The Dynamics of Personality and Relationship Longevity: A Survey on Agreeableness, Neuroticism, Satisfaction, and Duration

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Psych 205: Research Methods in Psychology

Oct 27, 2023

Abstract

Conducted with a cohort of 145 predominantly college-aged young adults, this study

investigates the relationship between the personality traits of agreeableness and neuroticism,

relationship satisfaction, and their impacts on relationship duration. Employing two linear

regression models, the analysis reveals that there are no statistically significant correlations

between varying levels of agreeableness or neuroticism, satisfaction, and the outcomes of

relationship duration. Additionally, no significant relationships were found between the

personality traits of agreeableness and neuroticism and relationship satisfaction. These findings

illustrate potential differences in personality, environment, and social norms within the context

of age, socioeconomic status, educational status, and gender. The absence of significant

correlations emphasizes the importance of considering multifaceted factors when

understanding mutual perceptions of relationship satisfaction, while also challenging

traditional assumptions regarding the predictive power of these personality traits.

Introduction

Relationships are fundamental to human beings, and understanding which factors elicit or hinder relationship success and longevity has been a focus for researchers.

The Five-Factor Model, also known as The Big Five Personality Traits—extraversion, agreeableness, openness, conscientiousness, and neuroticism—coined by Fiske in 1949, has been widely used and studied both inside and outside of psychology to help individuals of different personalities explore relationships and predict life outcomes (McCrae & John, 1992).

Agreeableness refers to the level of empathy, cooperativeness, and willingness to compromise an individual reflects. It is defined as being "likable, pleasant, and harmonious in relations with others" (Graziano & Tobin, 2009). This prosocial, moderator-like personality trait has been crucial in relationship research. In a meta-analysis conducted by Malouff et al. (2010) that included 19 samples with a total of 3,848 participants, researchers found that agreeableness has a significant correlation with higher marital satisfaction, as agreeable individuals are often better at conflict resolution due to their ability to empathize, listen, and compromise for the well-being of their partners. Tov et al. (2014) conducted three diary studies and found that agreeableness had positive effects on family and daily relationships, as it indirectly predicted positive exchanges through greater trust and fewer negative exchanges.

Neuroticism refers to emotional instability, anxiety, and vulnerability to stress. The presence of neuroticism can often lead to more frequent conflicts, mistrust, and decreased overall relationship quality (Widiger & Oltmanns, 2017). In cross-sectional longitudinal research on marriage conducted by Karney & Bradbury (1995) to understand how marriages develop, succeed, and fail, researchers found that neuroticism has the greatest effect on marital outcomes

compared to the other four personality traits; traits associated with neuroticism can lead to frequent conflicts and decreased relationship quality. A study by Neyer & Asendorpf (2001) looked at how individual differences in personality traits predicted social relationships in 489 young adults. The study found that personality effects on relationships were significant: neuroticism predicted higher levels of insecurity and a decrease in closeness with partners. However, neuroticism was also affected by relationship experiences, as individuals who experienced insecurity in relationships later had higher levels of neuroticism.

A study that explored marriage duration, personality traits, gender, and conflict resolution strategies by Igbo et al. (2015) found a significant relationship between personality traits and conflict resolution strategies. This finding was consistent with the study by Antonioni et al. (1998), who found that personality type is a predictive factor of conflict management styles. Individuals with higher levels of agreeableness were attributed to trust and altruism, while individuals with higher levels of neuroticism were associated with higher levels of anxiety and depression. All three factors have a significant relationship with conflict resolution strategies due to their strong prediction of spouses' conflict management styles.

The maturity principle of personality development suggests that individuals demonstrate higher levels of agreeableness and lower levels of neuroticism as they age (Roberts et al., 2008). A possible explanation for this phenomenon is the age-related social roles that individuals need to fulfill as they grow older.

Connecting previous research on the positive effects of higher levels of agreeableness and lower levels of neuroticism on relationships—primarily due to conflict resolution styles and levels of trust, insecurity, and closeness—I am curious about the effects of personality traits and

relationship satisfaction on relationship duration. In this study, I will observe the effects of agreeableness, neuroticism, and relationship satisfaction on relationship duration, along with the interaction between personality traits and relationship satisfaction.

