Personality and Subjective Well-Being: Evidence from South Korea

Article *in* Social Indicators Research · March 2012

DOI: 10.1007/s11205-012-0009-9

CITATIONS
35

READS
879

2 authors, including:

Shang E. Ha
Sogang University
18 PUBLICATIONS **1,453** CITATIONS

SEE PROFILE

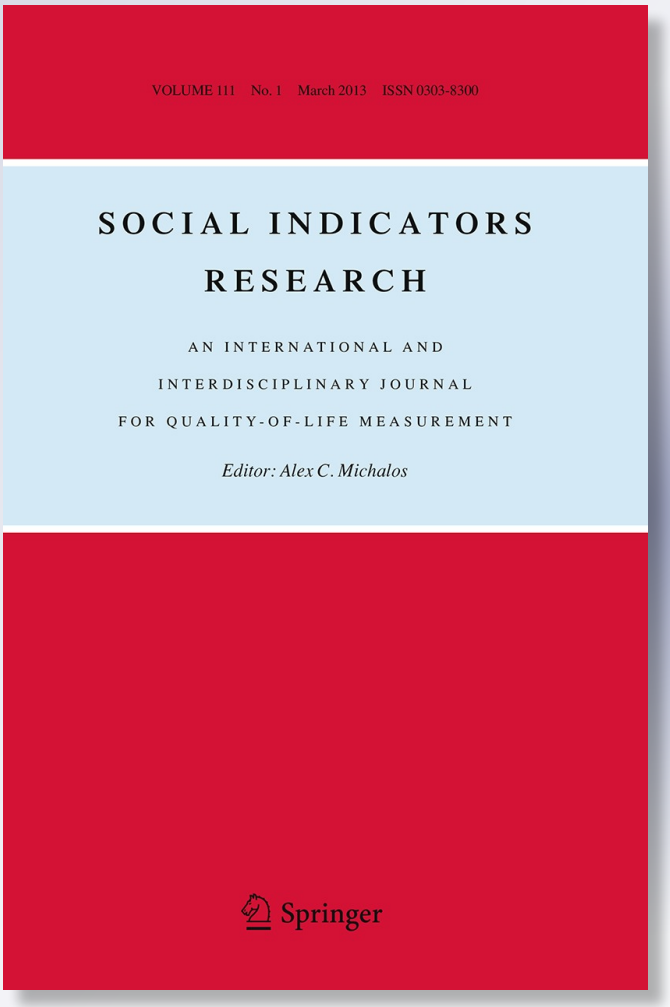
Personality and Subjective Well-Being: Evidence from South Korea

Shang E. Ha & Seokho Kim

Social Indicators Research
An International and Interdisciplinary Journal for Quality-of-Life Measurement

ISSN 0303-8300
Volume 111
Number 1

Soc Indic Res (2013) 111:341-359
DOI 10.1007/s11205-012-0009-9



Springer

Soc Indic Res (2013) 111:341–359
DOI 10.1007/s11205-012-0009-9

Personality and Subjective Well-Being: Evidence from South Korea

Shang E. Ha · Seokho Kim

Accepted: 6 February 2012 / Published online: 18 February 2012

Abstract Although the statistically significant relationship between personality traits and subjective well-being (i.e., self-reported happiness and life satisfaction) is well-known in the field of positive psychology, some scholars still cast doubt on the external validity of this finding and the strength of personality dimensions vis-à-vis other individual-level determinants of subjective well-being such as income, employment status, marital status, self-reported health, and so on. Using a nationally representative, face-to-face survey fielded in South Korea in 2009, we find that personality traits (measured by the Five-factor Model)—particularly, Emotional Stability and Extraversion—are positively associated with happiness and life satisfaction, after controlling for other covariates. The effects of personality traits are often on par with, and sometimes even greater than, those of other well-known determinants.

Keywords Personality · The "Big Five" · Subjective well-being · Happiness · Life satisfaction · South Korea

1 Introduction

Exploring personality has been an active area of research in the field of psychology (Caspi et al. 2005; Funder 2008). It is now well-known that across various social contexts, individuals demonstrate consistent attitudinal and behavioral patterns, which can be attributed to their personality traits (e.g., Gosling 2008). Such a common knowledge is based on psychologists' longstanding, tireless efforts to develop taxonomies that classify individuals according to a small number of personality dimensions (Allport and Odbert

S. E. Ha (✉)
Department of Political Science, Brooklyn College-City University of New York,
2900 Bedford Avenue, Brooklyn, NY 11210, USA
e-mail: sha@brooklyn.cuny.edu

S. Kim
Department of Sociology, Sungkyunkwan University, Seoul, Korea
e-mail: seokhok@skku.edu

1936; Cattell 1943; Eysenck and Eysenck 1976; Goldberg 1990; Costa and McCrae 1992). Among these constructs, the Five-factor Model (a. k. a., the "Big Five"), composed of Extraversion, Agreeableness, Conscientiousness, Emotional Stability (sometimes referred to by its reverse, Neuroticism), and Openness, has been accepted as a valid and reliable measure of personality and, as a consequence, it is the most widely used measure today (Gosling et al. 2003; John et al. 2008). A considerable amount of empirical research has employed the "Big Five" to examine the effects of personality on human behaviors, and they have found that these personality traits can predict a vast array of behavioral patterns, including academic performance, occupational choice, alcohol and tobacco consumption, religiosity, mental health, job satisfaction, and so on (e.g., Borghans et al. 2008; Carney et al. 2008; Ozer and Benet-Martínez 2006; Paunonen and Ashton 2001).

Personality has been known to affect subjective well-being (often referred to self-reported happiness and life satisfaction) as well. Particularly, among the "Big Five", Extraversion and Emotional Stability are reported to be positively and statistically significantly associated with subjective well-being (e.g., Costa and McCrae 1980; Diener and Lucas 1999; Lucas and Diener 2008; Steel et al. 2008). The influence of personality on subjective well-being is very replicable across various contexts and cultures, and therefore some positive psychologists even state that "the most important factor in determining a person's subjective well-being appears to be the personality with which he or she is born (Lucas and Diener 2008, p. 801)". However, such a relationship tends to be understated by other scholars mainly for two reasons. First, a set of comprehensive meta-analysis of the literature on personality and subjective well-being (e.g., DeNeve and Cooper 1998) revealed that although both Extraversion and Emotional Stability were unequivocally associated with subjective well-being, their effect sizes were relatively small. Second, as Dolan et al. pointed out, the association between personality and subjective well-being has been confirmed by a series of studies using convenience samples, while a few studies using large-scale, representative surveys (e.g., Helliwell 2006) found that, after controlling for other covariates such as trust and religiosity, this relationship was quite moderate (Dolan et al. 2008, p. 99).

Apparently, we have a convincing answer regarding the first issue. Recent studies have found that the effect sizes become substantially greater if only established personality measures—e.g., the "Big Five", Eysenck's three dimensional model, and Cattell's 16 personality factors—are taken into consideration (Steel et al. 2008). To the contrary, we do not have any clear answers regarding the second issue, because this issue basically requires us to generate large-scale survey data that include both personality measures and measures of subjective well-being along with a vast array of control variables that may affect one's happiness and life satisfaction. Few large-scale surveys have so far included personality measures because they tend to be too long to be part of face-to-face or telephone-based survey questionnaire. External validity is the main concern: unlike psychologists who generalize the findings across different sets of convenient samples via a meta-analysis, scholars in other social science disciplines such as economics and sociology typically think that generalization can be obtained by a careful analysis of a representative sample, controlling for covariates that may make the alleged relationship spurious.

