's self-reported and partner-reported agreeableness as well as women's self-reported agreeableness negatively predicted their own cost-inflicting behaviors. Men's and women's partner-reported agreeableness negatively predicted this MR domain in their partners. Women's conscientiousness negatively predicted men's cost-inflicting behaviors across both data sources. Neuroticism exerted the strongest effects on both MR domains; specifically, across both data sources neuroticism positively predicted men's and women's own cost-inflicting behaviors, and men's neuroticism positively predicted this MR domain in their partners. Additionally, women's partner-reported neuroticism positively predicted men's cost-inflicting behaviors. Men's self-reported and women's partner-reported neuroticism positively predicted their own benefit-provisioning behaviors. Furthermore, women's self-reported and partner-reported neuroticism positively predicted their partner's benefit-provisioning behaviors, and men's self-reported neuroticism positively predicted this MR domain in their partners. Women's self-reported openness negatively predicted their own cost-inflicting behaviors. Models with indistinguishable dyads show that self-reported openness positively predicted participant's own benefit-provisioning behaviors, and that partner-reported openness positively predicted partner's benefit-provisioning behaviors. The effects of five-factor personality traits on overall MR mainly parallel those obtained for cost-inflicting behaviors.

Dyadic patterns that could be interpreted were related to the effects of self-reported agreeableness on cost-inflicting behaviors and self-reported and partner-reported neuroticism on cost-inflicting behaviors and overall MR. A plausible dyadic pattern for the effects of self-reported agreeableness on cost-inflicting behaviors in men was actor-only, indicating that men's cost-inflicting behaviors was negatively affected only by their own self-reported agreeableness. For women, plausible dyadic patterns were couple and actor-only. Namely, 95% confidence intervals (CI) fell between actor-only and couple pattern (i.e., a CI value of k including 0 suggests actor-only and a CI value of k including 1 suggests a couple pattern), indicating that women's cost-inflicting behaviors was negatively affected by their own as well as by their partner's self-reported agreeableness. Similarly, men's cost-inflicting behaviors and overall MR were positively affected only by their own self-reported neuroticism, whereas women's cost-inflicting behaviors and overall MR were positively affected by their own as well as by their partner's self-reported neuroticism. The effects of partner-reported neuroticism are best described by the couple dyadic pattern, indicating that men's and women's cost-inflicting behaviors and overall MR were positively affected by their own as well as by their partner's neuroticism, and that actor and partner effects were equal.[1]

4. Discussion

The current research investigated the relationships between the five-factor personality traits and MR behaviors using a dyadic perspective. To control for shared method variance between predictor and outcome variables, we secured self-reports and partner-reports of personality traits. With respect to actor effects, the results show that neuroticism consistently and positively predicted cost-inflicting behaviors in both sexes, whereas agreeableness negatively predicted cost-inflicting behaviors in men but not women. Concerning partner effects, men's neuroticism consistently positively predicted women's cost-inflicting behaviors and women's neuroticism positively predicted men's benefit-provisioning behaviors, whereas women's conscientiousness consistently negatively predicted men's cost-inflicting behaviors.

Actor effects of neuroticism are consistent with previous findings indicating that individuals higher on neuroticism are more cautious regarding the perceived risk of their partners' infidelity, perhaps because of their sensitivity to social threats (de Miguel & Buss, 2011; Holden et al., 2014; McKibbin et al., 2014). A novel finding of the current research is that partners of the individuals higher on neuroticism are also prone to use more MR behaviors; specifically, women use more cost-inflicting and men use more benefit-provisioning behaviors. Although the mechanisms underlying these relationships should be addressed in future studies, it seems that they are associated more with negative affect and related cognitive processes than to a tendency to promiscuity among individuals higher on neuroticism. A recent meta-analysis linking personality traits to sexuality and sexual health

[1] Controlling for sociodemographic (men and women's age and education) and couple characteristic (relationship length) included as within- and between-dyad covariates, we obtained almost identical results to those presented in Tables 1 and 2 (analyses available upon request).

Table 1
APIMs for self-reported five factor personality traits predicting MR domains and overall MR.

