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Personality and health: Impacts of romantic relationship characteristics

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ABSTRACT

The psychosocial resources of personality, romantic relationship quality, and health-related social control were examined for their associations with self-rated health. Results based on survey responses from 421 participants (*M*age = 37.33 years, *SD* = 11.70; 63% women) revealed that individuals higher in conscientiousness and extraversion and lower in neuroticism enjoy better health, even after accounting for socioeconomic status and romantic relationship characteristics (R^2 = 0.14, $F(10, 410) = 7.65$, $p < 0.001$). We also found support for a mediation process whereby higher conscientiousness predicted better relationship quality, which predicted more positive social control (R^2 = 0.34, $F(10, 408) = 27.39$, $p < 0.001$, $z = 2.47$, $p = 0.01$). While directionality cannot be determined from cross-sectional data, the present results suggest that the associations of personality traits with health outcomes are strong and unique, independently influencing both self-rated health and romantic relationship characteristics. Results further reveal that positive health-related persuasion tactics are more prevalent in high-quality than in low-quality relationships, and that conscientious individuals are more likely to report high-quality relationships. These findings highlight the health-related benefits of conscientiousness and conscientious practices.

1. Introduction

Health status is an important individual difference with implications for physical, psychological, emotional, financial, and social functioning (World Health Organization, 2016). The literature does not currently address how personality and relationship characteristics work together to influence health outcomes (Markey & Markey, 2014), yet better understanding these processes would allow for more effective health interventions (Smith, Baron, & Grove, 2013). Therefore, attending to this gap in the literature is the focus of the current study.

1.1. Personality

According to the five factor model set forth by McCrae and Costa (1987), personality is composed of five main characteristics: *openness to experience* (enjoying adventure and new ideas), *conscientiousness* (self-disciplined, responsible, dependable), *extraversion* (outgoing, energetic, gregarious), *agreeableness* (compassionate, cooperative, good-natured), and *neuroticism* (experiencing negative emotionality).

In studies examining links between personality and health, higher conscientiousness is consistently associated with better health outcomes (Hampson, 2012). For example, in the Terman Lifecycle Study, which has followed intellectually gifted children longitudinally for decades, higher conscientiousness in childhood predicted lower mortality in midlife and beyond (Friedman et al., 1995; Kern, Della Porta, & Friedman, 2014). One pathway by which personality is linked to health outcomes is through its influence on health behaviors. For example, conscientious kids in Terman's study (Friedman et al., 1995; Kern et al., 2014) grew up to drink less alcohol and use less tobacco. These behaviors were, in turn, associated with lower risk of illness and death.

Kern et al. (2014) argue that, in addition to influencing health behaviors, conscientiousness also affects social relationships, which are another important influence on health (Cohen, 2004). In their study, Kern et al. (2014) found that lower childhood conscientiousness predicted higher likelihood of midlife divorce. Experiencing midlife divorce, as well as having a lower overall number of family relationships, predicted mortality (Kern et al., 2014). These results are consistent with others suggesting that social integration may be protective against illness and death (Berkman, Glass, Brissette, & Seeman, 2000), a topic we explore in more detail below.

While studies examining conscientiousness have found that it is consistently associated with positive health outcomes (Bogg & Roberts, 2004), findings regarding the link between neuroticism and health outcomes reveal the opposite: higher neuroticism predicts greater mortality risk, a risk that is mediated by sociodemographic and lifestyle

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factors (e.g., Shipley, Weiss, Der, Taylor, & Deary, 2007). For example, Hampson (2012) revealed that higher neuroticism was linked to more subjective distress and greater likelihood of mortality. In another study examining 78 young and middle-aged adults, retrospective accounts of neuroticism were linked to morbidity in diaries of illnesses at the time of data collection. Of note, this link was buffered by relationship satisfaction, such that respondents reporting lower neuroticism also had more support from their romantic partners, and this support predicted fewer illness reports over time.

Neuroticism has also been linked to relationship quality. For example, in a study of 197 Jewish Israeli couples who had been living together for 17 years (on average), husbands' neuroticism significantly predicted both husbands' and wives' marital quality (Lavee & Ben-Ari, 2004). Wives' neuroticism also predicted both husbands' and wives' marital quality, but was a statistically significant predictor only for wives' marital quality. Higher neuroticism and lower conscientiousness also predicted relationship dissolution in a four-year longitudinal study of over 8000 Australian adults (Solomon & Jackson, 2014). This dissolution was attributed to low relationship quality among the married or cohabiting couples. Farooqi (2014) corroborated these findings in a review of relationship quality, reporting that higher conscientiousness and lower neuroticism are reliably associated with higher relationship satisfaction.

