Personality and Individual Differences 49 (2010) 827–830

Contents lists available at ScienceDirect

Personality and Individual Differences

journal homepage: www.elsevier.com/locate/paid

Short Communication

Is spousal similarity for personality a matter of convergence or selection?

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ARTICLE INFO

Article history:
Received 6 April 2010
Received in revised form 6 July 2010
Accepted 13 July 2010
Available online 3 August 2010

Keywords:
Personality similarity
Assortative mating
Spousal convergence

ABSTRACT

We investigated whether spousal similarity for personality traits results from convergence (i.e., couples becoming more similar to one another over time) or selection (i.e., individuals selecting partners with similar traits) in a sample of 1296 married couples. Personality was assessed using the Multidimensional Personality Questionnaire. We evaluated whether similarity increased with increasing length of marriage. Evidence of spousal convergence was inconsistent across analyses, arguing against this mechanism as a compelling explanation for spousal similarity. Accordingly, selection processes may better explain spousal similarity in these data. The one exception might be for aggressive aspects of personality.

1. Introduction

Although the degree of spousal similarity for broad personality traits such as extraversion and neuroticism is somewhat inconsistent, the similarity coefficients are generally positive (e.g., Gattis, Berns, Simpson, & Christensen, 2004; Humbad, Donnellan, Iacono, & Burt, 2010; McCrae et al., 2008; Watson et al., 2004). This raises the important question as to whether this similarity results from selection processes or spousal convergence over time. These processes have important, but very different, implications. Most notably, if partners become more or less similar to each other over time, it would support the notion that environmental factors (i.e., spouses) shape the course of adult personality development. However, evidence for any systematic social effects on personality development has a contentious status in the current literature (e.g., McCrae & Costa, 2008, p. 168). Alternatively, observed spousal similarity could be a function of selection processes, pointing to assortative mating (i.e., the tendency for individuals to select partners resembling them based on certain characteristics) for personality traits. Identification of this latter process would also be important, as assortative mating could influence the intergenerational transmission of certain personality traits (e.g., Loehlin, 1992) and thereby violate common assumptions in many behavioral genetic models.

The current literature generally provides weak support for spousal convergence as an explanation for spousal similarity (e.g., Barelds, 2005; Caspi, Ozer, & Herbener, 1992; Luo & Klohnen, 2005; Watson et al., 2004). For example, Luo and Klohnen (2005) and Watson et al. (2004) found that newlyweds, who had little chance to become more similar to one another over time, were similar on various attitudes and personality related dimensions, pointing to assortative mating rather than convergence. Caspi et al. (1992) found that over a 20 year time period couples did not become increasingly similar in domains such as personal values and attitudes towards marriage. Finally, other researchers have found that length of marriage does not moderate spousal similarity, again providing little support for the convergence hypothesis (Buss, 1984; Caspi et al., 1992; Luo & Klohnen, 2005; Watson et al., 2004).

The current paper aims to extend existing literature by testing associations between length of marriage and spousal similarity in a large cross-sectional sample. To do so, we revisited a sample of over 1200 married couples assessed as part of one of three independent studies at the Minnesota Center for Twin and Family Research and first reported in Humbad et al. (2010). We examine a broad range of personality traits in order to determine potential effects of convergence that may only be evident at a lower-order scale level (e.g., McCrae et al., 2008). Although previous research has primarily failed to support the convergence hypothesis, the current study makes use of a very large sample size and assesses a variety of personality traits and thereby offers an important context to evaluate this question.

2. Method

Although most of the 1805 couples from Humbad et al. (2010) had data on at least one spouse, we limited our sample to the

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doi:10.1016/j.paid.2010.07.010

1296 couples with personality data on both spouses and data on length of marriage. Couples were married an average of 19.8 years (*SD* = 5.4), with a range of 2–39 years (3.8% had been married fewer than 10 years, and 17.3% had been married fewer than 15 years). Several analyses were conducted to assess whether or not personality similarity increases with increasing length of marriage. We first compared zero-order spousal similarity correlations to their respective partial correlations (i.e., controlling for years married). Second, we correlated the absolute value of the difference between husbands and wives on all personality dimensions with length of marriage. Finally, we examined the effect of length of marriage using a regression-based strategy. Analyses were conducted using linear, quadratic, and cubic functions of years married (centered) predicting the absolute value difference score for all personality variables (difference between the centered scores).

Personality was assessed using a 198-item version of the Multidimensional Personality Questionnaire (MPQ; Tellegen, 1982), which contains 10 primary scales that coalesce into three higher-order factors: Positive Emotionality (i.e., the tendency to experience positive emotions), Negative Emotionality (i.e., the tendency to experience negative emotions), and Constraint (i.e., behavioral restraint). The Positive Emotionality primary scales include Well-being (e.g., optimistic, happy disposition), Social Potency (e.g., likes being in charge), Achievement (e.g., ambitious, persistent), and Social Closeness (e.g., sociable, affectionate). The Negative Emotionality primary scales include Stress Reaction (e.g., unaccountable mood changes, easily upset), Aggression (e.g., physically violent), and Alienation (e.g., estrangement). Lastly, the Constraint scales include Control (e.g., cautious, plans ahead), Harm Avoidance (e.g., avoids risk), and Traditionalism (e.g., conventionality). Absorption (e.g., responsive to sensory experiences), the final primary scale, does not have high loadings on any higher factor.

