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Supplementary: A conceptual replication of aspirational assortative preferences for the Big Five personality traits

Several studies have investigated aspirational assortative preferences for basic personality traits (Botwin et al., 1997; Dijkstra & Barelds, 2008; Figueredo et al., 2006), reporting significant correlations between self-ratings and ideal partner ratings for some traits. According to previous studies, self-ratings and ideal partner ratings exhibited correlations (r-values) ranging from .24 to .81 for Openness, .34 to .61 for Conscientiousness, .30 to .60 for Extraversion, .30 to .73 for Agreeableness, and .20 to .52 for Neuroticism (Botwin et al., 1997; Dijkstra & Barelds, 2008; Figueredo et al., 2006). Moreover, according to Figueredo et al. (2006), in a study of aspirational assortative preference, mean differences between self-ratings and ideal partner ratings were .03 for Openness, .32 for Conscientiousness, .08 for Extraversion, .24 for Agreeableness, and -.79 for Neuroticism. Here we conceptually replicated Figueredo et al. (2006).

Methods

*Participants*

In total, 185 Japanese undergraduates (101 females, 84 males; mean age: 19.3 ± 1.3 years) at two universities participated. They responded to a paper and pencil questionnaire in classrooms and received no monetary reward for their involvement. Informed consent was obtained from all participants included in the study.

*Measures*

BFS-SELF: We employed a short form of the Japanese Big-Five Scale (BFS), developed by Namikawa et al. (2012) based on the Big-Five Scale of Personality Trait Adjectives (Wada, 1996) and used commonly in Japan. The short form version contains 29 statements rated using a five-point Likert scale ranging from not applicable (1) to applicable (5). The scale demonstrates sufficient reliability and validity despite the reduced number of items.

BFS-IDEAL: The instrument used to investigate personality traits of the “ideal romantic partner” is an adapted form of the original short form of the Japanese BFS. To create a questionnaire concerned specifically with an individual’s ideal romantic partner, the question “To what extent do you think these items apply to yourself?” was replaced with “To what extent do these items apply to your ideal long-term partner?”.

These scales, as well as MFQ-SELF and MFQ-IDEAL (see the main text), were bound into a booklet and administered to participants. It was emphasized in the instructions that the participants should consider their own ideal romantic partner, rather than that which they believed the rest of society might consider ideal. The MFQ-IDEAL was completed first, followed by the BFS-IDEAL, MFQ-SELF, and then the BFS-SELF. The study was approved by the Bioethics Review Committee of Nagoya Institute of Technology (No. 30-001).

*Statistical analyses*

Bivariate correlations between self and ideal romantic partner ratings were calculated for all factors. Self-scores were subtracted from those of the ideal romantic partner factors and tested against zero to identify discrepancies between the ratings of self and ideal romantic partners. A power analysis using G\*Power 3.1 showed that a sample of 84 participants was required to compare the correlation with 0, given an effect size of 0.3 (medium; Cohen, 1992), power of .80 and an alpha of .05 and that a sample of 64 participants in each group was required to detect a between-group difference, given an effect size of 0.5 (medium; Cohen, 1992), a power of .80 and an alpha of .05 (t-test). Thus, our sample size was sufficient for the analyses performed.

Results

Females evaluated their ideal partner as more agreeable than did males (Table S1), and females assessed themselves as more extraverted and neurotic than did males (Table S2). Correlations between self and ideal romantic partner ratings on these same factors were statistically significant, except for Neuroticism (Table S3). In females, the correlation for Neuroticism was significant, while it was almost zero in males. In contrast, the correlation for Agreeableness was significant only in females. Differences between the scores on the self-rated factors and those of the ideal romantic partner factors deviated significantly from zero for all of the factors (Table S4). Participants sought partners who had somewhat higher scores than themselves for Openness, Conscientiousness, Extraversion, and Agreeableness, and somewhat lower scores for Neuroticism. The deviation in Extraversion scores between self-rated and ideal romantic partner scores was significantly greater in males than females, while those for Neuroticism and Agreeableness were greater in females (Table S4).

Table S1. Scores of each factor in BFS-IDEAL

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cronbach’s alpha | Female | Male |  |  | Cohen’s *d* | All |
|  | M±SD | M±SD | *t* | *df* | M±SD |
| Openness | .70 | 3.7±0.5 | 3.7±0.5 | -0.48 | 176.45 | 0.00 | 3.7±0.5 |
| Conscientiousness | .73 | 3.7±0.5 | 3.6±0.6 | -1.43 | 173.43 | 0.18 | 3.7±0.6 |
| Extraversion | .77 | 3.9±0.7 | 4.0±0.6 | 0.40 | 182.86 | 0.15 | 4.0±0.6 |
| Agreeableness | .76 | 4.6±0.4 | 4.3±0.5 | -3.86\*\*\* | 159.51 | 0.67 | 4.4±0.5 |
| Neuroticism | .73 | 2.3±0.6 | 2.4±0.5 | 1.40 | 182.96 | 0.18 | 2.3±0.6 |

