

Original citation:

Realo, Anu (2016) Disentangling the complex relations among personality, health and well-being. *European Journal of Personality*, 30 (5). pp. 423-425.

Permanent WRAP URL:

<http://wrap.warwick.ac.uk/83335>

Copyright and reuse:

The Warwick Research Archive Portal (WRAP) makes this work by researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher's statement:

This is the peer reviewed version of the following article: Realo, A. (2016) Disentangling the Complex Relations Among Personality, Health and Well-being. *Eur. J. Pers.*, 30: 423–425. doi: 10.1002/per.2078, which has been published in final form at <http://dx.doi.org/10.1002/per.2078> This article may be used for non-commercial purposes in accordance with [Wiley Terms and Conditions for Self-Archiving](#).

A note on versions:

The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher's version. Please see the 'permanent WRAP url' above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk

Running Head: PERSONALITY, HEALTH, AND WELL-BEING

Editorial:

Disentangling the Complex Relationships among Personality, Health, and Well-Being

Anu Realo ^{1,2}

¹University of Warwick, United Kingdom

²Department of Psychology, University of Tartu, Estonia

Please address correspondence to:

Anu Realo

Department of Psychology

University of Warwick

Coventry CV4 7AL

United Kingdom

E-mail: a.realo@warwick.ac.uk

Disentangling the Complex Relations among Personality, Health, and Well-Being

In recent years, there has been increasing research indicating that both personality and subjective well-being (SWB) are significantly associated with health and health-related behaviour (Friedman & Kern, 2014; Hampson, 2012). Even more importantly, many studies have shown that personality traits and SWB causally contribute to health with levels of personality traits (e.g., Deary, Weiss, & Batty, 2010; Ferguson, 2013; Weston, Hill, & Jackson, 2015) and SWB (e.g., Chida & Steptoe, 2008; Diener & Chan, 2011) at younger ages predicting important health outcomes in later life. Yet, the causal roles of personality and SWB in health are far from being fully understood (Friedman & Kern, 2014) and many aspects of the associations among personality, health, and SWB deserve more attention.

First, although the association between personality traits and health outcomes is often theorized as causal, relatively few studies (e.g., Weston et al., 2015) have in fact examined relations between personality and the onset of specific diseases. Thus, how exactly personality traits influence people's health still needs to be specified. It is possible that personality traits serve as risk factors for disease or that personality traits are associated with other risk factors that cause diseases (e.g., Čukić, Möttus, Realo, & Allik, 2016). It is, however, also possible that personality traits promote health because people with particular trait levels tend to be more vigilant about their health and to choose healthier situations and environments, thereby minimising different small health risks (Friedman, Kern, Hampson, & Duckworth, 2014). Similarly, more SWB research is needed to understand how people's positive feelings (Edmonds, Hampson, Côté, Hill, & Klest, this issue) and emotions about their lives lead to physiological states and immune function contributing to better health. Despite above-mentioned prospective longitudinal studies that have shown that

various types of SWB predict health and longevity, it is still possible that there is a third variable that influences both SWB and health and creates a 'false causal' association between them. Moreover, it cannot be excluded that health causally contributes to SWB (Gana et al., 2013), or that health and SWB are reciprocally related and influence each other during the life course (Realo, Johannson, & Schmidt, 2016).

Second, the majority of work on the associations among personality, SWB, and health is based on self-reports. Relatively few existing studies (e.g., Čukić et al., 2016; Realo et al., 2015; Vainik, Möttus, Allik, Esko, & Realo, 2015) have used measures of personality and SWB beyond self-reports, such as reports by informants. However, other-reports may be more effective in controlling the common method variance that may arise when personality/SWB and health information are all obtained from the same source. The same problem, perhaps even more strongly, applies to measures of self-reported health. Although self-ratings of health are solid predictors of mortality (DeSalvo, Bloser, Reynolds, He, & Muntner, 2006; Mackenbach, Simon, Looman, & Joung, 2002), the meaning and content of self-rated health is still not completely understood (see Jylhä, 2009, for a review). Thus, when examining relations between SWB and health, one should consider not only subjective, self-reported health status but also more objective health information, including blood tests, doctor's diagnosis, number of days spent at a hospital, etc., to understand how people arrive at their ratings of SWB and self-reported health (Realo et al., 2016).

