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RESEARCH PAPER

Longitudinal Relationships Between Personality Traits and Social Well-Being: A Two-Decade Study

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Abstract
This study examined the temporal relationships between social well-being and the Big Five personality traits (i.e., neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience), using a sample of 6452 American adults collected at 3 time points over 2 decades. The random-intercept cross-lagged panel model was used, which allows associations between variables to be examined at the between-person and within-person levels. At the between-person level, neuroticism was negatively associated and the other traits were positively associated with social well-being. At the within-person level, increases or decreases in trait levels did not predict subsequent increases or decreases in social well-being. However, increased (i.e., higher-than-usual) social well-being was associated with increased future levels of extraversion and conscientiousness. Thus, sustained improvements in social well-being may precede and predict increases in extraversion and conscientiousness.

Keywords Social well-being · Big Five · MIDUS · Random-intercepts cross-lagged panel · Longitudinal · Trait change

1 Introduction

Mental well-being consists of subjective, psychological, and social components (Joshanloo, 2021; Keyes, 2013). While the subjective and psychological components are primarily concerned with positive personal abilities, qualities, and states of mind, social well-being concerns optimal functioning in social tasks that individuals encounter in public life (Cicognani, 2014; Keyes, 1998). Keyes' (1998) model of social well-being is the most comprehensive model developed to date. According to this model, social well-being is comprised of five elements (Keyes & Lopez, 2009): Social acceptance (having a tolerant and positive attitude toward others regardless of their occasionally difficult behaviors), social actualization (believing in the positive aspects of society and that one's society is living up to its full potential), social contribution (believing that one can

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give back to society and that one's actions are appreciated by society), social coherence (seeing the world and society as comprehensible, understanding where the world and society are heading), and social integration (feeling a sense of belonging to one's community, feeling supported and cared for by one's groups). These five elements show how well individuals cope with daily social challenges and function optimally as members of society and in interactions with neighbors, colleagues, and fellow citizens (Cicognani, 2014).

A personality trait refers to "differences among individuals in a typical tendency to behave, think, or feel in some conceptually related ways, across a variety of relevant situations and across some fairly long period of time" (Ashton, 2013, p. 68). The five traits of neuroticism, extraversion, agreeableness, conscientiousness, and openness to experience are the best known and researched in the literature and are commonly referred to as the "Big Five" personality dimensions (John, 2021). These traits are reliably predictive of various life outcomes (Soto, 2019). Large-scale studies (e.g., Mann et al., 2021b) and meta-analytic results show that the Big Five traits are also robust predictors of subjective and psychological well-being (e.g., Anglim et al., 2020). The relationship between the Big Five and social well-being is less well studied. However, existing cross-sectional evidence suggests a robust relationship between the Big Five and social well-being in the USA (Hill et al., 2012; Joshanloo, 2019), Iran (Joshanloo et al., 2012), India (Tiwari & Misra, 2020), and China (Yu et al., 2021). A general conclusion from cross-sectional studies is that extraversion, agreeableness, conscientiousness, and openness to experience are positively related to social well-being, while neuroticism is negatively related to social well-being.

These cross-sectional results relate primarily to the between-person covariance between social well-being and personality traits. For example, a positive correlation between extraversion and social well-being suggests that individuals with high extraversion are also likely to have high social well-being. Another level at which associations between these variables can be assessed is the within-person level, which requires longitudinal data and concerns intraindividual variation over time. A typical question for the within-person level is whether or not variation in one variable is associated with future variation in another variable. Technically, knowing the correlations between two variables at the between-person level does not tell us anything about their associations at the within-person level (Nezlek, 2011), and there are numerous reasons for a lack of equivalence between the two levels of analysis (Voelkle et al., 2014). The main goal of the present study was to use longitudinal data to examine the direction of associations between social well-being and personality traits. That is, the study sought to examine whether an increase or decrease in one variable is associated with a future increase or decrease in the other variable. Thus, the focus of this study is on within-person associations, as the directionality of associations between two variables can only be assessed at the within-person level (Newsom, 2015).