Agentic (i.e., high scorers tend to be ambitious and socially dominant; includes the Achievement and Social Potency scales) and Communal (i.e., high scorers tend to have higher interpersonal connectedness and experience positive emotions from close relationships; includes the Well-being and Social Closeness scales) sub-factors of Positive Emotionality were used because previous studies have hinted that associations with marital quality tend to differ between the two (Donnellan, Assad, Robins, & Conger, 2007; Humbad et al., 2010; Robins, Caspi, & Moffitt, 2000). All 11 lower-order scales as well as their respective higher-order factors were examined in the current sample because previous research has suggested spousal similarity is greater for lower-order personality scales rather than higher-order domains (i.e., McCrae et al., 2008). Alphas in these data ranged from .82 to .85.

3. Results and Discussion

Table 1 summarizes all analyses examining whether spousal similarity is associated with length of marriage. The first column presents zero-order spousal similarity correlations between husbands and wives for all MPQ superfactors and primary scales. As shown in Table 1, there is statistically significant spousal similarity for all superfactors and the majority of lower-order scales. Of interest, some lower-order scales demonstrated a higher degree of similarity (e.g., Traditionalism) than their corresponding higher-order scales (e.g., Constraint), a pattern consistent with the McCrae and Costa (2008) finding that evidence of spousal similarity might be stronger for lower-order scales than higher-order scales. These correlations were then compared to their respective partial correlations (i.e., controlling for years married; the second column of Table 1). No partial correlation differed from its respective zero-order correlation by more than .01, providing little evidence spousal similarity changed when controlling for years married.

In the third column of Table 1, the absolute value difference between husband and wife scores on all dimensions was correlated with length of marriage. As seen there, only three correlations were statistically significant: Social Closeness, Aggression, and Stress Reaction, such that smaller differences between husbands and wives (i.e., greater similarity) were associated with a longer length of marriage. These suggest some spousal convergence for certain lower-order scales.[1]

Finally, we conducted a series of regression analyses using linear, quadratic, and cubic functions of years married (centered) to predict the absolute value difference score between husbands and wives for all variables (difference between the centered scores). These analyses examined the possibility of a non-linear pattern of spousal convergence (e.g., for the quadratic term, spouses would become more similar over time to a certain point and then decrease in similarity). Quadratic and cubic functions were uniformly non-significant, providing no evidence of non-linear effects of spousal convergence, and were therefore omitted from Table 1. Linear functions, denoted in the final column of Table 1, were also non-significant with the exception of Aggression ($b = -.09$, $B = -.11$, $t(1292) = -2.5$, $p < .05$), in which greater years married predicted greater similarity (or a smaller difference score). This finding offers further support for spousal convergence for Aggression.

Taken together, the above evidence suggests that for most traits, spousal convergence does not explain spousal similarity. There was little consistency across the various results, suggesting that any positive evidence for increasing spousal similarity with length of marriage is sporadic and restricted to a particular way of operationalizing similarity. Moreover, given the number of analyses conducted, some of the significant findings would be expected by chance alone. Aggression, however, may be an exception to this general conclusion as the correlation between the difference score and marriage length was significant, and there was some indication a longer marriage length predicted a smaller difference score. It is possible that individuals might reinforce each other's aggressive tendencies due to hostile interpersonal exchanges (e.g., Anderson, Buckley, & Carnagey, 2008) thereby promoting greater convergence over time. Assuming this convergence effect can be replicated, this would be an important topic for future study.

An important caveat in the current analyses is that we did not have large numbers of recently married couples (i.e., most couples were married 11–25 years). Although it is possible spousal convergence occurs early in marriage, spousal similarity is also present in newlyweds, suggesting similarity precedes the marriage (e.g., Luo & Klohnen, 2005; Robins et al., 2000; Watson et al., 2004). Even in a sample of young adults, Donnellan et al. (2007) found similarly sized correlations for Communal Positive Emotionality, Negative Emotionality, and Constraint (*r*s = .13, .17, and .22, respectively), suggesting young adults and those in established marriages have similar levels of similarity on personality dimensions. Thus, this concern might not be such a limiting factor for these analyses.

[1] A number of methodological issues are involved in calculating and testing dyadic similarity indexes (see Kenny, Kashy, & Cook, 2006). Specifically, although difference scores may capture level similarity (similarity in absolute trait scores of partners), they cannot capture shape similarity across dimensions of personality. Although perhaps more conceptually difficult to understand, this aspect of similarity is captured by the correlation between two spouses' personality profiles (i.e., profile correlations). To calculate profile correlations, individual trait scores were first mean-deviated (following Kenny et al., 2006) and then a correlation was calculated between husbands' and wives' scores on the MPQ superfactors for each couple (i.e., all four wives' superfactor scores were correlated with all four husbands' superfactor scores). This procedure was repeated for the 11 lower-order scales. However, neither of these profile correlations were correlated with length of marriage (both *r*s = .04, $p > .05$).