Pred.	Crit.	r_p	r_{ce}	Dist. test (χ^2)[a]	Actor effect (β) W ➔ W M➔ M	Partner effect (β) M ➔ W W ➔ M	R^2	k	95%CI		Dyadic pattern
									LL	UL	
E	C-I B	−0.02	0.37***	22.15***	−0.03	−0.01	0.00	0.48	−4.96	5.92	CBD
					−0.10	0.06	0.01	−0.51	−2.02	1.01	CBD
A		0.15*	0.34***	23.88***	−0.17*	−0.12	0.05	0.69	−0.36	1.73	Couple and Actor-only
					−0.37***	0.01	0.14	−0.02	−0.40	0.37	Actor-only
C		0.10	0.36***	22.92***	−0.06	0.07	0.01	1.19	−4.60	2.22	CBD
					−0.04	−0.19*	0.04	4.20	−10.97	19.37	CBD
N		0.04	0.32***	35.54***	0.22**	0.17*	0.08	0.82	−0.04	1.69	Couple and Actor-only
					0.40***	0.04	0.16	0.10	−0.21	0.41	Actor-only
O		0.16*	0.37***	28.74***	−0.18*	0.09	0.04	−0.52	−1.38	0.33	Contrast and Actor-only
					0.14	0.02	0.02	0.13	−0.88	1.14	Couple and Actor-only
E	B-P B	−0.02	0.37***	8.25	0.03	0.05	0.00	1.46	−8.25	12.11	CBD
A		0.15*	0.38***	4.96	0.01	−0.08	0.01	−9.10	−57.91	58.78	CBD
C		0.10	0.38***	7.06	0.00	−0.03	0.00	8.32	−20.77	25.82	CBD
N		0.04	0.35***	21.22**	0.10	0.15*	0.03	1.59	−1.17	4.35	CBD
					0.16*	0.20**	0.07	1.20	−0.16	2.56	Couple and Actor-only
O		0.16*	0.36***	7.93	0.11*	0.06	0.02	0.56	−0.35	1.36	Couple and Actor-only
E	OMR	−0.02	0.42***	11.77	−0.01	0.03	0.00	2.63	−20.05	25.27	CBD
A		0.15*	0.40***	9.65	−0.14*	−0.09	0.03	0.59	0.13	1.17	Couple and Actor-only
C		0.10	0.43***	13.86*	−0.03	−0.08	0.01	−2.72	−16.08	10.63	CBD
					−0.04	−0.17*	0.03	3.95	−11.27	19.17	CBD
N		0.04	0.37***	24.94***	0.18*	0.18*	0.07	1.04	−0.13	2.20	Couple and Actor-only
					0.32***	0.14*	0.12	0.42	−0.03	0.87	Actor-only
O		0.16*	0.42***	17.52**	−0.09	0.10	0.02	−1.11	−3.25	1.04	CBD
					0.19*	0.04	0.04	0.20	−0.56	0.95	Actor-only

Note. C-I B – Cost-inflicting behaviors; B-P B – Benefit-provisioning behaviors; OMR – Overall mate retention; E – Extraversion; A – Agreeableness; C – Conscientiousness; N – Neuroticism; O – Openness; W – women; M – men; r_p – correlation between women's and men's predictor variables; r_{ce} – correlation between errors; χ^2 – chi square; β – beta coefficient; R^2 – coefficient of determination; k – ratio of the partner effect to the actor effect; 95% CI – confidence interval for k (Monte Carlo sampling); LL – lower limit of 95% CI; UL – upper limit of 95% CI; CBD – cannot be determined.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

[a] Degrees of freedom for all tests are 6.

indicates that neuroticism is most important for affective outcomes such as sexual satisfaction and negative emotions, whereas its associations with sexual behaviors such as number of lifetime sexual partners and sexual infidelity are very small (Allen & Walter, 2018). Individuals higher on neuroticism also may be prone to interpret ambiguous relationship situations negatively (Finn et al., 2013). These processes negatively affect a partner's relationship satisfaction and signal a higher probability of relationship dissolution, which may increase their partner's MR.