There is evidence that both personality traits (e.g. Bleidorn & Hopwood, 2019; Hueluer, 2017) and various aspects of well-being (e.g. Galambos et al., 2020; Lansford, 2018; Osafo Hounkpatin et al., 2014), including social well-being (e.g. Mann et al., 2021a), change over the life course. Yet, we do not know much about the within-person relationships between social well-being and the Big Five. Initial evidence was provided by Hill et al.'s (2012) two-wave study, which found that changes in social well-being were associated with changes in personality traits over time. The researchers used only two waves of data and a statistical procedure that did not allow for an examination of the direction of associations between the variables. The present study seeks to address these limitations and extend this line of research by examining the direction of associations between social well-being and the Big Five traits.

1.1 Analytic Approach

The Cross-Lagged Panel Model (CLPM) is a commonly used technique for analyzing longitudinal data (Falkenstroem et al., 2020). The main purpose of the CLPM is to examine the relationships between two variables over time, taking into account the prior values of each variable (Newsom, 2015). However, the CLPM has been criticized for assuming that individuals change over time only relative to a group average, ignoring the fact that individuals also change longitudinally around their personal averages (Mund & Nestler, 2019). Because the CLPM cannot distinguish between-person sources of variation from within-person variation, its results can be difficult to understand and interpret, especially when the focus is on temporal within-person associations (Falkenstroem et al., 2020; Hamaker, 2012). To address these limitations, in this study, the Random Intercept Cross-Lagged Panel Model (RI-CLPM) was used. This model is a refinement of the traditional CLPM that differentiates stable differences among individuals with reference to the grand mean from changes within individuals over time (Hamaker et al., 2015). By accounting for differences between individuals around the group mean when estimating within-person effects, the resulting within-person effects purely capture the associations of the time-varying components of the variables (i.e., state components; Hamaker et al., 2015; Mund & Nestler, 2019). The within-person associations between these state variables are examined to determine whether deviations from one's typical level of one variable are associated with subsequent deviations from the typical level of the other variable. Thus, the RI-CLPM allows us to examine the direction of associations between two variables.

1.2 The Present Study

The present study sought to examine the direction of the within-person associations between social well-being and personality traits. Existing research on the temporal associations between the Big Five and subjective (e.g., Boyce et al., 2012; Soto, 2014; Specht et al., 2012; Tauber et al., 2016) and psychological well-being (e.g., Abbott et al., 2008; Kokko et al., 2013; Martin & Keyes, 2015; Osafo Hounkpatin et al., 2014) shows that both traits and well-being can predict each other prospectively. Given this body of evidence, the study had no hypothesis regarding the direction of the relationships between social well-being and personality traits, and all possible reciprocal relationships were examined. A large American sample was used, collected at three time points over approximately two decades. The long interval (i.e., approximately a decade) between assessments is optimal and serves the purpose of this study, as previous research suggests that despite short-term fluctuations, both personality traits (Bleidorn & Hopwood, 2019; Hueluer, 2017) and well-being (e.g., Hudson et al., 2019) are largely stable and develop over longer periods of time.

2 Methods

2.1 Pre-Registration

This analysis plan was pre-registered on AsPredicted: https://aspredicted.org/blind.php?x=58ck7t

2.2 Participants

The sample was drawn from the Midlife in the United States project (MIDUS; midus.wisc.edu). Data from Wave 1 (collected in 1995–1996, mean age = 46,378, *SD* = 12,984, females = 51.6%), Wave 2 (2004–2006, mean age = 55,433, *SD* = 12,448, females = 53.3%), and Wave 3 (2013–2014, mean age = 63,641, *SD* = 11,350, females = 54.9%) were used. Of the total sample (*N* = 7,108), 656 individuals (9.2%) did not respond to any of the social well-being and personality variables in the study in any of the waves and were therefore excluded from the analyses. The final study sample consisted of 6,452 individuals who had data for at least one variable across waves (age at wave 1, mean = 46.83, median = 46.83, SD = 12.929, female = %52.5). Of these, 2,650 individuals (41.1%) participated in all three waves, 1,516 (23.5%) participated in two waves, and 2,286 (35.4%) participated in one wave. Thus, 3,802 (58.9%) subjects missed at least one wave.

2.3 Measures

Personality traits The Midlife Development Inventory (MIDI) personality scale (Lachman & Weaver, 1997) was used to measure the Big Five traits (for statistical properties, see Joshanloo, 2018). Respondents indicated how well 26 self-descriptive adjectives described them on a scale of 1 (*a lot*) to 4 (*not at all*). Items were reverse coded so that a higher score indicated higher levels of the traits.