In this paper, we address this issue, the generalizability of the relationship between personality and subjective well-being, using data from the 2009 Korean General Social Survey (KGSS). The data are based on a face-to-face, nationally representative survey using a multi-stage probability sampling, and they include a valid measure of personality, Ten Item Personality Inventory (TIPI), developed by Gosling et al. (2003). Our findings confirm that personality traits—particularly, Extraversion and Emotional Stability—are

positively associated with self-reported happiness and life satisfaction, even after controlling for many potential confounding factors. We also find that the effects of personality traits are often on par with, and sometimes greater than, those of other well-known determinants of subjective well-being. Thus, this study primarily contributes to a body of pre-existing research by enhancing external validity using a large-scale representative survey in a country where the relationship between personality and subjective well-being has not firmly been established.[1]

2 Personality and Subjective Well-Being: Previous Literature

In psychology a strong consensus has emerged that personality traits can effectively be measured using a Five-factor Model, often referred to simply as the "Big Five" (Goldberg 1990; Gosling et al. 2003). Like other personality measures, the "Big Five" is also based on lexical analysis. Specifically, researchers gathered lists of words (mainly adjectives) that could be used to describe underlying personality characteristics and asked people to rate how well each word described themselves. Researchers then conducted a series of factor analysis and identified five distinct groups of descriptors that tended to be similarly applied. Studies have found that this trait structure is consistent across different types of samples, languages, cultures, raters (self versus peer ratings), and methodological variations (John et al. 2008; Schmitt et al. 2007). Additionally, since these five traits are known to be largely heritable and relatively stable over an individual's lifespan (e.g., Bouchard 2004; Caspi et al. 2005; Van Gestel and Van Broeckhoven 2003), psychologists often theorize the "Big Five" personality traits are causally prior to any specific attitudes or behaviors (e.g., McCrae and Costa 2008).

The five dimensions of personality are Extraversion, Agreeableness, Conscientiousness, Emotional Stability (sometimes referred to by its inverse, Neuroticism), and Openness (to Experience): *Extraversion* involves the degree to which an individual is energetic, is outgoing, and experiences positive emotion; *Agreeableness* refers to the degree to which an individual is warm, sympathetic, cooperative, and gets along well with others; *Conscientiousness* involves the degree to which an individual is well-organized, punctual, and dependable; *Emotional Stability* means the degree to which an individual is worry-free, is immune to stress, and is less prone to negative ("blue") affect; and *Openness* refers to the degree to which an individual is open-minded, creative and aesthetic (Funder and Fast 2010, p. 679). Based on these characteristics, people who are extravert are expected to have large number of friends and sex partners and hold leadership positions in groups than those who are introvert. People high on Agreeableness are more likely to perform better in work groups and less likely to have interpersonal problems than those low on Agreeableness. People who are highly conscientious are expected to perform better in schools and tend to live longer (presumably because of good diet and exercise habits) than their counterparts. People who are neurotic (i.e., lower levels of Emotional Stability) are more likely to be burnt out and less likely to feel committed to the group to which they belong. Finally, people high on Openness are expected to succeed in artistic jobs and create unique work

[1] A few studies have examined the relationship between personality and subjective well-being using college student samples in South Korea, but they focus on personality traits (e.g., self-esteem and optimism) that are conceptually different from the "Big Five" (e.g., Cha 2003).

and home environments than those low on Openness who are more likely to have conservative attitudes and follow the convention (John et al. 2008).

Studies have found that personality characteristics, particularly Emotional Stability and Extraversion, are positively associated with subjective well-being (Costa and McCrae 1980; Lucas and Diener 2008; Steel et al. 2008). Explanations for these associations generally take two forms. One is based on the understanding that personality plays a role as an instrument to choose situations that will make people happy (McCrae and Costa 1991). According to this account, extraverts inherently enjoy and participate in social activities, which, in turn, affect the amount of positive affect that they experience, while neurotics—those who have lower levels of Emotional Stability—put themselves in more stressful conditions in daily life (or simply feel more stressed), which, in turn, makes them unhappy and less satisfied. The other explanation focuses on a direct link from personality traits to subjective well-being. This explanation is rooted in the identification of two mutually related, yet distinct, fundamental systems in personality as dispositional characteristics (e.g., Gray 1991): the behavioral activation system (BAS), which determines sensitivity levels to signals of reward; and the behavioral inhibition system (BIS), which regulates reactions to signals of punishment. According to this explanation, extraverts who are higher in BAS strength will be more sensitive to signals of reward, and therefore this reward sensitivity will eventually lead to increased positive emotions. Meanwhile, the Emotional Stability dimension is thought to reflect individual differences in BIS strength. Thus, people who are emotionally stable will be less sensitive than the neurotics to signals of punishment, which eventually leads to increase negative emotions.

Meanwhile, hypotheses regarding the other three personality traits have not been well-established: as a matter of fact, it is not easy to imagine any noticeable differences in subjective well-being between those who are sympathetic and those who are critical (Agreeableness), those who are self-disciplined and those who are careless (Conscientiousness), and those who are curious and those who are uncreative (Openness). Empirical studies sometimes find that Agreeableness and Conscientiousness are also positively associated with subjective well-being (Steel et al. 2008), but theoretical justification in support of such a finding is usually non-existent.

This paper aims to see whether the direct influence of personality upon happiness and life satisfaction (frequently observed in the Western culture) is also confirmed in South Korea, where such a relationship has not reported to be firmly established. Based on a reasonable assumption that measures of personality (the "Big Five") and subjective well-being are valid across different cultures (e.g., Diener et al. 2003; Heine and Buchtel 2009; McCrae 2002; Schmitt et al. 2007), we hypothesize that both Extraversion and Emotional Stability are positively associated with subjective well-being in South Korea and test whether this can be empirically supported. We would like to emphasize that it is not our main intention to identify causal mechanisms that link personality traits with subjective well-being. Apparently, it seems feasible to peer into the "black box" between personality and subjective well-being as the survey provides a vast number of covariates that have been known to be associated with these two factors. However, we have now convincing evidence that the conventional, Baron–Kenny style mediation analysis—particularly relying on observational data—leads to biased results, and therefore should not be over-utilized (Bullock et al. 2010; Spencer et al. 2005). Reflecting the recent advance in statistical analysis, we limit our attention to detecting the direct effect of personality traits on subjective well-being.