The finding of consistent and negative actor effects of men's agreeableness on cost-inflicting behaviors are in line with the results of previous studies (de Miguel & Buss, 2011; Holden et al., 2014; McKibbin et al., 2014; Sela et al., 2015), and in accord with the cooperative nature of agreeableness. Less frequent use of cost-inflicting behaviors in men whose partners are more conscientious was expected because highly conscientiousness individuals are more self-controlled and responsible. These results are in line with those showing that conscientiousness, along with agreeableness, is a large and negative predictor of sexual infidelity (Allen & Walter, 2018).

Dyadic patterns indicate that an actor-only pattern plausibly described the effects of men's self-reported neuroticism and agreeableness on their cost-inflicting behaviors, whereas couple and actor-only patterns plausibly described the effects of women's self-reported neuroticism and agreeableness on the same MR domain. Partner-reports resulted in larger partner effects and, therefore, the couple dyadic pattern plausibly described the effects of men and women's neuroticism on cost-inflicting behaviors. Generally, men's cost-inflicting behaviors was more affected by their own traits, whereas women's cost-inflicting behaviors was more relational, i.e. affected both by their own as well as their partner's personality traits.

The effects of openness were much weaker and inconsistent, i.e. none of them generalized across both data sources, whereas extraversion did not demonstrate any significant effects. Along with consistent effects, neuroticism and agreeableness also exerted several inconsistent actor and partner effects on MR behaviors. Except in two cases, all other inconsistent actor effects were obtained only by self-reports and all partner effects only by partner-reports and, therefore, it is unclear whether and to what extent the demonstrated effects were attributable to shared method variance. Exceptions are two effects that included different raters of personality traits and MR behaviors—a positive actor effect of women's partner-reported neuroticism on women's benefit-provisioning behaviors and a positive partner-effect of men's self-reported neuroticism on women's benefit-provisioning behaviors. Therefore, a woman will use benefit-provisioning behaviors more frequently when her partner rates her as well as himself to be higher on neuroticism. These results demonstrate that neuroticism is important not only for more costly, but also for more benign forms of MR behaviors. Additionally, the actor effect of women's partner-reported neuroticism suggests that self-ratings and partner-ratings of personality traits are not redundant, but instead that each can predict different aspects of behavior.

4.1. Limitations and future research

This study has several limitations that could provide a guide to future research. One limitation concerns limited generalizability of the results due to cultural specificities, length of a relationship, and its type. Future studies should include not only partners in current relationships

Table 2
APIMs for partner-reported five factor personality traits predicting MR domains and overall MR.

Pred.	Crit.	r_p	r_{ce}	Dist. test (χ^2)[a]	Actor effect (β) W ➔ W M ➔ M	Partner effect (β) M ➔ W W ➔ M	R^2	k	95%CI LL	95%CI UL	Dyadic pattern
E	C-I B	−0.07	0.37***	19.95**	−0.08	0.05	0.01	−0.63	−2.75	1.50	CBD
					−0.01	0.02	0.00	−1.54	−27.22	24.14	CBD
A		0.01	0.32***	17.59**	−0.13	−0.18*	0.05	1.52	−0.55	3.59	Couple and Actor-only
					−0.23**	−0.16*	0.08	0.65	−0.04	1.35	Couple and Actor-only
C		0.02	0.35***	20.13**	−0.10	−0.06	0.01	0.59	−0.98	2.16	Couple and Actor-only
					−0.06	−0.20**	0.05	4.10	−6.71	14.91	CBD
N		−0.06	0.30***	41.46***	0.24***	0.23***	0.10	0.87	0.18	1.55	Couple
					0.24***	0.19**	0.09	0.89	0.08	1.69	Couple
O		0.18*	0.36***	19.38**	−0.04	−0.04	0.00	1.01	−4.60	6.62	CBD
					−0.02	0.02	0.00	−1.08	−11.60	9.44	CBD
E	B-P B	−0.08	0.37***	9.18	0.03	0.08	0.01	2.43	−13.40	18.10	CBD
A		0.01	0.37***	2.90	−0.05	−0.05	0.01	0.92	−3.68	5.47	CBD
C		0.02	0.37***	5.03	−0.06	0.01	0.00	−0.09	5.86	1.69	CBD
N		−0.05	0.34***	35.92***	0.20**	0.13	0.05	0.62	−0.14	1.37	Couple and Actor-only
					0.02	0.27***	0.07	18.48	−138.75	175.70	CBD
O		0.17*	0.37***	6.61	0.03	0.11*	0.02	3.56	−18.19	23.87	CBD
E	OMR	−0.08	0.42***	11.51	−0.02	0.07	0.01	−4.75	−31.58	39.94	CBD
A		0.01	0.39***	6.92	−0.13*	−0.12*	0.03	0.94	0.24	1.61	Couple
C		0.02	0.41***	8.93	−0.07	−0.08	0.01	1.06	−0.63	2.97	Couple and Actor-only
N		−0.05	0.37***	36.24***	0.24***	0.21**	0.10	0.77	0.12	1.42	Couple
					0.14*	0.26***	0.08	2.06	−0.20	4.32	Couple and Actor-only
O		0.18*	0.41***	11.07	0.01	0.05	0.00	8.03	−29.23	30.08	CBD