The current special issue of the *European Journal of Personality* brings together six articles that tackled the abovementioned problems and challenges related to personality, health, and SWB using (a) multi-method assessments of personality and SWB (Edmonds et al., this issue; Harris, Brett, Starr, Deary, & Johnson, this issue; Kõõts-Ausmees et al., this

issue; Spengler, Brunner, Lüdtke, Martin, & Roberts, this issue); (b) not only self-reported but also more objective measures of health status (Edmonds et al., this issue; Kööts-Ausmees et al., this issue); (c) large representative cross-sectional samples (Kööts-Ausmees et al., this issue); and (d) longitudinal studies from a variety of countries, many of which range from early childhood to late adulthood, spanning up to 60 years (Edmonds et al., this issue; Harris et al., this issue; Mu, Luo, Nickel, & Roberts, this issue; Spengler et al., this issue; Sutin, Stephan, & Terracciano, this issue).

In the first paper of the special issue, Edmonds and colleagues tested prospective associations of childhood Conscientiousness with Leukocyte Telomere Length (LTL), a marker of cellular aging, using longitudinal data from the Hawaii Personality and Health Cohort over 40 years. More specifically, the aim of the study was to examine whether childhood Conscientiousness (assessed at average age 10)—that is often considered to be the strongest lifelong predictor of longevity and good health among personality traits (Bogg & Roberts, 2013; Friedman et al., 2014)—protects against shortening of the LTL in adulthood (assessed at average age 51), thereby helping to identify the biological pathways linking Conscientiousness to mortality because shorter telomeres have been associated with mortality. Higher rates of childhood betrayal trauma were indeed related to shorter LTL but, against expectations, childhood Conscientiousness was not associated with adulthood LTL once age and sex were controlled; and neither were adult Big Five traits associated with LTL.

The next study by Harris and colleagues assessed the longitudinal effect of childhood dependability (a personality trait related to Conscientiousness) on older-age health and SWB in two well-known longitudinal Scottish samples, the Follow-up Study of the 6-Day Sample subset of the second Scottish Mental Survey in 1947 and the 1936 Lothian Birth Cohort.

Childhood IQ and social class had significant associations with both self-rated health and SWB in older age (around 75 years of age) but mostly via education that acted as a mediator of early-life influences on later health and wellbeing. Childhood dependability, again, and against all expectations, did not contribute significantly to older-age self-rated health and SWB. As the authors argued, this finding stands in contrast to the results of previous studies that have repeatedly shown that childhood personality predicts health and SWB in adulthood (Hampson, Edmonds, Goldberg, Dubanoski, & Hillier, 2015; Hampson, Goldberg, Vogt, & Dubanoski, 2007).

In a similar vein, Spengler and colleagues examined the association between self-reported and teacher-rated personality characteristics and behaviours at the average age of 12 years in a representative sample of Luxembourgish student population and self-reported health status nearly 40 years later. While self-reported sense of inferiority and pessimism in childhood were found to be negatively associated with self-rated health at the average age of 52 years, teacher-rated studiousness (defined as a facet of Conscientiousness) was positively related to subjective health ratings in adulthood, even after controlling self-reported childhood personality characteristics and behaviours, IQ and parental socioeconomic status. Yet, the association of teacher-rated studiousness and adult self-rated health dropped once the attained level of education was controlled and thus, similarly to Harris et al. (this issue), it was primarily education that served as an important mediator of childhood characteristics and later health outcomes.

Mu, Luo, Nickel and Roberts used bi-factor models to clarify the nature of the association between personality and mental health in two samples from a large panel study of Americans older than 50 years and their spouses (The Health and Retirement Study).

They proposed a “barometer hypothesis”, suggesting that there is a global evaluative component inherent in both personality and mental health ratings—the so-called “barometer”—that indicates one’s general feelings of positivity or negativity. The findings provided support for the barometer hypothesis and suggested that general factors of personality and mental health indeed explain much of the shared variance of these two constructs. However, Neuroticism, which similarly to Conscientiousness is a strong and robust correlate of different mental and physical health problems (Lahey, 2009), was a significant predictor of all the specific mental health factors even when the general factor of personality and mental health was controlled.