3 Data and Measures

For data analysis, we use the 2009 KGSS. The KGSS is a nationally representative, face-to-face interview survey, conducted every year since 2003.[2] The sampling procedure and interviewing methods are virtually identical to those of the General Social Survey (GSS) in the US. The core questions are generally compatible with those of the GSS and the modules are shared with the International Social Survey Project (ISSP) and the East Asian Social Survey (EASS). This particular survey took place during the summer of 2009 and had a response rate of 63.4% ($n = 1{,}602$).[3]

Two questions serve as our dependent variables. One measures the respondents' perceived level of happiness ("If you were to consider your life in general these days, how happy or unhappy would you say you are?") and the other gauges subjective evaluation of life satisfaction ("All things considered, how satisfied are you with your life as a whole these days?). Both questions are coded in a five-point scale, with higher values denoting higher levels of happiness and life satisfaction. So, in this study, we examine only one element of subjective well-being—*cognitive* judgments, i.e., "an individual's reflective judgment that his or her life or the circumstances of that life are going well (Lucas and Diener 2008, 796)". The other element, *affective* experiences that encompass the emotions and moods that individuals have in their daily life [being able to be elegantly captured by experience sampling (Scollon et al. 2003)], is not considered.[4]

The survey includes a carefully translated, Korean version of the TIPI.[5] Originally developed by Gosling et al. (2003), the TIPI is ideal in a large-scale survey context because it is relatively short. This battery asks respondents to report how well ten pairs of traits (e.g., "Extraverted, enthusiastic", "Anxious, easily upset", "Conventional, uncreative") describe themselves. That said, the TIPI is composed of twenty adjectives (ten pairs) in total, and two pairs of adjectives are assigned to measure each of the five dimensions of

[2] The codebooks and cumulative data of the 2003–2009 KGSS are available at http://www.kossda.or.kr/eng/.

[3] The response rate of 63.4% is slightly lower than that of the General Social Survey in the United States, which is usually over 70%. A comparison with the Korean Census suggests that it does not undermine the demographic representativeness of the survey.

[4] Some of previous literature (e.g., Campbell et al. 1976) consider happiness (unlike life satisfaction) as an affective orientation. Though conceptual difference between life satisfaction and happiness clearly exists, recent studies (e.g., Lucas and Diener 2008) tend to put them in the same dimension, presumably because happiness in the survey setting is believed not to tap on affective dimension. In surveys, questions on life satisfaction and happiness lead respondents to evaluate one's quality of life retrospectively, and the answers will be a weighted sum of reflective judgments of one's life. In order to grasp affective orientation that happiness involves, it will be better to rely on experience sampling that allows us to track down one's emotional experiences in daily life.

[5] The first author translated the TIPI into Korean. We did not compare the Korean TIPI with other, longer personality batteries in Korean because it would not be particularly helpful to build construct validity of the Korea TIPI for two reasons. First, the longer batteries available in South Korea are not validated ones, which are basically translated in Korean from English, not created through a series of factor analysis of Korean adjectives from scratch. Therefore, though we know that the Korean version of the "Big Five" based on longer batteries is by and large similar to its English version, we cannot rule out the possibility that there are some noticeable differences between them, presumably due to some unobservable problems in translation (e.g., Schmitt et al. 2007). Second, even though we assume that the "Big Five" measured by longer batteries of Korean adjectives is quite reliable, it is practically impossible to add them to a face-to-face, nationally representative, survey because they are too long to be included. It may be possible to compare the TIPI with longer measures used in previous studies (e.g., Yik et al. 2002), but it will not be helpful because of some fundamental differences between convenience samples from the college student body and a nationally representative sample that covers the whole population.

personality traits. Due to its brevity and its high correlation with personality measures obtained from other longer survey instruments (such as the 44-item Big Five Inventory [BFI] or the 240-item Revised NEO Personality Inventory [NEO-PI-R]), the TIPI has received extensive use in academic research.[6] In the 2009 KGSS, 1,596 respondents answered all the TIPI questions.

The bivariate correlations between the couple of items that form each of the "Big Five" are as follows: Extraversion (0.45), Agreeableness (0.04), Conscientiousness (0.16), Emotional Stability (0.24), and Openness (0.28). Though not ideal, these relatively low correlations do not necessarily suggest that internal consistency has not been obtained, as the TIPI was intentionally created to cover a variety of "facets" of each dimension of personality with two pairs of adjectives. Not surprisingly, these correlations are quite comparable to those from the short batteries used by Mondak (2010)—Extraversion (0.53), Agreeableness (0.47), Conscientiousness (0.29), Emotional Stability (0.43), and Openness (0.28)—and by Gerber et al. (2010)—Extraversion (0.45), Agreeableness (0.23), Conscientiousness (0.37), Emotional Stability (0.47), and Openness (0.28).

The correlations among the "Big Five" are listed in Table 1. Since the largest correlation is 0.287 (between Conscientiousness and Emotional Stability), the personality dimensions seem to be independent of each other. It is intriguing that some of the five personality dimensions are negatively correlated in the Korean TIPI, as they all tend to be positively correlated—perhaps due to social desirability—in the Western cultures. These negative correlations may be explained by cultural differences: Leung and Bozionelos (2004) report that in the Confucian tradition, both Extraversion and Openness are likely to be viewed negatively, while Agreeableness and Emotional Stability tend to be viewed positively. As a consequence, people are more likely to disapprove of politicians who are out-going and embrace new, unconventional ideas.

Along with personality traits, we also consider two sets of control variables that have been known to be associated with subjective well-being.[7] The first set includes socio-demographic variables: age, income, gender, education, marital status, and employment status. Both age (measured in years) and its squared term are included in the models as we have often observed a curvilinear relationship between age and subjective well-being (e.g., Blanchflower and Oswald 2008; but see Easterlin 2006 for an alternative view). Income (coded in 21 categories) is also considered since it is arguably the most frequently examined determinant of life satisfaction and happiness (e.g., Diener and Biswas-Diener 2002; Easterlin 2001). Though we have little evidence that gender (a dummy variable) and education (coded in 8 categories) affect subjective well-being (e.g., Dolan et al. 2008; but see Inglehart 2002; Witter et al. 1984 for an alternative view), we include them as they are part of standard demographic control variables. Additionally, we consider individuals' marital status (a set of four dummies—married, widowed, separated/divorced, and never married) to confirm the married are happier than those who are never married (e.g., Diener et al. 2000; Myers 1999; but see Stutzer and Frey 2006a for an alternative view). Finally, employment status (a set of five dummies—employed, student, housekeeper, retired, and unemployed) is included to see whether unemployment is negatively associated with subjective well-being (e.g., Di Tella et al. 2001; Lelkes 2006).

[6] For a partial list of research that has used the TIPI and its translated versions, see Samuel Gosling's website: http://homepage.psy.utexas.edu/homepage/faculty/gosling/scales_we.htm (last visited on February 2, 2012).

[7] A detailed discussion on the relationship between socio-demographic factors and subjective well-being is available at Argyle (2001) and Dolan et al. (2008).

Table 1 Correlation matrix of the "Big Five" personality dimensions

	Conscientiousness	Openness	Agreeableness	Emotional Stability	Extraversion
Conscientiousness	1.000				
Openness	0.069	1.000			
Agreeableness	0.139	−0.094	1.000		
Emotional Stability	0.287	−0.076	0.226	1.000	
Extraversion	0.026	0.267	−0.097	−0.156	1.000

Source The 2009 Korean General Social Survey

The other set of variables—presumably correlated with personality—is interpersonal trust, financial satisfaction, self-reported health, political ideology, political participation, and religious attendance. Trust (a 3-point scale variable) is known to be positively associated with subjective well-being (e.g., Helliwell 2003; Helliwell and Putnam 2004). Subjective evaluation of the financial situation of the family (a 5-point scale variable) has been reported to mediate the effect of income onto life satisfaction and happiness (e.g., Johnson and Krueger 2006). People who are in a good health (a 5-point scale variable) are more likely to be happy than those who have health problems (e.g., Okun, Stock, Haring, and Witter 1984; but see Pussman and Cohen 2005 for an alternative view). In terms of political ideology (a 5-point scale variable), the liberal are less likely to happy than the conservative (e.g., Napier and Jost 2008). People who are active in political processes (a dummy variable) are more likely to be happy than those who do not participate in politics (e.g., Pacheco and Lange 2010; Stutzer and Frey 2006b). Religious attendance (a 7-point scale variable) is also known to affect subjective well-being (e.g., Helliwell 2003; Lim and Putnam 2010).