I predict that higher levels of neuroticism will correlate with lower levels of relationship satisfaction and relationship duration. In contrast, higher levels of agreeableness will correlate with higher levels of relationship satisfaction and longer relationship duration. Lastly, higher levels of relationship satisfaction will correspond with longer relationship duration, higher levels of agreeableness, and lower levels of neuroticism.

Methods

Participants

A total of 149 participants, with an average relationship duration of 16.4 months (ranging from 1 to 78 months, SD = 14.7), were recruited primarily from Midwest undergraduate universities. The average age was 21.1 years (ranging from 18 to 25, SD = 1.3). The sample consisted of 37.2% males, 58.6% females, and 4.2% non-binary or other genders. Additionally, 73.7% of the sample identified as heterosexual, 16.6% as bisexual, 5.5% as homosexual, and 4.2% as having other sexual orientations. In terms of racial and ethnic backgrounds, 40.2% of the participants identified as White, 6.9% as Black, 27.1% as Asian, 13.9% as Latino, and 11.9% as mixed race.

Analyses were conducted with slight adjustments to the collected data. Three participants were omitted from the study because they did not report their relationship duration, which is the dependent variable. Data analysis could not be conducted with missing data, as it

could potentially bias the overall correlation and interaction results.

Measures

The Investment Model Scale (IMS; Rusbult et al., 1998)

The IMS is an instrument used to measure commitment level, satisfaction level, quality of alternatives, and investment size in a relationship. Rusbult et al. (1998) demonstrated that the Investment Model Scale exhibits good internal structure, reliability, high item-total correlations, and strong alpha coefficients. Furthermore, the subscales also demonstrate good internal consistency, affirming the accuracy of the independent constructs employed in this study. In this study, the IMS was employed to assess relationship satisfaction. Specifically, five of the six questionnaires from the Investment Model Scale were utilized to gauge satisfaction levels.

Big Five Inventory - 2 (BFI-2; Soto & John, 2017)

The BFI-2 is employed for assessing the Big Five personality domains. It is a revised version of the BFI, which utilizes 44 short and easily comprehensible phrases for each domain in personality research. For this study, I specifically selected questions designed to measure levels of neuroticism and agreeableness. These questions were formulated directly based on the domains and facets recommended by the BFI-2. Specifically, for agreeableness, the questions encompassed items related to compassion, respectfulness, and trust, while for neuroticism, they addressed anxiety, depression, and emotional volatility.

In this study, certain measures of neuroticism were reverse-coded. For example, assigning a value of 5 on the 5-point Likert scale for the question "Is relaxed, handles stress well" signifies lower neuroticism. Consequently, the reverse coding procedure was implemented to ensure that higher scores consistently represent higher levels of agreeableness or neuroticism in the analysis.

Data Analytic Plan

Analyses were conducted using Jamovi, a statistical software package optimized for statistical analysis. A linear regression model was constructed to assess the correlation between two independent variables, personality trait and relationship satisfaction, and the dependent variable, relationship duration.

For this study, two models were developed. The first model aims to examine the interaction between neuroticism and relationship satisfaction and their combined impact on relationship duration. The second model aims to investigate the interaction between agreeableness and relationship satisfaction and their combined influence on relationship duration.

The correlation coefficient, Pearson's r, will be used to assess the strength of the observed relationships. R^2 will be used to gauge how well the regression model fits the data, indicating the proportion of variance in the dependent variable explained by the independent variable. A coefficient estimate will be calculated for each predictor to represent the magnitude and direction of the effects that the respective independent variable has on the dependent

variable. The standard error will be calculated to assess the variability and uncertainty in the coefficient estimates. A t-value will be computed to measure how many standard errors the coefficient estimate deviates from zero. Lastly, p-values will be calculated to determine the statistical significance of the relationships being examined.

Results

Results from the linear regression model of neuroticism, satisfaction, and duration demonstrate no significant relationship between neuroticism and relationship duration (p = .305). The model presents a positive coefficient estimate (Estimate = 9.72) for average neuroticism levels and relationship duration, indicating a positive relationship. The standard error is also high (SE = 9.45), indicating that the estimate is less precise and has high variability as an estimation of the population mean. The t-value is 1.029, indicating a small positive relationship between the independent and dependent variables.