Social well-being The 14-item version of Keyes' (1998) social well-being scale was used. Items were rated on a 7-point likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Due to unacceptable internal consistencies (ranging from 0.41 to 0.42 across the three time points), the social acceptance scale was excluded from the analyses. The four dimensions used in the study were social coherence, social integration, social contribution, and social actualization, each measured with two or three items.

2.4 Statistical Analysis

Estimation and fit Mplus 8.5 was used to estimate all models using a robust maximum likelihood estimator (MLR). Models were computed using all available data. A Comparative Fit Index (CFI) cutoff value of 0.90, a Root Mean Square Error of Approximation (RMSEA) cutoff value of 0.07, and a Standard Root Mean Square Residual (SRMR) cutoff value of 0.08 were considered indicative of adequate fit (e.g., Kline, 2015).

Measurement invariance Since social well-being was modeled as a latent variable, its measurement invariance was tested. Establishing invariance would rule out the possibility that differences in parameters estimates between time points are due to changes in the measurement properties of the variable rather than actual changes in social well-being. Since the focus of the present lagged regression models is on the regression coefficients, metric invariance is a necessary condition (Newsom, 2015). Metric invariance would mean that the four indicators have similar significance across the time points in defining social well-being. Because the structure of the means is not of interest in this study (i.e., there are no hypotheses about longitudinal changes in latent means), scalar invariance was not examined.

RI-CLPM Social well-being was modeled in the present analysis as a latent variable with four indicators: social coherence, social integration, social contribution, and social

actualization. Personality variables were included as manifest variables. A RI-CLPM was tested for each personality trait. Figure 1 shows a sample RI-CLPM as specified in this study. The baseline age and gender were included as time-invariant predictors of observed state variables at Waves 2 and 3 in all models. The paths between state variables were held equal over time.

Attrition handling. In this study, only participants who did not answer any of the variables in the three waves were excluded. Missing data were handled using Full Information Maximum Likelihood. Approximately 41% of the sample participated in all three waves, and approximately 59% of participants missed at least one wave. Supplemental analyses (in Tables S1 and S2) showed that these two groups differed significantly on many of the study variables (i.e., social coherence, social integration, social contribution, social actualization, neuroticism, and conscientiousness). Although effect sizes ranged from 0.010 to 0.223, indicating small differences, an auxiliary variable was added to all models in this study (a dummy variable, 0 = individuals with at least one missing wave and 1 = individuals with no missing wave). Auxiliary variables are not of substantive interest in the analysis and are not part of the measurement or structural models. They are included to assist the process of estimation in the presence of missing data by reducing the uncertainty caused by missing values and thereby improving the precision of parameter estimation (Asparouhov & Muthén, 2008; Kline, 2015).

