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Cross-Cultural Comparison of Personality Traits, Attachment Security, and Satisfaction With Relationships as Predictors of Subjective Well-Being in India, Sweden, and the United States

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Abstract

Personality traits like Neuroticism and Extroversion, Satisfaction With Relationships, and Attachment Security are among the most important predictors of subjective well-being (SWB). However, the relative contribution of these predictors to SWB is seldom tested, and even more rarely tested cross-culturally. In this study, we replicate and extend Galinha, Oishi, Pereira, Wirtz, and Esteves, aiming to identify the strongest predictors of SWB, and in what way that contribution is universal or culture-specific, across such collectivist-individualist countries as India, Sweden, and the United States (N = 1,622). Structural equation modeling showed that Satisfaction With Relationships is a stronger predictor of SWB in India, while Neuroticism is a stronger predictor of SWB in Sweden and the United States, results consistent with prior Portuguese and Mozambican samples. These findings suggest that Satisfaction With Relationships is probably a stronger predictor of SWB in more collectivistic and less developed countries, while low Neuroticism is a stronger predictor of SWB in more individualistic and highly developed countries. Across all samples, Attachment Security and Extroversion showed very weak or nonsignificant effects on SWB above the contribution of Neuroticism and Satisfaction With Relationships, consistent with prior results. Neuroticism significantly mediated the relationship between Attachment Security, SWB, and Satisfaction With Relationships.

Keywords

personality, neuroticism, extroversion, attachment, satisfaction with relationships, cross-cultural predictors, subjective well-being, mediation

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Personality and Satisfaction With Relationships are two of the strongest and most consistent predictors of subjective well-being (SWB; Lucas, 2008; Lyubomirsky, King, & Diener, 2005). Attachment Security is also an important related construct (Mikulincer & Shaver, 2007). However, the relative contribution of these predictors to SWB has rarely been tested, particularly cross-culturally. In this study, we aim to identify which is the stronger predictor of SWB and to examine whether that contribution is universal or culture-specific, using three countries that vary in a set of sociocultural variables: India, Sweden, and the United States.

A broad range of studies have shown that personality is clearly related to SWB (Gomez, Krings, Bangerter, & Grob, 2009; Soto, 2015; Steel, Schmidt, & Shultz, 2008). The role of Attachment style and Satisfaction With Relationships as relevant predictors of SWB is also robustly supported by the literature (T. Li & Fung, 2014; Whitton, Rhoades, & Whisman, 2014). However, there are very few studies that cross-culturally analyze these elements together to understand their contributions to SWB, raising the question of whether some findings about SWB can be generalized across cultures (Diener, 2012). Most studies and theories in psychology are developed and empirically tested in Western/industrialized societies, assuming that psychological processes are universal (Henrich, Heine, & Norenzayan, 2010; Norenzayan & Heine, 2005). However, some culture-specific differences between countries have already been found. For example, people's moods and emotions are more predictive of life satisfaction in individualistic cultures, whereas an individual's social life is a better predictor of life satisfaction in collectivistic cultures (Diener, 2012). The cross-cultural research line initiated by Galinha, Oishi, Pereira, Wirtz, and Esteves (2013) is unique in jointly analyzing the role of personality traits, Attachment Security and Satisfaction With Relationships as predictors of SWB, involving three different cultural contexts—American, Portuguese, and Mozambican. The aim of the present study is to further this line of research, replicating and extending the previously obtained structural equation models in one shared (American) and two new (Swedish and Indian) samples. A third goal is to test mediation effects between the predictors of SWB. The study therefore contributes to advance the understanding of the relationships between the variables through a more extended sampling and improved measurement.

Variables Related to SWB

Traditionally, SWB has been defined and measured in three primary components: people's cognitive evaluations of their lives (e.g., life satisfaction), and their experiences of positive and negative emotions (e.g., positive and negative affect; see Lucas & Diener, 2015, for a review). As mentioned above, from the pool of variables related to SWB, not all of them relate similarly across cultures (Diener, 2012).

Personality and SWB

There is a consensus to accept personality traits as "the emotional, cognitive and behavioural tendencies that constitute underlying personality dimensions on which individuals vary" (Western, Burton, & Kowalski, 2006, p. 421). These individual traits are mainly determined by innate disposition but also can be shaped by cultural and social relations (McCrae & Costa, 2003). A number of researchers defend a core structure of five personality traits (Digman, 1997; McCrae & Costa, 2003), and many studies support the cross-cultural validity of the Five-Factor Model (Ispas, Iliescu, Ilie, & Johnson, 2014; McCrae, Terracciano, & 78 Members of the Personality Profiles of Cultures Project, 2005).