We consider our list of individual-level variables reasonably comprehensive. Our models are also decidedly conservative, because studies have shown some of these control variables (e.g., income, education, and political ideology) are at least partially endogenous to personality (Borghans et al. 2008; Carney et al. 2008; Gerber et al. 2010). As these control variables would somewhat absorb the personality trait effects, we could view any statistically significant direct relationships between personality and subjective well-being in these models as substantial.[8] The variables' coding and the wording of their questions are available at "Appendix A". "Appendix B" lists the summary statistics of the variables included in our analysis.

Three model specifications in our data analysis are as follows:

1. Dependent Variable = Constant + B*(Personality) + e;
2. Dependent Variable = Constant + B*(Personality) + D*(Socio-Demographic Controls) + e;
3. Dependent Variable = Constant + B*(Personality) + D*(Socio-Demographic Controls) + G*(Other Controls) + e,

where Personality is a vector of the Big Five traits, and Socio-Demographic Controls and Other Controls include the above-mentioned control variables, respectively. We report cluster robust standard errors at the province level to allow for the interdependence of

[8] For the reasons we stated above, we did not conduct mediation analysis to identify causal mechanism here.

individuals in a given province.[9] As our dependent variables are measured in a five-point scale, we employ ordered probit regression.

4 Results

The results from statistical analysis are reported in Table 2. Model 1 includes only the "Big Five" personality traits as independent variables. These results show that Stability and Extraversion are positively associated with both life satisfaction and happiness. Here, the "Big Five" traits are jointly significant (p value associated with Chi-square test of joint significance is smaller than 0.01). The findings in Model 1, which are consistent with those of previous studies, suggest that people who are calm and emotionally consistent and those who are enthusiastic and outgoing are more likely to harbor higher levels of life satisfaction and happiness. That said, personality traits by themselves can serve as important predictors of subjective well-being.

But do personality traits really add anything to what we already know about the predictors of subjective well-being? To answer this question, we examine the results from two additional models. Model 2 includes both personality traits and a set of standard socio-demographic control variables (age, income, gender, education, employment status, and marital status). Model 3 additionally includes another set of variables that are reported to be related to subjective well-being: trust, economic satisfaction, health, political ideology, religious attendance, and political participation. As we can see in Model 2, the effects of the "Big Five" are still jointly significant at the 99% confidence level (i.e., $p < 0.01$), with the effects of Stability and Extraversion remaining statistically significant, even after controlling for standard socio-demographic factors. Model 2 also demonstrates that, consistent with previous findings, these socio-demographic variables are good predictors of subjective well-being: life satisfaction (not necessarily happiness) seems to be "U-shaped" over life cycle; income is positively associated with both life satisfaction and happiness; education is also positively linked with our dependent variables; as opposed to the employed, the unemployed are less likely to be satisfied; and in comparison of people who are never married, the married and the widowed are more likely to be satisfied and happy, but those who are separated or divorced are less likely to be satisfied with their life.

The effects of Stability and Extraversion on subjective well-being tend to be held even after controlling for additional set of variables in Model 3. We observe that the effect of Extraversion on life satisfaction is apparently washed out, but it is still on the borderline statistical significance ($p = 0.061$). Among the newly added factors, trust, economic satisfaction, and self-reported health are all positively associated with both life satisfaction and happiness. People who are active in politics are more likely to be satisfied with their life, while those who are involved in religious activities are more likely to be happy. It is notable that political ideology seems not to be associated with subjective well-being among South Koreans. This is presumably because there are some peculiarities in terms of political ideology in Korea; for example, unlike the case of the United States [where political ideology can neatly be decomposed into two parts, economic and social (e.g., Feldman and Johnston 2009; Gerber et al. 2010)], South Koreans' political ideology may

[9] In another set of models, we also consider the province-level fixed effects, to ensure that our results are not the products of some correlation between personality traits and other factors that might affect subjective well-being (e.g., province-level socio-cultural differences). The results are fairly similar to those reported here (available upon request from the authors).

Table 2 Personality and subjective well-being

Variables	Life satisfaction (1 = not satisfied; 5 = satisfied)			Happiness (1 = unhappy; 5 = happy)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Personality						
Conscientiousness (scale, 0–1)	0.150 (0.195)	0.107 (0.195)	0.142 (0.174)	0.063 (0.107)	0.057 (0.116)	0.110 (0.143)
Openness (scale, 0–1)	0.280 (0.149)	0.212 (0.168)	0.124 (0.156)	0.230* (0.115)	0.044 (0.108)	−0.088 (0.134)
Agreeableness (scale, 0–1)	0.105 (0.113)	0.204 (0.107)	0.141 (0.120)	0.190 (0.189)	0.412* (0.194)	0.331 (0.203)
Stability (scale, 0–1)	0.866** (0.154)	0.887** (0.192)	0.549** (0.168)	0.848** (0.127)	0.930** (0.168)	0.559** (0.130)
Extraversion (scale, 0–1)	0.500** (0.133)	0.474** (0.139)	0.285 (0.153)	0.632** (0.087)	0.649** (0.084)	0.455** (0.069)
Demographic control						
Age (years)		−0.041** (0.013)	−0.040** (0.013)		−0.025 (0.013)	−0.022 (0.012)
Age-squared (years)		0.042** (0.011)	0.040** (0.012)		0.014 (0.013)	0.008 (0.014)
Income (scale, 1–21)		0.040** (0.005)	0.014* (0.006)		0.035** (0.006)	0.012 (0.007)
Female (1 = Yes)		0.115 (0.069)	0.155 (0.083)		−0.042 (0.078)	−0.042 (0.089)
Education (scale, 0–7)		0.066* (0.028)	0.060* (0.027)		0.052** (0.018)	0.037 (0.021)
Other control						
Trust (1 = no; 3 = yes)			0.111** (0.022)			0.152** (0.029)
Financial satisfaction (1 = no; 5 = yes)			0.373** (0.049)			0.312** (0.048)
Health (1 = bad; 5 = good)			0.152** (0.016)			0.187** (0.025)
Political liberalism (scale, 1–5)			−0.018 (0.035)			0.007 (0.030)
Religious attendance (scale, 1–8)			0.010 (0.011)			0.035** (0.011)
Political participation (1 = Yes)			0.210* (0.103)			0.100 (0.088)
Employment status						
Student (1 = Yes)		0.200 (0.167)	0.063 (0.143)		0.273* (0.110)	0.137 (0.093)
Homemaker (1 = Yes)		0.127 (0.073)	0.048 (0.073)		0.146 (0.117)	0.072 (0.119)
Retired (1 = Yes)		−0.036 (0.231)	−0.090 (0.236)		0.065 (0.143)	0.069 (0.151)
Unemployed (1 = Yes)		−0.136* (0.062)	−0.131* (0.065)		−0.023 (0.154)	−0.001 (0.155)