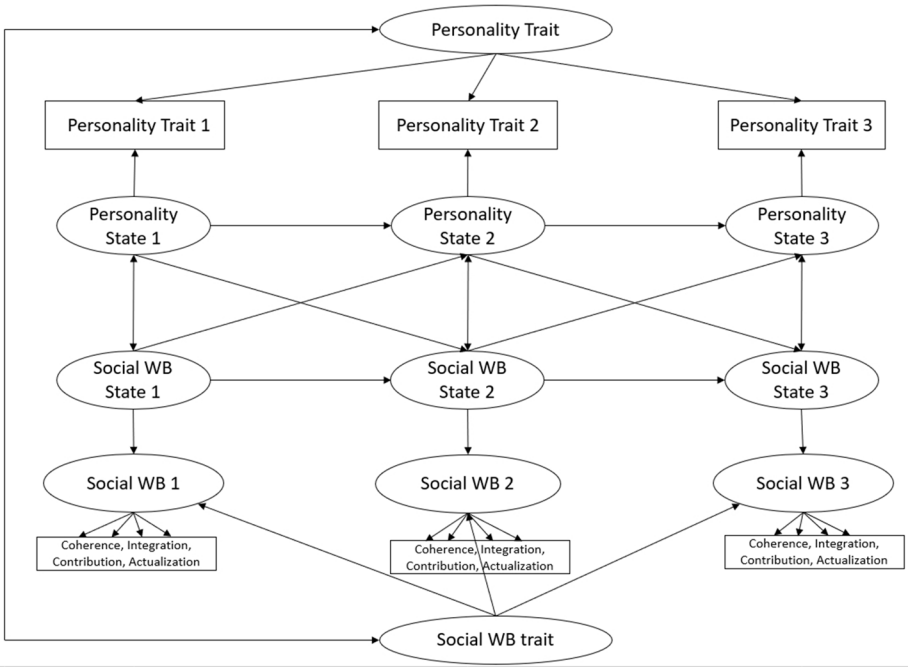

Fig. 1 A sample RI-CLPM for a personality trait (e.g., neuroticism) and social well-being as specified in this study. The observed variable of personality and the latent variable of social well-being are partitioned into trait and state components. The latent variable of social well-being is indicated by four observed variables of social coherence, social integration, social contribution, and social actualization. The factor loadings for social well-being are held equal across time points. Predictive paths between state components are held equal across time points

3 Results

The intercorrelations between all variables in the study are shown in Table S3.

3.1 Reliabilities

As shown in Table 1, the alphas of the nine scales used in the study ranged from 0.56 to 0.80 across the three waves. However, some of the scales did not have acceptable alphas. Although this should be interpreted given the short length of the scales (Rammstedt & Beierlein, 2014), the low reliability for some of the scales is one of the limitations of the study. The intraclass coefficients are presented in Table 1 and show a high degree of agreement between scores over time for all variables.

3.2 Measurement Invariance

A longitudinal confirmatory factor analysis model was tested with social well-being across three waves. The latent variable of social well-being was indicated by four social well-being variables of social coherence, social integration, social contribution, and social actualization. A random intercept was also included in the model. To account for indicator specificity over time, the residual terms of each indicator were specified to covary across the three waves. As shown in Table 2, the configural model provided an acceptable fit to the data. The factor loadings are shown in Table S4 and had an acceptable range (> 0.520). In a metric invariance model, equality constraints were placed on the factor loadings over time. As shown in Table 2, the equality constraints in the metric model did not worsen model fit, as indicated by a smaller RMSEA and an identical CFI (ΔRMSEA = -0.004, ΔCFI = 0.000). Thus, metric invariance was supported (Chen, 2007). Simply put, this means that the factor loadings for the latent variable social well-being are invariant over time. For example, the significance of social contribution as an indicator of social well-being is the same across the time points. These equality constraints for social well-being were included in the subsequent models.

Table 1 Reliability

	Number of items	Wave 1	Wave 2	Wave 3	Intraclass Correlation		
					Coefficient	95%CI lower	95%CI upper
Social coherence	2	.65	.64	.67	0.77	0.75	0.78
Social Integration	3	.73	.75	.79	0.78	0.76	0.79
Social Contribution	3	.67	.70	.72	0.79	0.78	0.81
Social Actualization	3	.64	.66	.70	0.73	0.70	0.75
Neuroticism	5	.74	.74	.71	0.83	0.81	0.85
Extraversion	5	.78	.76	.76	0.87	0.86	0.88
Agreeableness	5	.80	.80	.77	0.84	0.83	0.85
Conscientiousness	4	.58	.58	.56	0.82	0.81	0.83
Openness to experience	7	.77	.77	.77	0.86	0.85	0.88

Table 2 Fit Indices

Model	X^2	*df*	*p*	RMSEA [90% CI]	CFI	SRMR
Invariance (social well-being)						
Configural	867.679	40	0.000	0.057 [0.053–0.060]	0.946	0.046
Metric	876.015	46	0.000	0.053 [0.050–0.056]	0.946	0.049
RI-CLPM						
Neuroticism	1917.701	95	0.000	0.055 [0.052–0.057]	0.916	0.055
Extraversion	2055.508	95	0.000	0.057 [0.054–0.059]	0.914	0.058
Agreeableness	2117.472	95	0.000	0.057 [0.055–0.060]	0.907	0.063
Conscientiousness	1922.670	95	0.000	0.055 [0.052–0.057]	0.911	0.056
Openness to experience	2114.194	95	0.000	0.057 [0.055–0.060]	0.910	0.057