Personality traits are relevant predictors of the components of SWB (Diener & Ryan, 2009). A meta-analysis carried out by Steel et al. (2008) indicated that personality traits can explain nearly 18% of the variance in life satisfaction, 24% of the variance in positive affect (PA), and

30% of the variance in negative affect (NA). Extroversion and Neuroticism are consistently the traits most strongly related to SWB through their respective associations with positive and NA (Diener & Biswas-Diener, 2008). The associations between Extroversion, Neuroticism, and SWB are partially supported cross-culturally (Diener, 2012; Diener, Oishi, & Lucas, 2003; Galinha et al., 2013; Kjell, Nima, Sikström, Archer, & Garcia, 2013; Lucas, 2008). Galinha et al. (2013) found that in a U.S. sample, the two main contributors to SWB were, respectively, Neuroticism and Satisfaction With Relationships; while in a Mozambican sample, they were Satisfaction With Relationships and Extroversion; and in a Portuguese sample, they were Satisfaction With Relationships followed by Neuroticism. One study in India found that Neuroticism and Extroversion predicted NA (25% of the variance) and PA (26% of the variance), respectively (Tanksale, 2015).

Attachment Style and SWB

Attachment Security can be defined as a relatively stable characteristic related to expectations about significant relationships with others, such as the possibility of trusting, depending on and being intimate with others. Attachment is considered as a joint product of experiences in early relationships and current cognitive and social contexts (Mikulincer & Shaver, 2007, 2015) that can regulate emotional stress (Bost, Wiley, Fiese, Hammons, & McBride, 2014).

The scientific literature shows a relationship between Attachment Security and SWB (T. Li & Fung, 2014; X. Li & Zheng, 2014). For example, Avoidant Attachment to one's spouse not only influences the quality of the marital relationship but also directly impairs SWB (T. Li & Fung, 2014). Individuals having an insecure Attachment style are more likely to base their self-esteem on others' evaluations; in contrast, secure Attachment provides alternative means to be happy, apart from the need for increases in collective self-esteem (Crocker & Park, 2004). T.-G. Li, Li, and Li (2006) found that securely attached individuals got higher scores in social support and SWB than participants who showed an insecure Attachment.

Satisfaction With Relationships and SWB

Lyubomirsky et al. (2005) observed that the association between relationships and happiness is one of the most robust findings in the literature on SWB. Oishi and Diener (2001) clearly showed that, even controlling for personality traits, individuals high in global life satisfaction evaluated their social relationships as more satisfying than those low in life satisfaction. Recently, using a smartphone application to zoom in on daily life, Hendriks, Ludwigs, and Veenhoven (2016) argued that locals are happier than internal migrants, partially because migrants could have less opportunity in choosing friends and maintaining relationships over time. Satisfaction With Relationships is a broad concept that includes several domains (family members, friends, partners, work mates, neighbors, etc.). Two of these domains are especially relevant in relation to SWB: friendships and romantic relationships (Lyubomirsky et al., 2005).

Despite the fact that Satisfaction With Relationships, in general, is strongly affected by cultural factors, few studies take into account different cultures and explore the link between Satisfaction With Relationships and SWB (Chou, 1999; Galinha et al., 2013; Tam, Lau, & Jiang, 2012). Among Hong Kong young adults, Satisfaction With Relationships (with family members and friends) was consistently associated with the three components of SWB (Chou, 1999). Tam et al. (2012), also in a Hong Kong sample, confirmed the hypothesis that the SWB of bicultural (Chinese American) people exposed to Chinese icons (as opposed to American icons) is more contingent on their satisfaction with relationships (family and friendship satisfaction) and less on their satisfaction with the self-related domains. Family satisfaction was positively associated with SWB in both experimental conditions but was stronger in the Chinese condition. Galinha

et al. (2013) found that among Mozambicans and Portuguese, from collectivist cultures, Satisfaction With Relationships was the main predictor of SWB, in contrast with Americans, highly individualistic, where emotional stability was the main predictor.