Neuroticism also played a key role in the study by Sutin, Stephan and Terracciano who examined how early-life experiences were associated with individual differences in personality traits and well-being in adulthood. More specifically, they were interested in finding out whether having been breastfed (and if so, for how long) was associated with adult personality and well-being in a large national longitudinal sample from the United States (the National Longitudinal Study of Adolescent to Adult Health). Participants who, according to their caregivers’ reports, had been breastfed in infancy had lower scores on traits related to negative emotionality (i.e., trait neuroticism, anxiety, and hostility) and higher scores on openness and optimism at the age of 29 years even when controlling relevant sociodemographic factors.

Finally, Kõõts-Ausmees and colleagues examined the roles of personality traits in people’s self-ratings of their health while also controlling the effects of objective health indicators, health-related quality of life, and SWB in a large population-based dataset of Estonian adults. Only self-rated, but not informant-rated, Neuroticism explained additional

variance in people's general self-rated health reports when all the other relevant variables were taken into account. It appears that people's general self-reported health status is a relatively good reflection of their objectively measured health status (cf. Jylhä, 2009) and also that the way in which people experience and evaluate the quality of their lives significantly affects their general self-rated health assessments, whereas personality is likely to play a relatively minor role in influencing self-rated health status.

In sum, I believe that the six articles published in this special issue of the *European Journal of Personality* make excellent and important contributions to this exciting field of study. However, most (if not all) studies in this special issue suggested that the associations between personality traits (particularly Conscientiousness) and self-reported health status, especially when controlling relevant behavioural and sociodemographic factors, are not as strong and robust as has been reported by numerous earlier studies. Even if statistically significant associations between personality traits and self-rated health status were found, their effect sizes were relatively small (e.g., Kööts-Ausmees et al., this issue; Spengler et al., this issue). In the light of the recent replication crisis (Open Science Collaboration, 2015), this is perhaps no surprise, but clearly calls for cautiousness in interpreting and emphasising the causal role of personality in health outcomes as well as for more rigorous personality trait-outcome research, as compellingly argued by Möttus (2016) in the latest issue of the *European Journal of Personality*. So, there are some exciting but also challenging times ahead for us in this area.

References

- Bogg, T., & Roberts, B. W. (2013). The case for Conscientiousness: Evidence and implications for a personality trait marker of health and longevity. *Annals of Behavioral Medicine, 45*(3), 278-288. doi: 10.1007/s12160-012-9454-6
- Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: A quantitative review of prospective observational studies. *Psychosomatic Medicine, 70*, 741-756. doi: 10.1097/PSY.0b013e31818105ba
- Čukić, I., Möttus, R., Realo, A., & Allik, J. (2016). Elucidating the links between personality traits and diabetes mellitus: Examining the role of facets, assessment methods, and selected mediators. *Personality and Individual Differences, 94*, 377-382. doi: <http://dx.doi.org/10.1016/j.paid.2016.01.052>
- Deary, I. J., Weiss, A., & Batty, G. D. (2010). Intelligence and personality as predictors of illness and death: How researchers in differential psychology and chronic disease epidemiology are collaborating to understand and address health inequalities. *Psychological Science in the Public Interest, 11*(2), 53-79. doi: 10.1177/1529100610387081
- DeSalvo, K. B., Bloser, N., Reynolds, K., He, J., & Muntner, P. (2006). Mortality prediction with a single general self-rated health question: A meta-analysis. *Journal of General Internal Medicine, 21*(3), 267-275. doi: 10.1111/j.1525-1497.2005.00291.x
- Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-Being, 3*, 1-43.
- Edmonds, G., Hampson, S., Côté, H., Hill, P., & Klest, B. (this issue). Childhood personality, betrayal trauma, and leukocyte telomere length in adulthood: A lifespan perspective on

Conscientiousness and betrayal traumas as predictors of a biomarker of cellular aging.

European Journal of Personality, 30(5), xx-xx.

Ferguson, E. (2013). Personality is of central concern to understand health: Towards a theoretical model for health psychology. *Health Psychology Review*, 7(Suppl 1), S32-S70. doi: 10.1080/17437199.2010.547985

Friedman, H. S., & Kern, M. L. (2014). Personality, well-being, and health. *Annual Review of Psychology*, 65, 719-742.

