Is change bad? Personality change is associated with worse psychological well-being and greater metabolic syndrome

Online Supplemental Appendix

Personality Change Predicting Levels of Well-Being and Subjective Health

By controlling for Time 1 standing on each of the well-being and subjective health indicators, our main analyses examined whether personality change predicted changes in these constructs over time. But does personality change predict mean levels at Time 2, not only simultaneous change? To examine this question we also conducted all analyses without controlling for the corresponding Time 1 measures. Directional change continued to significantly predict psychological well-being, $b = -.53$, $t(3842) = -4.55$, $p < .05$, but not satisfaction with life or self-reported health, all $|ts| < 1.01$. Absolute change continued to significantly predict all three subjective outcomes, all $|ts| > 6.48$. All significant metabolic syndrome (MetS) results we report also hold not controlling for Time 1 self-reported health, all $|ts| > 2.51$. Overall, personality change generally tends to predict both levels of and concurrent changes in health and well-being indicators.

Interactions with Personality Change

There was a significant negative interaction between age and directional change predicting psychological well-being, $b = -.02$, $t(3833) = -2.53$, $p < .05$. A closer examination of this association revealed that although socially undesirable change was associated with worse psychological well-being for both middle-aged (those age 65 and younger) and older adults (those above age 65), socially desirable change was also strongly negatively associated with poorer psychological well-being for older adults (see Online Supplementary Figure below). Thus, at least in terms of psychological well-being, it seems that personality change may be more

detrimental for older adults compared with younger adults. Given that amounts of change tend to decline with age (Roberts & DelVecchio, 2000), this finding suggests that off-timed or non-normative change may be particularly detrimental to well-being (Caspi, Bem & Elder, 1989). However, we did not find this same pattern with self-reported health or satisfaction with life, nor with the MetS, indicating that further research on this question is needed.

Time 2 Personality Traits Predicting MetS Components and Diagnosis

The majority of the Time 2 personality traits also significantly predicted the number of MetS components (see Table 2). Specifically, lower conscientiousness and extraversion at Time 2 were associated with greater MetS components. Surprisingly, considering previous research (e.g., Sutin et al., 2011), higher agency and agreeableness and lower neuroticism were also significantly associated with greater MetS components. Parallel to the MetS components results, lower conscientiousness and higher agency and agreeableness significantly predicted a greater likelihood of receiving a MetS diagnosis, while low extraversion and neuroticism marginally predicted MetS diagnosis.

The negative association between Time 2 conscientiousness and the metabolic syndrome is in line with previous work suggesting a protective effect of conscientiousness (Sutin et al., 2010). It appears that in this sample, extraversion may also play a protective role. Surprisingly, however, higher agency, agreeableness, and lower neuroticism were associated with greater MetS, findings that seem to be inconsistent with previous research (e.g., Sutin et al., 2010). However, this association with neuroticism is in line with evidence for a protective effect of high neuroticism (Taga & Friedman, 2009). Clearly, the role of personality trait levels also requires further examination in future research.

References

Caspi, A., Bem, D. J., & Elder, G. H. (1989). Continuities and consequences of interactional styles across the life course. *Journal of Personality*, *57*, 375-406. doi: 10.1111/j.1467-6494.1989.tb00487.x

Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality from childhood to old age: A quantitative review of longitudinal studies. Psychological Bulletin, 126, 3-25. Doi: 10.1037//0033-2909.126.1.3

Online Supplemental Table.

Time 1 and Time 2 mean personality trait levels predicting Time 2 well-being and subjective health indicators.