Cross-Cultural Differences and Similarities in the Predictors of SWB

Different cultures vary in the relevance of the predictors and causes of SWB (Diener, 2012; Suh & Oishi, 2004; Veenhoven, 2012). Despite the relevance of the three predictors analyzed (personality traits, Attachment Security and Satisfaction With Relationships), our literature review shows a lack of studies addressing cultural differences in these major predictors of SWB. Furthermore, the existing studies have some shortcomings that we attempt to address: Many of these works only take into account some of these predictors (Kang, Shaver, Sue, Min, & Jing, 2003; Kjell et al., 2013; Neff & Suizzo, 2006); others are frequently limited to North American or Western European samples (Plaut, Markus, Treadway, & Fu, 2012; Ponterotto et al., 2007). Even when cross-cultural studies are focused on East-West differences, the triangulation strategy is not frequently used (Henrich et al., 2010; Norenzayan & Heine, 2005). In one exception, the interplay of Extroversion, Neuroticism, and cultural factors in predicting SWB was examined using five samples from largely individualistic (the United States and Germany) and collectivistic cultures (Japan, Mexico, and Ghana). As predicted, culture affected the relation between personality and life satisfaction. That is, Extroversion and Neuroticism were more strongly correlated with life satisfaction in the individualistic countries compared with the collectivistic (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002).

We could not find previous studies that included personality, Attachment and Satisfaction With Relationships as predictors of SWB, or that compared them cross-culturally, except for Galinha et al. (2013)—the focus of the present replication and extension. In this study, a comprehensive approach was carried out, using the dimension of individualism–collectivism through a triangulation strategy to compare the effect of each of the three predictors of SWB. The study found significant differences across three samples in the main predictors of SWB.

The present study expanded the number of different cultures analyzed to include a north European country, Sweden, and an Asian country, India, testing the robustness and generalizability of the obtained results. The Indian (state of Goa) and Sweden samples were selected because they differ culturally and geographically from each other and from the previous samples (e.g., the U.S., North American, Portugal, South European, and Mozambique, Sub-Saharan African) on a variety of socioeconomic and cultural variables, namely, collectivism–individualism, masculinity–femininity, indulgence–restraint, power distance and uncertainty avoidance, as we will further explain.

According to the recent Human Development Index (HDI) report, in which 187 countries were ranked, the United States is at the fifth position (HDI = .91), and Sweden occupies the 12th position (HDI = .90), at the top of the very high HDI group. India, at the 135th position (HDI = .59), is at the bottom of the medium HDI countries (United Nations Development Program [UNDP], 2015). Wealthier and developed countries are, in general, more individualistic, and their citizens are encouraged to pursue personal happiness over honor and meeting social obligations (Veenhoven, 2012).

Hofstede, Hofstede, and Minkov (2010) define individualism–collectivism as the degree of interdependence a society maintains among its members. North Americans and Swedish are highly individualistic cultures, scoring, respectively, 91 and 71 on a 100-point scale. People show a preference for a loosely knit social framework in which individuals are expected to take care of only themselves and their immediate family and where individuals base their identity on one's

personal accomplishments. While India is more collectivist, with a score of 48, it is a society with both collectivistic and individualist characteristics. On the collectivist side, there is a high preference for belonging to a larger social framework in which individuals are expected to act in accordance to the greater good of one's in-group. On the individualistic aspect—related to the dominant religion/philosophy, Hinduism—people believe in a cycle of death and rebirth, that is dependent on individuals' personal responsibility, in the way they lead their lives.[1] If wealth and individualism–collectivism relate to cultural differences in the predictors of SWB, more similarities might be expected between American and Swedish respondents than between either of these two cultures and the collectivistic, relatively less wealthy, Indian culture.

Besides individualism, other cultural variables distinguish these countries. According to Hofstede et al. (2010), the United States and Sweden are more alike in power distance (both lower than India), as well as higher than India in indulgence. India and the United States are more alike in masculinity and uncertainty avoidance, both higher than Sweden. India and Sweden are more alike in long-term orientation, both higher than the United States. Therefore, these cultural dimensions may also be important to understand the relationships between the variables in the present research, using the triangular strategy analysis.

Objectives

We defined three goals: (a) to test the unique contribution of personality traits, Attachment Security, and Satisfaction With Relationships as predictors of SWB; (b) to test whether Attachment Security and Satisfaction With Relationships mediate the association between personality and SWB; and (c) to test cultural similarities and differences in the unique contribution of personality, Attachment Security, and Satisfaction With Relationships to SWB—as well as in the mediating roles of Attachment Security and Satisfaction With Relationships (cf., Galinha et al., 2013). We expect that Extroversion, Neuroticism, Attachment Security, and Satisfaction With Relationships will predict SWB; Attachment Security and Satisfaction With Relationships will mediate the associations between personality traits and SWB; and in the Indian sample, the impact of Satisfaction With Relationships on SWB will be stronger, due to India's higher collectivism, relative to the United States and Sweden.