Table 2 continued

Variables	Life satisfaction (1 = not satisfied; 5 = satisfied)			Happiness (1 = unhappy; 5 = happy)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Marital status						
Married (1 = Yes)		0.266** (0.090)	0.302** (0.093)		0.440** (0.096)	0.509** (0.091)
Widowed (1 = Yes)		0.555** (0.150)	0.596** (0.162)		0.650** (0.111)	0.724** (0.101)
Separated/divorced (1 = Yes)		−0.298** (0.109)	−0.079 (0.126)		−0.125 (0.196)	0.111 (0.185)
Cut 1	−0.772** (0.142)	−0.906** (0.333)	0.397 (0.337)	−1.098** (0.112)	−1.099** (0.332)	0.257 (0.321)
Cut 2	0.064 (0.135)	−0.025 (0.345)	1.358** (0.340)	−0.134 (0.114)	−0.072 (0.315)	1.359** (0.315)
Cut 3	1.269** (0.140)	1.241** (0.355)	2.750** (0.346)	1.058** (0.128)	1.191** (0.333)	2.743** (0.337)
Cut 4	2.478** (0.143)	2.499** (0.358)	4.125** (0.345)	2.206** (0.132)	2.385** (0.342)	4.042** (0.353)
Observations	1,503	1,503	1,503	1,503	1,503	1,503
Chi-squared statistic (joint significance of personality items)	193.237**	76.611**	22.896**	216.387**	147.562**	110.126**
Pseudo *R*-square	0.0160	0.0468	0.1079	0.0169	0.0492	0.1066

Coefficients and robust standard errors in parentheses (clustered by province) come from ordered probit analysis

Source The 2009 Korean General Social Survey

**$p < 0.01$; *$p < 0.05$ (two-tailed)

have multiple aspects that include attitudes toward North Korea as well as "attitudes toward inequality (economic ideology)" and "attitudes toward social change versus tradition (social ideology)" (Jost 2006, p. 654).[10]

To demonstrate the relative importance of the associations between personality and subjective well-being, we present the effect sizes of some of our independent variables on a respondent's likelihood of being "satisfied" (the answering option "4" on the 5-point scale life satisfaction variable) and of being "happy" (the value "4" on the 5-point scale happiness variable). The effect sizes were obtained by calculating the min–max ("full dose") effects (Long and Freese 2005, p. 215). Generally speaking, the min–max effects of an independent variable on life satisfaction or happiness mean that, with other independent variables fixed at their mean values, an increase in the independent variable from its minimum to its maximum corresponds to a certain percentage-point increase (or decrease)

[10] In this context, it is very suggestive that the relationship between personality and political ideology does not elegantly replicate well-established findings in the US and Europe (e.g., Gerber et al. 2010; Jost et al. 2009). An exploratory analysis shows that Openness is positively associated with political liberalism, but Conscientiousness is not necessarily associated with political conservatism in South Korea.

Table 3 Marginal (min–max) effects of personality and other variables on subjective well-being

Variables	Predicted probability	95% Confidence interval
Panel I: Life satisfaction		
Emotional Stability	0.1518	[0.1427, 0.1608]
Extraversion	0.0801	[0.0754, 0.0848]
Income	0.0846	[0.0793, 0.0898]
Trust	0.0626	[0.0590, 0.0662]
Financial satisfaction	0.3509	[0.3264, 0.3753]
Health	0.1686	[0.1593, 0.1779]
Panel II: Happiness		
Emotional Stability	0.1247	[0.1126, 0.1365]
Extraversion	0.1034	[0.0936, 0.1132]
Income	0.0535	[0.0481, 0.0589]
Trust	0.0710	[0.0645, 0.0776]
Financial satisfaction	0.2402	[0.2149, 0.2656]
Health	0.1751	[0.1599, 0.1903]

The marginal effects (with 95% confidence interval within brackets) reported here are calculated following Long and Freese (2005, p. 215). They are based on Model 3 in Table 1

in the likelihood of choosing one over other answering options (specifically, the probability of choosing "4" over "1", "2", "3", or "5") on life satisfaction and happiness variables.[11]

Table 3 shows that, with other variables fixed at their mean values, an increase in Stability, from its minimum value to its maximum value, correlates with a 15.18 percentage-point increase in a respondent's likelihood of choosing the value of 4 ("satisfied") over other values in the life satisfaction variable (95% CI is [14.27, 16.08]). It means that the difference between the probability of being "satisfied" for an individual whose Emotional Stability is lowest (26.03%) and that for another individual whose Emotional Stability is highest (41.21%) is 15.18%-points. The equivalent effect size of Extraversion is 8.01 percentage-point (95% CI is [7.54, 8.48]): specifically, the probability of being "satisfied" for an individual whose Extraversion is lowest is 29.74%, while that for another individual whose Extraversion is highest is 37.75%. Similarly, an increase in Financial Satisfaction, from "very dissatisfied" to "very satisfied", or an increase in Health (from "poor" to "excellent") correlates with 35.09 percentage-point and 16.86 percentage-point increases in a respondent's probability of reporting to be "satisfied" with their life, respectively. All other things being equal, financial satisfaction is the most powerful predictor of life satisfaction. However, it is noteworthy that two dimensions of the "Big Five" personality—Stability (15.18 percentage-point) and Extraversion (8.01 percentage-point)—are, in terms of their effect sizes, comparable with self-reported health (16.86 percentage-point) and income (8.46 percentage-point), respectively. This means that, other things being equal, the differences in perceived life satisfaction between an individual with the lowest level of Emotional Stability (or Extraversion) and another individual with the

[11] We report the min-max effects here in order to make our interpretation straightforward. It is also easy to calculate other types of marginal effects (e.g., from mean to maximum, from the 25th percentile to the 75th percentile, etc) following the same procedure. It is also doable to report the changes in predicted probability of choosing another value in the dependent variable (e.g., 2 "dissatisfied/unhappy" instead of 4 "satisfied/happy").

highest level of Emotional Stability (or Extraversion) are approximately equal to those between an individual who feels very unhealthy (or who is extremely poor) and another individual who feels very healthy (or who is extremely rich).