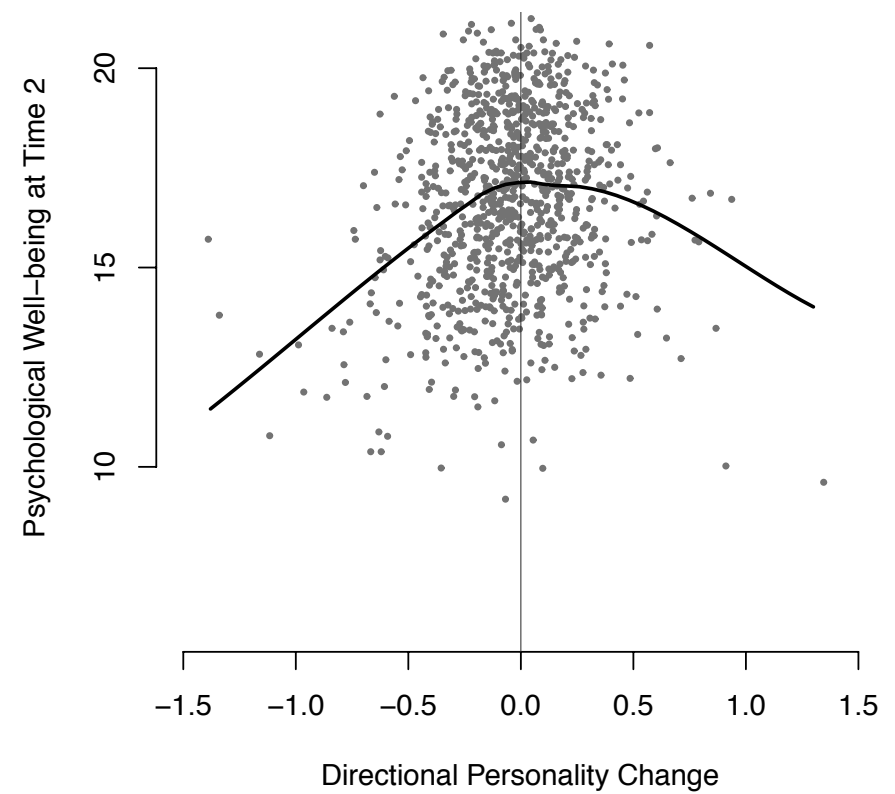| Well-being or Health Indicator	Neuroticism		Conscientiousness		Agreeableness		Extraversion		Openness		Agency	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Psychological Well-being	-.16***	-.90***	.21***	.82***	.11***	.61***	.18***	.91***	.19***	.86***	.16***	.72**
Satisfaction with Life	-.18***	-.68***	.19***	.59***	.10***	.43***	.15***	.66***	.08**	.42***	.10***	.35**
Self-reported Health	-.13***	-.48***	.14***	.51***	.03	-.15***	.06*	.49***	.10***	.35***	.05†	.26**

Note. T1 = Time 1. T2 = Time 2. All values reported are standardized regression coefficients, ßs, calculated as the predicted change in the dependent variable, in standard deviations, for a 2 standard deviation change in the respective personality change score (see Gelman, 2008). All analyses with Time 1 personality trait scores control for the corresponding Time 1 self-reported health or well-being indicator. *p < .05, **p < .01, ***p <.001, † p < .10.

Online Supplemental Figure.

The association between directional personality change and psychological well-being for middle aged (panel A) and older (panel B) adults.
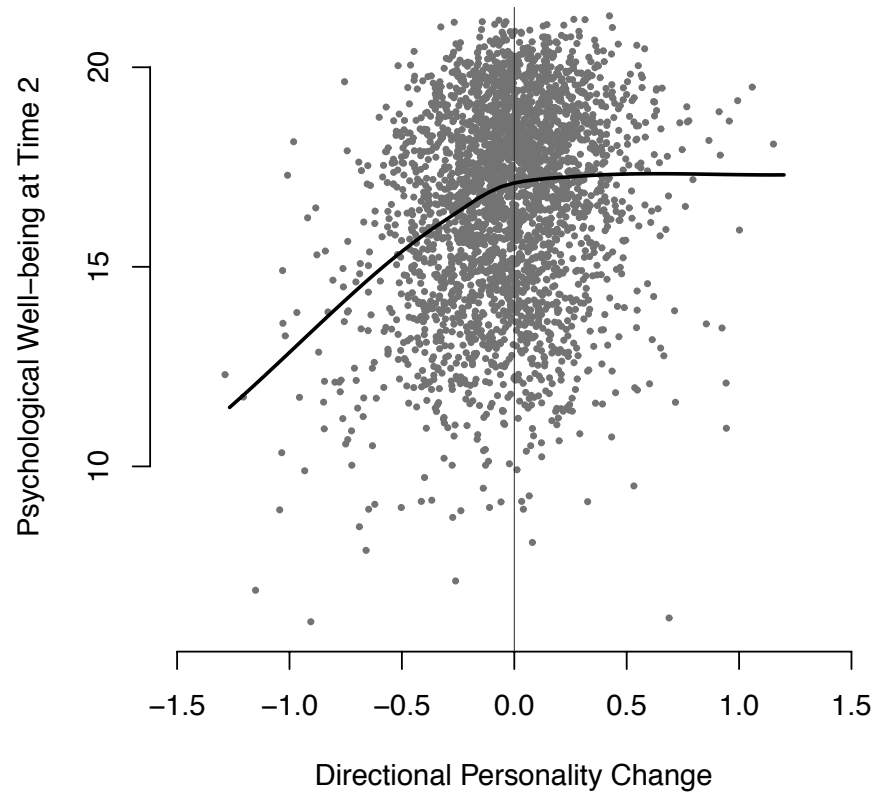
Panel A. Middle-aged and younger adults (age 65 and younger).

Panel B. Older adults (over age 65).