Building upon Galinha et al. (2013), and our literature review, we developed a hypothesized model in which personality traits (Extroversion, Neuroticism) are defined as the main independent variables of the study, due to their hereditary nature. Attachment Security, also a relatively stable and partly innate characteristic but one that is mainly developed through early relationships, is defined as a mediator between personality and Satisfaction With Relationships. Personality and Attachment Security are defined as predictors of Satisfaction With Relationships because those trait characteristics are believed to determine the way individuals relate to others. Finally, Satisfaction With Relationships is defined apart from SWB because we wanted to specifically test its contribution to overall SWB in the three countries, although it can also be considered a dimension of life satisfaction.

Method

Participants

Participants were 1,622 university students from three different countries and continents: India (Goa), Sweden (center/north of Sweden), and the United States (North Carolina). Of the total number of participants, 574 were students at Goa University, from Panaji, Margão, and Mapusa, aged between 17 and 62 years old ($M = 20.54$, $SD = 3.36$), 53.5% female and 46.5% male, 551 were students from Mid Sweden University, aged between 18 and 69 years old ($M = 26.8$, $SD = 6.39$),

63.9% female and 36.1% male, and 497 were students at East Carolina University, aged between 18 and 54 years old (M = 19, SD = 2.93), 64.4% female and 35.6% male.

Instruments

To measure the latent variables in the present study, we used five scales. In the Indian and American samples, we used an English version of the measures. In the Swedish sample, we used Swedish validated versions of the instruments (not published). When no validated version was available, instruments were translated following a retro-translation procedure by two bilingual psychologists. In the following, we present each scale, their characteristics, and the psychometric properties of the latent and observed variables in our study, using Structural Equation Modeling analysis.[2]

Positive and negative affect schedule (PANAS). The PANAS (Watson, Clark, & Tellegen, 1988) measures PA and NA using a list of 20 emotions. Participants are asked how much they experienced each emotion (during the last few days), on a scale from 1 (*very slightly or not at all*) to 5 (*extremely*). A model with two uncorrelated factors (PA and NA), measured by three observed variables each, fit the data well in the three samples: India, $\chi^2(8) = 13.7$, $p = .090$ (minimum discrepancy, divided by its degrees of freedom [CMIN/DF] = 1.71; comparative fit index [CFI] = .99; root mean square error approximation [RMSEA] = .04); Sweden, $\chi^2(8) = 4.4$, $p < .817$ (CMIN/DF = 0.55; CFI = 1; RMSEA = .00); and the United States, $\chi^2(8) = 23.5$, $p = .003$ (CMIN/DF = 2.94; CFI = .98; RMSEA = .06). All regression loadings of the observed variables in the three samples are above .46. A multigroup model comparison between the unconstrained, $\chi^2(24) = 41.65$, $p = .014$; CMIN/DF = 1.74; CFI = .99; RMSEA = .02, and constrained measurement models showed a $\Delta\chi^2(8) = 7.40$, $p < .494$; ΔCFI ≤ .01, guaranteeing configural and metric equivalence between the samples.

Personal Well-Being Index (PWI). The PWI (International Wellbeing Group, 2006) measures personal satisfaction with eight life domains: standard of living, health, achieving in life, relationships, safety, community connectedness, future security, and spirituality/religion. Participants respond to items using a 0 (*completely dissatisfied*) to 10 (*completely satisfied*) scale. A one-factor model measured by three observed variables (standard of living, health, achieving in life) fits the data well the three samples: India, $\chi^2(0) = 0$ (CFI = 1; RMSEA = .22), Sweden, $\chi^2(0) = 0$ (CFI = 1; RMSEA = .33), and the United States, $\chi^2(0) =$ (CFI = 1; RMSEA = .36). The high RMSEAs are probably related to the small number of dimensions in the model. All standardized regression loadings of the observed variables were above .57. A multigroup model comparison between the unconstrained, $\chi^2(0) = 0$; CFI = 1; RMSEA = .00, and constrained measurement models showed a $\Delta\chi^2(4) = 2.95$, $p < .565$; ΔCFI ≤ .01, guaranteeing configural and metric equivalence.