3.3 RI-CLPMs

Five RI-CLPMs were tested, each containing a single trait. As shown in Table 2, the models fit the data well. The autoregressive effects are shown in Table 3. These estimates were positive and significant, indicating that a deviation from the expected mean on a variable at one point in time is followed by a deviation in the same direction on the same variable at the next point in time. For example, if social well-being is below average at the second time point, a below-average value for social well-being is expected at the third time point. Autoregressive effects imply carry-over effects, which can be interpreted as the persistence of deviations from the person-specific mean across assessment time points. Stronger carry-over effects would suggest that it takes longer for individuals to revert to their expected mean, whereas smaller effects would suggest that deviations from the person-specific mean are less persistent over time. The cross-lagged coefficients are shown in Table 4. Based on the 95% confidence intervals, only two of the cross-lagged effects are significant: state social well-being predicting future state extraversion and state conscientiousness. That is, deviations from expected levels of social well-being at one point in time are associated with deviations from expected levels of extraversion and conscientiousness at the next point in time. Therefore, social well-being prospectively predicts higher extraversion and conscientiousness. Deviations from expected trait scores did not predict future deviations in social well-being. This is evidence for the temporal precedence of social well-being. R^2 values and between-person correlations are reported in Table 5. The between-person correlations of social well-being and the traits were moderate. The weakest correlation was 0.276 (with agreeableness) and the strongest was 0.528 (with openness to experience).

4 Discussion

Replicating previous cross-sectional findings (e.g., Yu et al., 2021), neuroticism was negatively and the other traits were positively associated with social well-being. At the within-person level, significant lagged effects were found from social well-being to extraversion and conscientiousness. A within-person increase in social well-being predicted a subsequent increase in extraversion and conscientiousness. In other words, a higher (or lower) than expected level of social well-being at one point in time is associated with a higher (or

Table 3 Auto-Regressive Coefficients

Predictor	Outcome	Unstandardized coefficient	*p*	95% CI Low	High	Standardized coefficient
Neuroticism						
N1	N2	0.142	0.000	0.067	0.216	0.161
N2	N3					0.142
SW1	SW2	0.238	0.004	0.076	0.399	0.245
SW2	SW3					0.231
Extraversion						
E1	E2	0.169	0.000	0.087	0.251	0.155
E2	E3					0.175
SW1	SW2	0.317	0.000	0.156	0.478	0.313
SW2	SW3					0.313
Agreeableness						
A1	A2	0.143	0.000	0.063	0.222	0.137
A2	A3					0.147
SW1	SW2	0.281	0.001	0.119	0.442	0.284
SW2	SW3					0.275
Conscientiousness						
C1	C2	0.191	0.000	0.103	0.278	0.176
C2	C3					0.188
SW1	SW2	0.231	0.004	0.072	0.390	0.235
SW2	SW3					0.221
Openness to experience						
O1	O2	0.236	0.000	0.149	0.324	0.217
O2	O3					0.239
SW1	SW2	0.285	0.000	0.129	0.441	0.284
SW2	SW3					0.280

SW = social well-being

lower) than expected extraversion/conscientiousness score at the next point in time. Thus, deviations from one's typical level of social well-being precede deviations from one's typical levels of extraversion and conscientiousness, but not the other way around. Consistent with the current findings, another small longitudinal study with a sample of 143 older adults and two measurement time points (seven months apart) also found that higher levels of perceived social support at baseline were associated with higher conscientiousness at the second time point (Hill et al., 2013). A previous longitudinal study showed that social well-being prospectively predicted subjective well-being (Joshanloo et al., 2018), which in turn is a desirable outcome and predicts future trait changes (e.g., Soto, 2014). Thus, increasing social well-being is not only desirable in itself, but also leads to desirable changes in other variables.

Previous cross-sectional findings have also shown that extraversion and conscientiousness are associated with social well-being (e.g., Joshanloo, 2019; Yu et al., 2021). The construct of extraversion describes individual differences in energy, dominance, and sociability (Wilt & Revelle, 2009). Extraversion is associated with social skills such as persuasiveness