In the same model, there is also no significant relationship between satisfaction and relationship duration (p = .106), although it is more significant than neuroticism as a predictor. The model illustrates a positive coefficient estimate (Estimate = 7.47) for average satisfaction levels and relationship duration, indicating a positive relationship. The standard error is lower than the coefficient estimate (SE = 4.59), indicating that the estimate is more precise and has lower variability as an estimation of the population mean. The t-value is 1.628, indicating a slight positive relationship between the independent and dependent variables.

The calculated p-value (p = .145) indicates no significant relationship between the combination of average satisfaction and average neuroticism with relationship duration. When

calculating the combination of average satisfaction and average neuroticism as predictors, there is a negative coefficient estimate (Estimate = -2.22), indicating a negative relationship. The standard error is 1.52, and the t-value is -1.466, indicating a slight negative relationship between the independent and dependent variables.

Overall, the linear regression model for the combination of average satisfaction and average neuroticism as predictors indicates a relatively weak positive correlation (R = .232). The R^2 value is .0540, indicating that 5.4% of the total variability in the dependent variable could be explained by the independent variables, which is a relatively small proportion. There could be a high level of unexplained variability, possibly due to random variation or experimental errors.

In the model exploring agreeableness, satisfaction, and duration, the calculated p-value (p = .993) indicates no significant relationship between agreeableness and relationship duration. Correlation results demonstrated a negative coefficient estimate (Estimate = -0.110) for average agreeableness levels and relationship duration, indicating a negative relationship. The standard error is high (SE = 13.16), indicating that the estimate is less precise and has high variability as an estimation of the population mean. The t-value is -0.00838, indicating that the observed effect between the independent and dependent variables may not be significant.

For average satisfaction levels and relationship duration, the calculated p-value (p = .967) indicates no significant relationship between the two variables. There is a negative coefficient estimate (Estimate = -0.345), indicating a negative relationship. The standard error is higher than the coefficient estimate (SE = 8.23), indicating that the estimate is not precise and has high variability as an estimation of the population mean. The t-value is -0.0419, indicating that the observed effect between the independent and dependent variables may not be significant.

The calculated p-value (p = .145) indicates no significant relationship between the combination of average satisfaction and average agreeableness with relationship duration. There is a small positive coefficient estimate (Estimate = 0.390), indicating a neutral to positive relationship. The standard error is 2.1, indicating that the estimate is not precise and has high variability as an estimation of the population mean. The t-value is 0.186, indicating that the observed effect between the independent and dependent variables may not be significant.

Overall, the linear regression model for the combination of average satisfaction and average agreeableness as predictors indicates a weak positive correlation (R = .115). The R^2 value is .00133, indicating that 1.33% of the total variability in the dependent variable could be explained by the independent variables, which is a small proportion. There could be a high level of unexplained variability, possibly due to random variation or experimental errors.

Discussion

Previous research has found a consistent positive correlation between agreeableness and relationship satisfaction and a negative correlation between neuroticism and relationship satisfaction.

Neuroticism was found to have the biggest effect on relationship quality and stability out of any personality characteristics (Widiger & Oltmanns, 2017). This could be due to neurotic individuals expressing more emotional instability, insecurity, and negativity. In relationships, Neurotic individuals could have challenges communicating when problems arise leading to patterns of mistrust.

In this survey, there was no significant relationship between levels of neuroticism,

relationship satisfaction, and relationship duration. One explanation for this result could be the maturity principle of personality development, where younger individuals gradually reduce their levels of neuroticism and increase their levels of agreeableness as they age, most likely due to age-related social roles (Roberts et al., 2008). The average age of participants in this study is 21.1, the average relationship duration is 16.4 months, and the main demographic is college students; therefore, participants could naturally demonstrate higher levels of neuroticism since they have not joined the workforce or have been in a long-term relationship and fully socialized yet. Therefore, higher levels of neuroticism and the actions associated with the personality may be deemed more acceptable or even the norm.