To measure the second-order latent variable SWB, we used the latent variables PA, NA, and PWI, each of which measured three observed variables. The model showed good fit in the three samples: India, $\chi^2(24) = 38.73$, $p = .029$ (CMIN/DF = 1.61; CFI = .98; RMSEA = .03); Sweden, $\chi^2(24) = 47.13$, $p = .003$ (CMIN/DF = 1.96; CFI = .98; RMSEA = .04); and the United States, $\chi^2(24) = 42.28$ $p = .012$ (CMIN/DF = 1.76; CFI = .98; RMSEA = .04). All regression loadings of the observed variables in the three samples were above .43. A multigroup model comparison between the unconstrained, $\chi^2(72) = 128.14$, $p < .001$; CMIN/DF = 1.78; CFI = .98; RMSEA = .02, and constrained measurement model showed a $\Delta\chi^2(12) = 10.80$, $p < .546$; ΔCFI ≤ .01, guaranteeing configural and metric equivalence between the samples.

Adult Attachment Scale (AAS-R). The AAS-R (Collins & Read, 1990) measures attachment in adult relationships in three dimensions: *close* (evaluates the comfort in establishing close and intimate

relationships), *depend* (evaluates the feeling of being able to depend on others in situations of need, level of trust in others), and *anxiety* (evaluates the level of worry of the individual with the possibility of being abandoned, rejected, or not loved). The scale consists of 18 items, answered using a 1 (*not at all characteristic*) to 5 (*very characteristic*) response format. Three latent variables (anxiety, depend, and close) measuring one higher order factor (Attachment) fit the data well. Anxiety is measured by three observed variables, while Depend and Close are measured by two observed variables. The model shows good fit in the three samples: India (error variance constrained in the Indian sample), $\chi^2(12) = 29.47$, $p = .000$ (CMIN/DF = 2.5; CFI = .95; RMSEA = .05); Sweden (correlating the error variance of item AAS-R14 and item AAS-R16 of the anxiety latent variable), $\chi^2(12) = 23.67$, $p = .009$ (CMIN/DF = 2.37; CFI = .99; RMSEA = .05); and the United States, $\chi^2(11) = 30.1$, $p = .002$ (CMIN/DF = 2.73; CFI = .98; RMSEA = .06). All regression loadings of the observed variables in the three samples are above .33. A multigroup model comparison between the unconstrained, $\chi^2(34) = 118.81$, CMIN/DF = 3.49; CFI = 97; RMSEA = .04, and constrained measurement model showed a $\Delta\chi^2(8) = 9.57$, $p < .297$, $\Delta CFI \leq .01$, guaranteeing configural and metric equivalence between the samples.

Big Five Inventory (BFI). The BFI (John & Srivastava, 1999) measures the big five personality traits: Extroversion, Conscientiousness, Agreeableness, Neuroticism, and Openness to Experience. The inventory consists of 44 items (8/10 items per scale), answered using a 1 (*strongly disagree*) to 5 (*strongly agree*) response scale. Confirmatory factor analysis of a model with two correlated latent variables, Extroversion and Neuroticism, measured by three observed variables each, showed good fit in the three samples: India, $\chi^2(8) = 29.57$, $p = .000$ (CMIN/DF = 3.7; CFI = .89[3]; RMSEA = .07); Sweden, $\chi^2(8) = 32.3$, $p = .000$ (CMIN/DF = 4.03; CFI = .97; RMSEA = .07); and the United States, $\chi^2(8) = 26$, $p = .001$ (CMIN/DF = 3.2; CFI = .97; RMSEA = .07). All regression loadings of the observed variables in the three samples were above .39. A multigroup model comparison between the unconstrained, $\chi^2(2) = 87.86$, $p = .000$, CMIN/DF = 3.67; CFI = .96; RMSEA = .04, and constrained measurement model showed a $\Delta\chi^2(8) = 14.04$, $p < .081$; $\Delta CFI \leq .01$, guaranteeing configural and metric equivalence between the samples.