Comparisons of the effect sizes are also relevant regarding happiness. With other factors fixed at their mean values, an increase in Stability, from its minimum to its maximum, yields a 12.47 percentage point increase in the likelihood of a respondent being "happy" (the value of 4 in the happiness variable)—32.96% for an individual whose Emotional Stability is lowest and 45.43% for another individual whose Emotional Stability is highest. A similar increase in Extraversion correlates with 10.34 percentage-point increase in the likelihood of a respondent being "happy"—34.13% for an individual whose Extraversion is lowest and 44.47% for another individual whose Extraversion is highest. These magnitudes are comparable to the predicted probability of other predictors: a monthly income increase, from the lowest category to the highest one (5.35 percentage-point); an increase in trust, from "can't be too careful in dealing with people" to "most people can be trusted" (7.10 percentage-point); an increase in financial satisfaction, from "very dissatisfied" to "very satisfied" (24.02 percentage-point); and an increase in health, from "poor" to "excellent" (17.51 percentage-point). In sum, the effects of personality traits, particularly Emotional Stability and Extraversion, on subjective well-being are not only statistically significant but also quite substantial in terms of their sizes. The changes in predicted probabilities regarding all five answering options of life satisfaction and happiness variables are shown in Fig. 1.[12]

5 Discussion

The findings in this paper demonstrate that there are statistically significant and substantively important relationship between personality traits and subjective well-being (i.e., life satisfaction and happiness). Our analysis of a large-scale, nationally representative survey indicates that Emotional Stability and Extraversion correlate with high levels of life satisfaction and happiness and the magnitudes of these associations are comparable to those of canonical subjective well-being predictors such as income, health, trust, employment status, religiosity, and so on. Our results showing personality traits directly affect subjective well-being, even after controlling for most of its well-known determinants, suggest that personality traits can actually help to explain some variations in subjective well-being that occasionally tend to be understated.

Overall, our results are consistent with the findings from previous studies, and therefore strengthen the external validity of the relationships between personality and subjective well-being. The findings of this study will be further elaborated by addressing two additional issues that it has not covered. First, due to the limitations of our data, our analysis focuses on only one aspect of subjective well-being, i.e., cognitive, retrospective judgments of one's happiness and life satisfaction, and ignores its other aspect, i.e., affective experience such as positive and negative affect. Experience sampling is designed to

[12] The finding that Emotional Stability has larger effect than Extraversion is also reported in previous meta-analysis (e.g., DeNeve and Cooper 1998; Steel et al. 2008). Unfortunately, we do not have any convincing answer for this. On the one hand, previous research is silent on this finding. On the other hand, theoretical pieces (e.g., Gray 1991) do not suggest that BIS (behavioral inhibition system)—linked with Emotional Stability—is more active than BAS (behavioral activation system)—linked with Extraversion. Hence, we believe this issue is a theoretically daunting task that cannot be resolved empirically, and therefore it is beyond the range and scope of this paper.

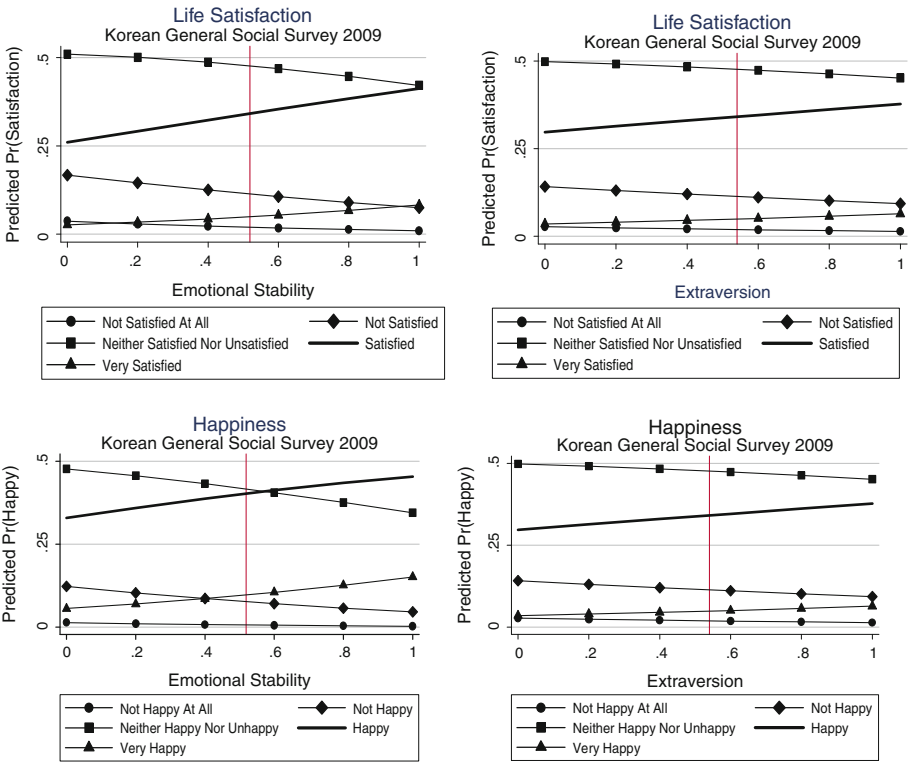


Fig. 1 Predicted probabilities on life satisfaction and happiness: Emotional Stability and Extraversion. *Note*: The predicted probabilities—"min–max" effects—are calculated following Long and Freese (2005). The predicted probabilities for all five answering options of life satisfaction and happiness variables are shown. One of them for "satisfied" and "happy" is reported in Table 3. The vertical lines indicate the mean values of Emotional Stability and Extraversion, respectively

capture this specific aspect of subjective well-being and there is a consensus among both psychologists and economists that it can yield a large-scale, representative sample (e.g., Csikszentmihalyi and Hunter 2003; Kahneman and Krueger 2006). To our best knowledge, though, no research has been done to examine the effect of personality on positive and negative affect using data based on experience sampling. This is presumably because personality measures are too long to be included in the survey. We think this is not an issue anymore. The development of TIPI—very short, yet valid, measure of personality—will be able to allow us to smoothly incorporate it in experience sampling procedure. Given that personality is heritable and highly stable over life span (e.g., Caspi et al. 2005; Van Gestel and Van Broeckhoven 2003), it will suffice to measure it once, along with other basic socio-demographic information, when identifying a pool of subjects of the sample. By doing so, we expect to identify some meaningful relationship between personality and affective aspect of subjective well-being, and it will open a new horizon for the study of interactions among personality, emotions, and subjective well-being.

Second, although we do our best to make our results robust to any potential contextual factors by reporting cluster-robust standard errors (and province-level fixed effects in a separate analysis), we cannot rule out the possibility that these contextual factors (e.g., economic inequality, unemployment rates, population density, the quality of governance,

and so on) exert influence on people's perceived quality of life. Up until now, contextual factors have usually been considered in cross-national studies of subjective well-being (e.g., Diener et al. 1995; Helliwell 2003; Flavin et al. 2010), but we have recently seen evidence that their effects exist even in sub-national levels (e.g., Alvarez-Díaz et al. 2010). This suggests that it is necessary to launch another study that examines the effects of both individual-level and context-level factors on subjective well-being using hierarchical modeling by collecting reliable and comprehensive socio-economic and political information on provinces, counties, and cities/towns.

Acknowledgment This paper was supported by the National Research Foundation of Korea Grant funded by the Korean goverment (NRF-2010-330-B00128).

Appendix A: Variable Coding and Question Wording

Personality: TIPI (10 Trait Pairs)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other. I see myself as:

Extraversion Extraverted, enthusiastic; Reserved, quiet (Reverse coded)
Agreeableness Sympathetic, warm; Critical, quarrelsome (Reverse coded)
Conscientiousness Dependable, self-disciplined; Disorganized, careless (Reverse coded)
Emotional Stability Calm, emotionally stable; Anxious, easily upset (Reverse coded)
Openness: Open to new experiences, complex; Conventional, uncreative (Reverse coded)

(1 = Disagree strongly; 2 = Disagree moderately; 3 = Disagree a little; 4 = Neither agree nor disagree; 5 = Agree a little; 6 = Agree moderately; 7 = Agree strongly. Responses rescaled to range from 0 to 1.)