Furthermore, at the beginning of a relationship, when relationship satisfaction tends to be at its highest and individuals are experiencing the "honeymoon phase," both partners are often positively biased toward each other's behaviors (Murray et al., 1996). For instance, a temperamentally neurotic individual may initially hold back on externalizing their anxiety and instability, as it is generally considered socially unacceptable to display high neuroticism toward someone they have just met (McNulty and Russell, 2010). Additionally, the partner of a neurotic individual may initially overlook the negative aspects of the relationship and focus only on the positive aspects, as the satisfaction gained early in the relationship can overshadow potential issues.

Similarly, the reason why relationship satisfaction may not be highly predictive of relationship duration could be that, for an individual to enter into a relationship, there typically must be an adequate level of satisfaction. During the initial phase of the relationship, where individuals are experiencing high levels of satisfaction, an additional unit of satisfaction or a

slight decrease in satisfaction may not significantly impact the relationship. Satisfaction may become more indicative later in the relationship, once individuals are no longer in the "honeymoon phase"(Karney and Bradbury, 1995).

Agreeableness has been found to positively affect relationship quality and stability in previous studies because agreeable individuals are cooperative, compassionate, and trustworthy. These traits frequently lead to better communication skills, more effective conflict resolution, and higher relationship satisfaction (Malouff et al., 2010).

In this survey, there was no significant relationship between levels of agreeableness, relationship satisfaction, and relationship duration. A similar explanation for this result could be the maturity principle of personality development. Younger individuals on average demonstrate lower levels of agreeableness compared to older people; therefore, lower levels of agreeableness could also be perceived as normal in younger demographics.

Younger individuals having higher levels of neuroticism and lower levels of agreeableness (Donnellan & Lucas, 2009) could also explain why the average relationship duration in this study is not long. Long-term relationships are less common in younger individuals in general because they are less interested in long-term relationships and lack the skills to sustain them (Lantagne & Furman, 2018).

A possible reason why agreeableness is not indicative of relationship duration in this study could be that younger individuals may be less experienced at discerning genuine competence from traits associated with psychopathy. For example, many young people might perceive disagreeable individuals as interesting, flexible, sharp, and competent, as they often hold higher positions in the adolescent social hierarchy (Anderson et al., 2001). In contrast,

agreeable young people are sometimes viewed as nerdy, boring, or lacking social skills. However, younger individuals may confuse actual competence within the social hierarchy with the problematic dominance behaviors exhibited by bullies and those with psychopathic traits (Hawley, 2003). Consequently, younger people in shorter-term relationships might see agreeableness as a boring trait and view more rebellious individuals as capable and interesting (Jonason & Webster, 2010).

Another reason for the differing results of this study compared to previous studies is the different forms of questionnaires. In the meta-analysis done by Malouff on personality traits and relationship satisfaction, researchers observed the relationship between one partner's personality traits and the satisfaction of the other partner, whereas this study looked at the personality traits and relationship satisfaction of the same individual. This could produce drastically different results as both agreeableness and neuroticism could have a bigger impact on the other partner's perceived satisfaction rather than themselves.

Limitations

As mentioned in the discussion section, the questionnaire created for this study could be revised to more accurately reflect the relationship satisfaction perceived by both partners. Furthermore, more randomized demographics of participants could help reduce more confounds discussed. Some confounds in this study are possible commonalities in personality traits in younger individuals and hence certain anti-social behaviors being considered normal. Young adult relationships are also more volatile (Halpern-Meekin et al., 2014), meaning self-perceived satisfaction might change drastically depending on when the survey was conducted. Lastly, most

participants of this study are prestigious college students, who demonstrate on average lower levels of neuroticism and higher levels of agreeableness than less prestigious college students (Hu et al., 2023). Therefore, the higher levels of neuroticism in previous studies with a more representative sample could represent drastically different personalities than a "high" level of neuroticism in this sample.

Conclusion

No statistically significant correlations were observed between differing levels of agreeableness or neuroticism, relationship satisfaction, and relationship duration outcomes. This finding contrasts with prior literature, which had identified significant correlations. It is important to note that this study employed different procedures and methods for measuring various variables. Future research could enhance the precision of relationship satisfaction assessments by incorporating input from both partners, ensuring that no significant events have occurred near the study period, and gathering a more representative sample of the population.

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