Table 4 Cross-Lagged Coefficients

Predictor	Outcome	Unstandardized coefficient	*p*	95% CI		Standardized coefficient
				Low	High	
Neuroticism						
SW1	N2	−0.017	0.309	−0.050	0.016	−0.051
SW2	N3					−0.050
N1	SW2	−0.165	0.137	−0.382	0.053	−0.064
N2	SW3					−0.055
Extraversion						
SW1	E2	0.038	0.008	0.010	0.066	0.118
SW2	E3					0.123
E1	SW2	0.232	0.066	−0.015	0.478	0.068
E2	SW3					0.074
Agreeableness						
SW1	A2	0.020	0.147	−0.007	0.046	0.065
SW2	A3					0.067
A1	SW2	0.016	0.905	−0.242	0.273	0.005
A2	SW3					0.005
Conscientiousness						
SW1	C2	0.028	0.027	0.003	0.054	0.100
SW2	C3					0.097
C1	SW2	0.236	0.130	−0.070	0.541	0.063
C2	SW3					0.065
Openness to experience						
SW1	O2	0.023	0.086	−0.003	0.050	0.077
SW2	O3					0.078
O1	SW2	0.238	0.099	−0.045	0.520	0.067
O2	SW3					0.071

SW = social well-being

Table 5 R^2 values and Trait Correlations

Model	R^2				Correlation with SW
	Social well-being		Personality		
	W2	W3	W2	W3	
Neuroticism	0.074	0.064	0.034	0.027	-0.494
Extraversion	0.112	0.120	0.046	0.061	0.446
Agreeableness	0.081	0.076	0.026	0.030	0.276
Conscientiousness	0.064	0.060	0.047	0.054	0.367
Openness to experience	0.093	0.095	0.060	0.075	0.528

W = wave. SW = social well-being. Only R^2 values in the structural part of the RI-CLPMs are reported. The correlations reported are between-person correlations (i.e., standardized covariance between trait components), which are all significant at $p < .001$

and leadership skills (Wilson et al., 2021), which to some extent depend on and are fostered by positive perceptions of and constructive relationships with one's social groups and communities. Conscientiousness "describes individual differences in the propensity to be self-controlled, responsible to others, hardworking, orderly, and rule abiding" (Jackson & Roberts, 2017, p. 133). Conscientiousness is associated with indicators of optimal social functioning at work and in life, including positive relationships with others (Anglim et al., 2020), better parenting (Oliver et al., 2009), satisfaction with intimate relationships (Malouff et al., 2010), marital satisfaction (Claxton et al., 2012), perceived social support (Huang et al., 2019), interpersonal facilitation (i.e., acts of cooperation, consideration, and support that promote coworkers' performance; Dudley et al, 2006), better team performance (Bell, 2007), organizational commitment (Ilies et al., 2009), organizational justice and perceived organizational support (Fu & Lihua, 2012), lower levels of counterproductive work behaviors (behaviors that harm the organization or other workers; Mercado et al., 2018), less aggression (Jensen-Campbell et al., 2007), and lower levels of dark triad traits (Jakobwitz & Egan, 2006). Conscientiousness is also associated with career success and academic achievement (Roberts et al., 2009). These associations suggest that higher levels of conscientiousness may depend to some extent on good relationships with and optimal perceptions of one's social groups, teams, and communities.

Personality researchers emphasize the importance of social relationships in the development of personality traits (Mroczek et al., 2021). For example, the PERSOC model is particularly useful for understanding why social well-being can contribute to personality change and stabilization. PERSOC is a framework for understanding the interaction of PERsonality and SOCial relationships (Back et al., 2011). According to this model, the way people behave in social relationships and their perceptions of those relationships contribute to personality development. For example, if a shy and withdrawn person behaves in a slightly more outgoing manner, he or she is likely to receive positive social feedback from others. This may prompt the person to perceive others as less intimidating and more interesting, leading him or her to behave in an even more extroverted manner in future interactions (Back, 2021). Long-lasting novel perceptions and repeated behaviors are likely to alter personality traits. Social well-being involves adaptive general perceptions (e.g., society is getting better, I understand what is happening around me, I am a useful member of my group, and my community sees me as a valuable member) that can give rise to new contextual perceptions and adaptive social behaviors, including the formation of high-quality social relationships, greater social engagement, and benevolent social actions. Empirical evidence is consistent with this suggestion, showing that higher levels of social well-being are associated with social, civic, and political participation (Cicognani et al., 2008), volunteering (Son & Wilson, 2012), and social support (Yu et al., 2021). In summary, higher than usual levels of social well-being may be a driver of new socially adaptive behaviors, which per se may contribute to subsequent trait level modification. Whether increased adaptive social behavior mediates the within-person link between social well-being and the traits remains speculative at this stage and will need to be examined directly in future studies.