Subjective Well-Being

Life Satisfaction "All things considered, how satisfied are you with your life as a whole these days?" (1 = Very Dissatisfied; 5 = Very Satisfied)
Happiness ""If you were to consider your life in general these days, how happy or unhappy would you say you are?" (1 = Very unhappy; 5 = Very happy)

Other

Female 0 = Male; 1 = Female
Age Years
Education 0 = No Schooling; 1 = Elementary School; 2 = Middle School; 3 = High School; 4 = 2-year College; 5 = Bachelor's Degree; 6 = Master's Degree; 7 = Doctoral Degree
Family income (Monthly) 0 = No Income; 1 = Less than 500,000 Won; 2 = 500,000 Won-990,000 Won; 3 = 1,000,000 Won-1,490,000 Won; 4 = 1,500,000 Won-1,990,000 Won; 5 = 2,000,000 Won-2,490,000 Won; 6 = 2,500,000 Won-2,990,000 Won; 7 = 3,000,000 Won-3,490,000 Won; 8 = 3,500,000 Won-3,990,000 Won; 9 = 4,000,000

Won-4,490,000 Won; 10 = 4,500,000 Won-4,990,000 Won; 11 = 5,000,000 Won-5,490,000 Won; 12 = 5,500,000 Won-5,990,000 Won; 13 = 6,000,000 Won-6,490,000 Won; 14 = 6,500,000 Won-6,990,000 Won; 15 = 7,000,000 Won-7,490,000 Won; 16 = 7,500,000 Won-7,990,000 Won; 17 = 8,000,000 Won-8,490,000 Won; 18 = 8,500,000 Won-8,900,000 Won; 19 = 9,000,000 Won-9,490,000 Won; 20 = 9,500,000 Won-9,990,000 Won; 21 = More than 10,000,000 Won (Approximately 1 USD = 1,200 Won)

Trust 1 = Can't be too careful in dealing with people; 2 = Depends; 3 = Most people can be trusted

Financial Satisfaction 1 = Very dissatisfied; 2 = Somewhat dissatisfied; 3 = Neither satisfied nor dissatisfied; 4 = Somewhat Satisfied; 5 = Very satisfied

Health 1 = Poor; 2 = Fair; 3 = Good; 4 = Very Good; 5 = Excellent

Political Ideology 1 = Very Liberal; 2 = Somewhat Liberal; 3 = Moderate; 4 = Somewhat Conservative; 5 = Very Conservative

Political Participation 0 = None; 1 = Participated in At Least One Mode of Political Activity (among voting, signing petition, boycotting, participating in demonstration, attending political meeting, contacting politician, contacting media, donating, and joining Internet forum)

Attend Church or Temple 1 = Never; 2 = Once for a few years; 3 = Once per year; 4 = A few times per year; 5 = Once per month; 6 = A few time per month; 7 = Once per week; 8 = A few times per week

Employment Status (Dummies) Employed (reference category); Student; Homemaker; Retired; Unemployed

Marital Status (Dummies) Married; Widowed; Separated or Divorced; Never Married (reference category)

Appendix B

See Table 4.

Table 4 Summary statistics of the variables included in the models

Dependent variables	
Life satisfaction (1 = Not satisfied; 5 = Satisfied)	3.266 [0.936]
Happiness (1 = Unhappy; 5 = Happy)	3.489 [0.918]
Independent variables	
Conscientiousness (scale, 0–1)	0.618 [0.195]
Openness (scale, 0–1)	0.549 [0.205]
Agreeableness (scale, 0–1)	0.626 [0.174]
Stability (scale, 0–1)	0.520 [0.205]
Extraversion (scale, 0–1)	0.540 [0.224]
Age (years)	43.453 [15.246]

Table 4 continued

Income (scale, 0–21)	8.215 [4.988]
Female (1 = yes)	0.518 [0.500]
Education (scale, 0–7)	3.623 [1.484]
Married (1 = yes)	0.668 [0.471]
Widowed (1 = yes)	0.065 [0.247]
Separated or divorced (1 = yes)	0.033 [0.180]
Never married (1 = yes)	0.233 [0.423]
Employed (1 = yes)	0.603 [0.489]
Student (1 = yes)	0.082 [0.274]
Housekeeper (1 = yes)	0.158 [0.365]
Retired (1 = yes)	0.081 [0.273]
Unemployed (1 = yes)	0.075 [0.264]
Ideology (1 = very conservative, 5 = very liberal)	3.012 [0.962]
Trust (1 = Mistrust, 3 = Trust)	2.235 [0.847]
Attend church (1 = Never, 8 = More than once per week)	3.588 [2.673]
Financial satisfaction (1 = Not satisfied, 5 = Satisfied)	2.937 [1.064]
Health (1 = Not healthy, 5 = Healthy)	3.483 [1.127]
Political participation (1 = yes)	0.831 [0.375]

Cell entries are mean values, with SD in brackets

References

Allport, G. W., & Odbert, H. S. (1936). *Trait-names: A psycho-lexical study*. Princeton, NJ: Psychological Review Company.

Alvarez-Díaz, A., González, L., & Radcliff, B. (2010). The politics of happiness: On the political determinants of quality of life in the American states. *Journal of Politics, 72*, 894–905.

Argyle, M. (2001). *The psychology of happiness* (2nd ed.). New York: Routledge.

Blanchflower, D., & Oswald, A. (2008). Is well-being U-shaped over the life cycle? *Social Science and Medicine, 66*, 1733–1749.

Borghans, L., Duckworth, A. L., Heckman, J. J., & ter Weel, B. (2008). The economics and psychology of personality traits. *Journal of Human Resources, 43*, 972–1059.