Note. C-I B – Cost-inflicting behaviors; B-P B – Benefit-provisioning behaviors; OMR – Overall mate retention; E – Extraversion; A – Agreeableness; C – Conscientiousness; N – Neuroticism; O – Openness; W – women; M – men; r_p – correlation between women's and men's predictor variables; r_{ce} – correlation between errors; χ^2 – chi square; β – beta coefficient; R^2 – coefficient of determination; k – ratio of the partner effect to the actor effect; 95% CI – confidence interval for k (Monte Carlo sampling); LL – lower limit of 95% CI; UL – upper limit of 95% CI; CBD – cannot be determined.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

[a] Degrees of freedom for all tests are 6.

but also those who broke up, because it is possible that the effects of some personality traits (e.g. neuroticism) on MR would be even stronger, and that they may have caused breakup. Another limitation is the reliance on a cross-sectional design that precludes causal interpretations. Future research should consider measuring MR at several measurement points, thus enabling the understanding the effects of personality traits on the changes in MR. Additionally, the five-factor personality traits were measured as unidimensional constructs, although they are often recognized as multidimensional. Measures that include facets may generate additional insight into the potential mechanisms underlying the relationships between personality traits and MR behaviors, as well as better understanding of the inconsistent results from previous studies.

4.2. Conclusions

A key contribution of this research is that it is the first to examine the relationships between personality traits and MR behaviors from a dyadic perspective. The findings demonstrate that the “Big Three” personality traits, especially neuroticism, predict not only own MR behaviors but also partner's MR behaviors. These results are not only theoretically, but also methodologically important because several actor and partner effects were not artifacts of common method variance. Consistent actor effects may help to clarify the inconsistencies in previous research because they relied mainly upon self-reports, and thus were influenced by an unknown level of method variance. Therefore, our results are better approximation of the effects of personality traits on MR. The results showing that men's MR is more under the impact of their own personality traits, whereas women's MR under the influence of their own as well as their partner's personality traits may have theoretical and practical implications. It seems that discriminative and contextual nature of women's sexuality is manifested also in their MR behavior as they pay more attention to their partner's personality and the relationship quality than men. Accordingly, therapeutic intervention focusing on relationship problems should be alert to these sex differences.

CRediT authorship contribution statement

Igor Kardum: Conceptualization, Methodology, Formal analysis, Resources, Writing - original draft, Writing - review & editing, Visualization, Supervision, Project administration, Funding acquisition. **Jasna Hudek-Knezevic:** Formal analysis, Resources, Writing - original draft, Writing - review & editing, Visualization, Supervision, Project administration. **Nermina Mehić**: Data curation, Writing - original draft, Writing - review & editing, Visualization. **Todd K. Shackelford:** Writing - original draft, Writing - review & editing.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.paid.2020.110069.

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