1.2. Romantic relationship characteristics

As noted above, greater social integration is related to better health (Berkman et al., 2000). However, relationship quality is more impactful than relationship quantity: in a study examining both among Italian adults, Fiorillo and Sabatini (2011) concluded that while those reporting a greater number of social interactions did report better health, it was the *quality* of the relationship that was the best predictor of health. Relationship quality refers to satisfaction and intimacy within a romantic relationship (Holt-Lunstad, Birmingham, & Jones, 2008) and it impacts health even when controlling for relationship differences due to cultural practices and health disparities due to race and ethnicity (McShall & Johnson, 2015).

Relationship quality shares a bi-directional association with dyadic communications within the relationship (Farooqi, 2014). Farooqi (2014) states that supportive communications predict higher partner satisfaction, and vice versa, while criticism predicts less satisfaction.

When these supportive and/or critical social interactions are aimed specifically at changing the health or health behaviors of a social partner, they are referred to as health-related social control (Umberson, 1987). Health-related social control messages can be positive (e.g., encouragement) and negative (e.g., complaint; Craddock, vanDellen, Novak, & Ranby, 2015), and while positive and negative social control may seem like opposite sides of the same coin, they yield different results in the literature (e.g., Pagel, Erdly, & Becker, 1987). In a meta-analysis of 35 studies, positive social control was consistently associated with healthy behavior change, while negative social control had a negligible effect (Craddock et al., 2015).

However, the effectiveness of these social control messages may depend on the quality of the relationship. In a sample of older German men recovering from prostate removal due to prostate cancer, receiving social control messages from a romantic partner predicted more frequent pelvic floor exercises (the target of the couples' intervention) only for those patients who were happier in their relationships (Knoll, Burkert, Scholz, Roigas, & Gralla, 2012). Furthermore, patients with lower relationship satisfaction who were receiving these social control messages reported more negative affect. Tucker (2002) suggests that relationship quality can affect perceptions of social control messages. She asserts that a relationship high in satisfaction and intimacy is likely to have compliance strategies that are effective, ultimately influencing health behaviors positively, and that negative affect is experienced when the relationship quality is low.

1.3. Personality, romantic relationship characteristics, and health

There is reason to believe that influences on disease processes are dynamic; that personality, relationship quality, and health affect each other in iterative processes (Smith et al., 2013). However, relationships researchers often do not consider individual differences, nor do personality researchers often consider relationship contexts (Markey & Markey, 2014). There are exceptions. For example, Hill, Nickel, and Roberts (2014) recently performed a mediation analysis on cross-sectional data from 1040 married adults where they found that higher conscientiousness predicted greater marital satisfaction, which predicted better health. In another study of 998 midlife and older adults, personality predicted social life events such as divorce (Iacovino, Bogdan, & Oltmanns, 2015). The stress from these "dependent" life events (life events at least partly attributable to personality and one's own behavior) predicted health problems six months later. These exceptions notwithstanding, there is currently a gap in the research regarding how one's personality contributes to health outcomes through relationship characteristics.

1.4. The present study

In order to better understand how to optimize health and to address the current dearth of scientific information on how personality influences health via social constructs, we examined personality traits, romantic relationship quality, and health-related social control in the present study. Based on previous research (Hill et al., 2014; Iacovino et al., 2015), we predicted that romantic relationship characteristics would mediate the process by which personality influences health. Specifically, we hypothesized that higher conscientiousness and lower neuroticism would predict better relationship quality, more positive social control, and less negative social control, which would predict better self-rated health. We also explored possible interactions between relationship quality and social control (Knoll et al., 2012).

2. Method

2.1. Participants

Participants were recruited through the online survey system, Amazon's Mechanical Turk (Mturk), which is a "marketplace for work that requires human intelligence" (Amazon's Mechanical Turk, 2013). Mturk has proven to consistently provide quality data from a diverse/representative population maintaining the high psychometric standards required in the field of psychology and other social sciences (Buhrmester, Wang, & Gosling, 2011). Paolacci and Chandler (2014) note, however, that Mturk participants, while diverse, are not always representative of the general population because internet users are systematically different from non-internet users, and Mturk respondents tend to score higher in social desirability than traditional respondents. Following Paolacci and Chandler's advice, we were careful not to provide information regarding the specific research question in order to avoid demand effects in the present study.

To be eligible to take the survey, we required participants to be at least 18 years of age and to have been in a current romantic relationship for a minimum of 5 months. Of the 618 original survey responses collected, 50 respondents were not currently in a romantic relationship and 147 respondents did not complete all sections of the survey, resulting in a final sample of 421 participants.

The final sample ranged in age from 20 to 79 years (M = 37.33, SD = 11.70), and in current relationship length from 5 to 587 months (M = 116.84 months, SD = 116.58). As shown in Table 1, 63% of participants were female and 82% were White. The median education level was a Bachelor's degree and the median pre-tax, household income level was $41,000–$60,000 a year. Ineligible respondents differed from those retained for analyses in the following ways: Participants