Because personality traits are associated with important outcomes in various areas of life (Soto, 2019), they are attractive targets for intervention (Jackson et al., 2021). The vast majority of people intend to change their traits (Hudson & Roberts, 2014). Previously, the prevailing view was that traits were essentially immutable and decontextualized (for a review, see Bleidorn et al., 2019). Recent findings, however, have challenged the conventional view, showing that personality traits, while relatively stable, change across the lifespan (e.g., Bleidorn & Hopwood, 2019; Hueluer, 2017). In addition to normative trait

development toward greater maturity across the lifespan (Bleidorn et al., 2019), certain environmental factors (e.g., romantic relationships and university graduation) may also contribute to personality change (Bleidorn & Hopwood, 2019). There is also evidence that psychological interventions can change personality traits (Hudson, 2021). However, "very little is known about the underlying genetic and environmental processes that drive personality trait development" (Bleidorn & Hopwood, 2019, p. 248). A review of published interventions aimed at changing personality traits concludes that "it is difficult to say there is a known method to change personality" (Jackson et al., 2021, p. 800). Therefore, not much is currently known about how traits develop normatively and change volitionally.

The present study contributes to this ongoing inquiry by suggesting that improving social well-being can promote and catalyze changes in personality traits. It is acknowledged that the present study has not provided direct evidence for the possibility of volitional change in personality traits and for the importance of social well-being in stimulating change in personality traits. However, this study has shown that deviations from typical levels of social well-being lead to deviations from typical levels of extraversion and conscientiousness. By demonstrating the temporal precedence of social well-being, the present results may suggest that increasing social well-being could be a potential means of trait modification (although this is still speculation and needs to be empirically tested in future studies). An important earlier finding is that trait change can occur in response to interventions that target variables other than traits, such as clinical interventions (for a review, see Hudson, 2021). A primary goal of clinical interventions is to develop social skills, improve social functioning, and facilitate the integration of individuals into their groups and communities (Bowins, 2021). Therefore, it may be that clinical interventions contribute to trait change in part by improving social well-being. There is evidence that social skills training leads to trait change (e.g., Oei & Jackson, 1980). Overall, the present findings suggest that interventions that target social well-being may also produce trait change in desirable directions. In addition, there appears to be great value in considering the social context of behavior and the individual's relationship to, and perceptions of, his or her social groups and communities when considering trait change. The concept of social well-being goes beyond interpersonal relationships to include relationships with broader social groups and society. Consideration of how people perceive their broader social context is missing from many current psychological interventions and deserves more attention in research and practice (Ciarrochi et al., 2016; Gruner & Csikszentmihalyi, 2018).

Some of the limitations of the study should also be acknowledged. First, the measures of social well-being and personality used here are relatively brief and do not allow for a comprehensive and multidimensional assessment of the constructs. Internal consistencies for some variables were not acceptable. Therefore, longer and more reliable measures should be considered in future studies. Second, the sample consisted of individuals in middle and late adulthood. There are differences between age groups in the magnitude and rate of trait change. Therefore, the present results cannot be generalized to younger age groups (i.e., adolescence, early adulthood, and probably young adulthood). Similarly, there are cultural differences in trait stability and change. For example, Chopik and Kitayama (2017) found that Japanese exhibit significantly greater trait fluctuations over time than Americans. Moreover, traits are differently associated with aspects of well-being across cultures (Galinha et al., 2016). For example, Joshanloo et al. (2012) reported a nonsignificant association between social well-being and extraversion in an Iranian sample. Therefore, the present findings cannot be generalized to other cultural groups without further research. Notwithstanding these limitations, the results suggest that higher levels of social well-being may act as a catalyst for trait change toward maturation, whereas lower levels of

social well-being may contribute to undesirable trait changes. It is expected that the current findings will prompt parents, psychologists, educators, and policymakers to reevaluate the potential role of social well-being training in promoting positive change.

Supplementary Information The online version contains supplementary material available at https://doi.org/10.1007/s10902-022-00534-1.

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Data Availability All data and materials are publicly available. More information can be found at https://www.midus.wisc.edu.

Declarations

Conflict of interest The author declares that he has no conflict of interest.

Consent to Participate All participants provided written informed consent.

Ethics Approval This study presents a secondary analysis of de-identified and publicly available data provided by the Midlife Development in the U.S. (MIDUS) project. For more information on data collection and study procedures, see https://www.midus.wisc.edu.

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