Note. Degree of freedom was adjusted because Welch t-test was employed. \*\*\* < .001

Table S2. Scores of each factor in BFS-SELF

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cronbach’s alpha | Female | Male |  |  | Cohen’s *d* | All |
|  | M±SD | M±SD | *t* | *df* | M±SD |
| Openness | .74 | 3.0±0.7 | 3.1±0.7 | 0.99 | 177.55 | 0.14 | 3.0±0.7 |
| Conscientiousness | .79 | 2.6±0.6 | 2.6±0.8 | 0.50 | 159.55 | 0.00 | 2.6±0.7 |
| Extraversion | .87 | 3.3±0.9 | 3.0±1.0 | -2.17\* | 176.76 | 0.32 | 3.2±1.0 |
| Agreeableness | .73 | 3.3±0.7 | 3.4±0.7 | 1.79 | 179.11 | 0.14 | 3.3±0.7 |
| Neuroticism | .85 | 3.8±0.9 | 3.4±0.9 | -2.98\*\* | 178.20 | 0.44 | 3.6±0.9 |

Note. Degree of freedom was adjusted because Welch t-test was employed. \*< .05, \*\*< .01

Table S3. Correlation between BFS-SELF and BFS-IDEAL

|  |  |  |  |
| --- | --- | --- | --- |
|  | Female | Male | All |
| Openness | 0.37\*\*\* | 0.43\*\*\* | 0.39\*\*\* |
| Conscientiousness | 0.33\*\*\* | 0.36\*\*\* | 0.34\*\*\* |
| Extraversion | 0.51\*\*\* | 0.46\*\*\* | 0.48\*\*\* |
| Agreeableness | 0.17 | 0.30\*\* | 0.18\* |
| Neuroticism | 0.23\* | 0.03 | 0.12 |

\* < .05, \*\* < .01, \*\*\* < .001

Table S4. Mean differences between self and ideal romantic partner on each personality factor

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Female | Male  |  |  | Cohen’s *d* | All |
|  | M±SD | M±SD | *t* | *df* | M±SD |
| Openness | 0.74±0.68\*\*\* | 0.62±0.66\*\*\* | -1.25 | 179.33 | 0.18 | 0.69±0.67\*\*\* |
| Conscientiousness | 1.17±0.69\*\*\* | 1.00±0.79\*\*\* | -1.51 | 165.47 | 0.23 | 1.09±0.74\*\*\* |
| Extraversion | 0.61±0.84\*\*\* | 0.95±0.86\*\*\* | 2.72\*\* | 175.39 | 0.40 | 0.76±0.86\*\*\* |
| Agreeableness | 1.30±0.75\*\*\* | 0.86±0.70\*\*\* | -4.01\*\*\* | 179.92 | 0.60 | 1.10±0.76\*\*\* |
| Neuroticism | -1.51±0.95\*\*\* | -1.01±0.99\*\*\* | 3.48\*\*\* | 174.01 | 0.52 | -1.30±1.0\*\*\* |

Note. Degree of freedom was adjusted because Welch t-test was employed. \*\* < .01, \*\*\* < .001

Discussion

The results for the Big Five scale were similar to those of previous studies, with some minor differences. For example, the correlations between self and ideal romantic partner ratings for Agreeableness (.18) and Neuroticism (.12) were lower than in previous studies. A possible reason for this is sex differences. Regarding Agreeableness, correlations between self and ideal romantic partner ratings were not significant in females, and weaker than those in males. Female participants gave more weight to Agreeableness in the ideal romantic partner than did males, which was consistent with previous studies indicating that agreeableness is one of the most strongly sought traits in long-term mates and one of the best predictors of a good partner (Miller, 2007). Indeed, all of the female participants scored above 3.5 with respect to the level of Agreeableness of an ideal partner and 20.8% of them scored above 5.0 (highly desirable). On the other hand, only 40.6% of female participants scored above 3.5 with respect to their self-rated Agreeableness, and none of them had a self-rating of 5.0. Such a ceiling effect might have resulted in the low correlations between self-rated and ideal partner Agreeableness in females. Regarding Neuroticism, the correlation between the self-rated and ideal partner rating was non-significant in males, and lower than in females. Although the ceiling effect seen for Agreeableness was not noted for Neuroticism, male Neuroticism ratings on the BFS-SELF were lower than those of females, while there was no sex difference in BFS-IDEAL Neuroticism scores. The low self-rated Neuroticism might be responsible for the weak correlations between self-rated and ideal partner ratings for this trait.

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