Friedman, H. S., Kern, M. L., Hampson, S. E., & Duckworth, A. L. (2014). A new life-span approach to conscientiousness and health: Combining the pieces of the causal puzzle. *Developmental Psychology*, 50(5), 1377-1389. doi: 10.1037/a0030373

Gana, K., Bailly, N., Saada, Y., Joulain, M., Trouillet, R., Herve, C., & Alaphilippe, D. (2013). Relationship between life satisfaction and physical health in older adults: A longitudinal test of cross-lagged and simultaneous effects. *Health Psychology*, 32(8), 896-904. doi: 10.1037/a0031656

Hampson, S. E. (2012). Personality processes: Mechanisms by which personality traits "get outside the skin". *Annual Review of Psychology*, 63, 315-339.

Hampson, S. E., Edmonds, G. W., Goldberg, L. R., Dubanoski, J. P., & Hillier, T. A. (2015). A life-span behavioral mechanism relating childhood Conscientiousness to adult clinical health. *Health Psychology*, 34(887-895).

Hampson, S. E., Goldberg, L. R., Vogt, T. M., & Dubanoski, J. P. (2007). Mechanisms by which childhood personality traits influence adult health status. *Health Psychology*, 26, 121-125.

- Harris, M., Brett, C., Starr, J., Deary, I., & Johnson, W. (this issue). Personality and other lifelong influences on older-age health and wellbeing: Preliminary findings in two Scottish samples. *European Journal of Personality*, 30(5), xx-xx.
- Jylhä, M. (2009). What is self-rated health and why does it predict mortality? Towards a unified conceptual model. *Social Science & Medicine*, 69, 307-316.
- Kööts-Ausmees, L., Schmidt, M., Esko, T., Metspalu, A., Allik, J., & Realo, A. (this issue). The role of the Five Factor personality traits in self-reported general health. *European Journal of Personality*, 30(5), xx-xx. doi: 10.1002/per.2058
- Lahey, B. B. (2009). Public health significance of neuroticism. *American Psychologist*, 64, 241-256.
- Mackenbach, J. P., Simon, J. G., Looman, C. W., & Joung, I. M. (2002). Self-assessed health and mortality: Could psychosocial factors explain the association? *International Journal of Epidemiology*, 31(6), 1162-1168.
- Mõttus, R. (2016). Towards more rigorous personality trait–outcome research. *European Journal of Personality*, 30(4), 292-303. doi: 10.1002/per.2041
- Mu, W., Luo, J., Nickel, L., & Roberts, B. (this issue). Generality or specificity? Examining the relation between personality traits and mental health outcomes using a bivariate bifactor latent change model. *European Journal of Personality*, 30(5), xx-xx.
- Open Science Collaboration. (2015). PSYCHOLOGY. Estimating the reproducibility of psychological science. *Science*, 349(6251), aac4716. doi: 10.1126/science.aac4716
- Realo, A., Johannson, J., & Schmidt, M. (2016). Subjective well-being and self-reported health in osteoarthritis patients before and after arthroplasty. *Journal of Happiness Studies*. doi: 10.1007/s10902-016-9769-2

- Realo, A., Teras, A., Kõõts-Ausmees, L., Esko, T., Metspalu, A., & Allik, J. (2015). The relationship between the Five-Factor Model personality traits and peptic ulcer disease in a large population-based adult sample. *Scandinavian Journal of Psychology, 56*, 693-699. doi: 10.1111/sjop.12248
- Spengler, M., Brunner, M., Lüdtke, O., Martin, R., & Roberts, B. (this issue). Student characteristics and behaviors in childhood predict self-reported health in middle adulthood. *European Journal of Personality, 30*(5), xx-xx.
- Sutin, A. R., Stephan, Y., & Terracciano, A. (this issue). Breastfeeding and adult personality. *European Journal of Personality, 30*(5), xx-xx.
- Vainik, U., Möttus, R., Allik, J., Esko, T., & Realo, A. (2015). Are trait-outcome associations caused by scales or particular items? Example analysis of personality facets and BMI. *European Journal of Personality, 29*, 622-634. doi: 10.1002/per.2009
- Weston, S. J., Hill, P. L., & Jackson, J. J. (2015). Personality traits predict the onset of disease. *Social Psychological and Personality Science, 6*(3), 309-317. doi: 10.1177/1948550614553248