Bouchard, T. J., Jr. (2004). Genetic influence on human psychological traits. *Current Directions in Psychological Science, 13*, 148–151.
Bullock, J. G., Green, D. P., & Ha, S. E. (2010). Yes, but what's the mechanism? (Do not expect an easy answer). *Journal of Personality and Social Psychology, 98*, 550–558.
Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, evaluations, and satisfactions*. New York: Russell Sage Foundation.
Carney, D. R., Jost, J. T., Gosling, S. D., & Potter, J. (2008). The secret lives of liberals and conservatives: Personality profiles, interaction styles, and the things they leave behind. *Political Psychology, 29*, 807–840.
Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology, 56*, 453–484.
Cattell, R. B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology, 38*, 476–506.
Cha, K.-H. (2003). Subjective well-being among college students. *Social Indicators Research, 62*(63), 455–477.
Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology, 38*, 668–678.
Costa, P. T., & McCrae, R. R. (1992). *NEO PI-R. Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
Csikszentmihalyi, M., & Hunter, J. (2003). Happiness in everyday life: The uses of experience sampling. *Journal of Happiness Studies, 4*, 185–199.
DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*, 197–229.
Di Tella, R., MacCulloch, R., & Oswald, A. (2001). Preferences over inflation and unemployment: Evidence from surveys of happiness. *American Economic Review, 91*, 335–341.
Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? A literature review and guide to needed research. *Social Indicators Research, 57*, 119–169.
Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology, 69*, 851–864.
Diener, E., Gohm, C. L., Suh, E., & Oishi, S. (2000). Similarity of the relations between marital status and subjective well-being across cultures. *Journal of Cross-Cultural Psychology, 31*, 419–436.
Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwartz (Eds.), *Well-being: The foundation of hedonic psychology* (pp. 213–229). New York: Russell Sage Foundation.
Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: Emotional and cognitive evaluations of life. *Annual Review of Psychology, 54*, 403–425.
Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy: A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology, 29*, 94–122.
Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *Economic Journal, 111*, 465–484.
Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics and demography. *Journal of Economic Psychology, 27*, 463–482.
Eysenck, H. J., & Eysenck, S. B. G. (1976). *Psychoticism as a dimensions of personality*. London: Hodder & Stoughton.
Feldman, S., & Johnston, C. (2009). *Understanding the determinants of political ideology: Implications of structural complexity*. Stony Brook University. Typescript.
Flavin, P., Pacek, A. C., & Radcliff, B. (2010). Labor unions and life satisfaction: Evidence from new data. *Social Indicators Research, 98*, 435–449.
Funder, D. C. (2008). Persons, situations, and person-situation interactions. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 568–580). New York: Guilford.
Funder, D. C., & Fast, L. A. (2010). Personality in social psychology. In S. T. Fiske, D. T. Gilbert, & G. Lindsey (Eds.). *Handbook of social psychology*. 5th edition (pp.668-697). New York. Wiley.
Gerber, A. S., Huber, G. A., Doherty, D., Dowling, C. M., & Ha, S. E. (2010). Personality and political attitudes: Relationships across issue domains and political contexts. *American Political Science Review, 104*, 111–133.
Goldberg, L. R. (1990). An alternative 'description of personality': The big-five factor structure. *Journal of Personality and Social Psychology, 59*, 1216–1229.
Gosling, S. D. (2008). *Snoop: What your stuff says about you*. New York: Basic Books.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the big-five personality domains. *Journal of Research in Personality, 37*, 504–528.
Gray, J. A. (1991). Neural systems, emotion, and personality. In J. Madden (Ed.), *Neurobiology of learning, emotion, and affect* (pp. 273–306). New York: Raven Press.
Heine, S. J., & Buchtel, E. E. (2009). Personality: The universal and the culturally specific. *Annual Review of Psychology, 60*, 369–394.
Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling, 20*, 331–360.
Helliwell, J. F. (2006). Well-being, social capital, and public policy: What's new? *Economic Journal, 116*, C34–C45.
Helliwell, J. F., & Putnam, R. (2004). The social context of well-being. *Philosophical Transactions of the Royal Society of London, 359*, 1435–1446.
Inglehart, R. (2002). Gender, aging, and subjective well-being. *International Journal of Comparative Sociology, 43*, 391–408.
John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York: Guilford.
Johnson, W., & Krueger, R. F. (2006). How money buys happiness: Genetic and environmental processes linking finances and life satisfaction. *Journal of Personality and Social Psychology, 90*, 680–691.
Jost, J. T. (2006). The end of the end of history. *American Psychologist, 61*, 651–670.
Jost, J. T., Federico, C. M., & Napier, J. L. (2009). Political ideology: Its structure, functions, and elective affinities. *Annual Review of Psychology, 60*, 307–337.
Kahneman, D., & Krueger, A. B. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives, 20*, 3–24.
Lelkes, O. (2006). Knowing what is good for you: Empirical analysis of personal preferences and the "objective good". *Journal of Socio-Economics, 35*, 285–307.
Leung, S. L., & Bozionelos, N. (2004). Five-factor model traits and the prototypical image of the effective leader in the Confucian culture. *Employee Relations, 26*, 62–71.
Lim, C., & Putnam, R. (2010). Religion, social networks, and life satisfaction. *American Sociological Review, 75*, 914–933.
Long, J. S., & Freese, J. (2005). *Regression models for categorical dependent variables using Stata*. College Station, TX: Stata Press.
Lucas, R. E., & Diener, E. (2008). Personality and subjective well-being. In O. P. John, R. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 795–814). New York: Guilford.
McCrae, R. R., & Costa, P. T. (1991). Adding liebe und arbeit: The full five-factor model and well-being. *Personality and Social Psychology Bulletin, 17*, 227–232.
McCrae, R. R. (2002). NEO-PI-R data from 36 cultures: Further intercultural comparisons. In R. R. McCrae & J. Allik (Eds.), *The five-factor model of personality across cultures* (pp. 105–125). New York: Kluwer Academic.
McCrae, R. R., & Costa, P. T. (2008). The five-factor theory of personality. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 159–181). New York: Guilford.
Mondak, J. J. (2010). *Personality and the foundations of political behavior*. New York: Cambridge University Press.
Myers, D. G. (1999). Close relationship and quality of life. In D. Kahneman, E. Diener, & N. Schwartz (Eds.), *Well-being: The foundation of hedonic psychology* (pp. 374–391). New York: Russell Sage Foundation.
Napier, J. L., & Jost, J. T. (2008). Why are conservatives happier than liberal? *Psychological Science, 19*, 565–572.
Okun, M. A., Stock, W. A., Haring, M. J., & Witter, R. A. (1984). Health and subjective well-being: A meta-analysis. *International Journal of Aging and Human Development, 19*, 111–132.
Ozer, D. J., & Benet-Martínez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology, 57*, 401–421.
Pacheco, G., & Lange, T. (2010). Political participation and life satisfaction: A cross-European analysis. *International Journal of Social Economics, 37*, 686–702.
Paunonen, S. V., & Ashton, M. C. (2001). Big five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology, 81*, 524–539.
Pussman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin, 131*, 925–971.

Schmitt, D. P., Allik, J., McCrae, R. R., & Benet-Martínez, V. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 countries. *Journal of Cross-Cultural Psychology, 28*, 173–212.

Scollon, C., Kim-Prieto, C., & Diener, E. (2003). Experience sampling: Promises and pitfalls, strengths and weaknesses. *Journal of Happiness Studies, 4*, 5–34.

Spencer, S. J., Zanna, M. P., & Fong, G. T. (2005). Establishing a causal chain: Why experiments are often more effective than mediation analyses in examining psychological processes. *Journal of Personality and Social Psychology, 89*, 845–851.

Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin, 134*, 138–161.

Stutzer, A., & Frey, B. S. (2006a). Does marriage make people happy or do happy people get married? *Journal of Socio-Economics, 35*, 326–347.

Stutzer, A., & Frey, B. S. (2006b). Political participation and procedural utility: An empirical study. *European Journal of Political Research, 45*, 391–418.

Van Gestel, S., & Van Broeckhoven, C. (2003). Genetics of personality: are we making progress? *Molecular Psychiatry, 8*, 840–852.

Witter, R. A., Okun, M. A., Stock, W. A., & Haring, M. J. (1984). Education and subjective well-being: A meta-analysis. *Educational Evaluation and Policy Analysis, 6*, 165–173.

Yik, M. S. M., Russell, J. A., Ahn, C.-K., Dols, J. M. F., & Suzuki, N. (2002). Relating the five-factor model of personality to a circumplex model of affect. In R. R. McCrae & J. Allik (Eds.), *The five-factor model of personality across cultures* (pp. 79–104). New York: Kluwer Academic.