Satisfaction With Relationships. Participants' Satisfaction With Relationships was measured through four items: "How satisfied are you with . . . your partner (boyfriend/girlfriend), the family you live with, your friends and neighbors, your colleagues (work/university)." The 5-point response scale ranged from *very little or not at all satisfied* to *extremely satisfied*. Confirmatory factor analysis of a model with three correlated latent variables—satisfaction with partner (measured by one item), satisfaction with nuclear family (measured by one item), and satisfaction with other relationships (measured by two items, for example, satisfaction with friends and neighbors; satisfaction with colleagues)[4]—showed good fit in the three samples: India, $\chi^2(1) = .48$, $p = .487$ (CMIN/DF = .484; CFI = 1; RMSEA = .00); Sweden, $\chi^2(1) = 2.53$, $p = .112$ (CMIN/DF = 2.53; CFI = .99; RMSEA = .05); and the United States, $\chi^2(1) = .04$, $p = .847$ (CMIN/DF = .037; CFI = 1; RMSEA = .00). All regression loadings of the observed variables in the three samples were above .47. A multigroup model comparison between the unconstrained, $\chi^2(3) = 3.05$, $p = .348$, CMIN/DF = 1.02; CFI = 1; RMSEA = .00, and constrained measurement models showed a $\Delta\chi^2(8) = 3.15$, $p = .207$, guaranteeing configural and metric equivalence between the samples.

Procedure

After obtaining permission from the universities and teachers involved, students in the Indian sample were invited, at the end of classes, to participate in a study about SWB and relationship experiences. The self-report questionnaire lasted, on average, 35 min.

Prior to completing the survey, participants were informed about the confidentiality and the anonymity of the questionnaire in accordance with the ethical standards of the American Psychological Association (APA). Students were informed that they were free to answer only the questions that they wished, and the ones who did not volunteer were free to leave. The email address of the researcher was given for any questions related to the research project. Data collection for the U.S. and Swedish samples was identical. Participants completed the questionnaire online as an option for obtaining course credit (U.S.) or on a voluntary basis (Sweden). Data in India and Sweden was collected in the winter of 2013, and the U.S. data were collected in the winter of 2010.

Results

Measurement Equivalence Across Cultures

For the statistical analysis of the data, we used a raw database. Parameters were estimated using the maximum likelihood algorithm, with AMOS (20th version) software. No missing values were replaced because one item (satisfaction with partner) was above the percentage for missing values replacement. To represent each latent variable in the study, based on a preliminary analysis of each measure (see "Instruments" section), we selected the three observed variables that, simultaneously, showed the best regression loadings and varied the same in the three samples. The global measurement model was specified by five correlated latent variables (Figure 1): (a) Attachment insecurity (ATT), a second-order latent variable measured by anxiety with relationships (Anxiety), comfort in establishing close relationships (Close) and ability to depend on others (Depend); (b) Extroversion (EXTRO) and (c) Neuroticism (NEURO), two first order latent personality trait variables; (d) Satisfaction with relationships (SR), a second-order latent variable measured by satisfaction with nuclear family, satisfaction with partner, and satisfaction with other relationships (colleagues, friends, and neighbors); (e) SWB, one second-order dependent variable, measured by PA, NA, and Satisfaction With Life in specific domains (PWI). Selecting three observed variables per latent variable generally showed good fit and metric equivalence in across samples. However, when the global model was built, some observed variables were deleted or replaced due to high measurement error correlation and lack of measurement equivalence between the samples.

The global multigroup measurement model of the study (Figure 1) showed good fit: $\chi^2(847) = 1808.82$, $p < .05$ (CMIN/DF = 2.14; CFI = .90; RMSEA = .026). The global model also showed good fit in each country: India,[5] $\chi^2(283) = 485.36$, $p = .000$ (CMIN/DF = 1.72; CFI = .90; RMSEA = .04); Sweden, $\chi^2(282) = 749.31$, $p = .000$ (CMIN/DF = 2.66; CFI = .90; RMSEA = .06); and the United States, $\chi^2(282) = 574.12$, $p = .000$ (CMIN/DF = 2.04; CFI = .92; RMSEA = .05). All observed variables had standardized factor loadings above .32, indicating good construct validity of the first order latent variables, except AAS-R17 in the Indian sample, with a factor loading of .28.[6]

Comparison of the measurement model with a model where all factor loadings of the variables were constrained showed a $\Delta\chi^2(30) = 38.82$, $p < .130$, $\Delta CFI < .01$, guaranteeing configural and metric equivalence between the samples; therefore, the comparison of the structural effects is legitimate. Finally, we tested for the hypothesis of multicollinearity between the latent variables. We compared the fit of our model with two other models: (a) where all the latent variables were measuring a third order latent variable, $\Delta\chi^2(16) = 87.01$, $p < .05$; and (b) where the Satisfaction With Relationships latent variable was represented as a dimension of SWB, $\Delta\chi^2(7) = 27.72$, $p < .05$. Our model was significantly better than these two, suggesting that the correlation between the variables in our study does not imply the problem of multicollinearity.

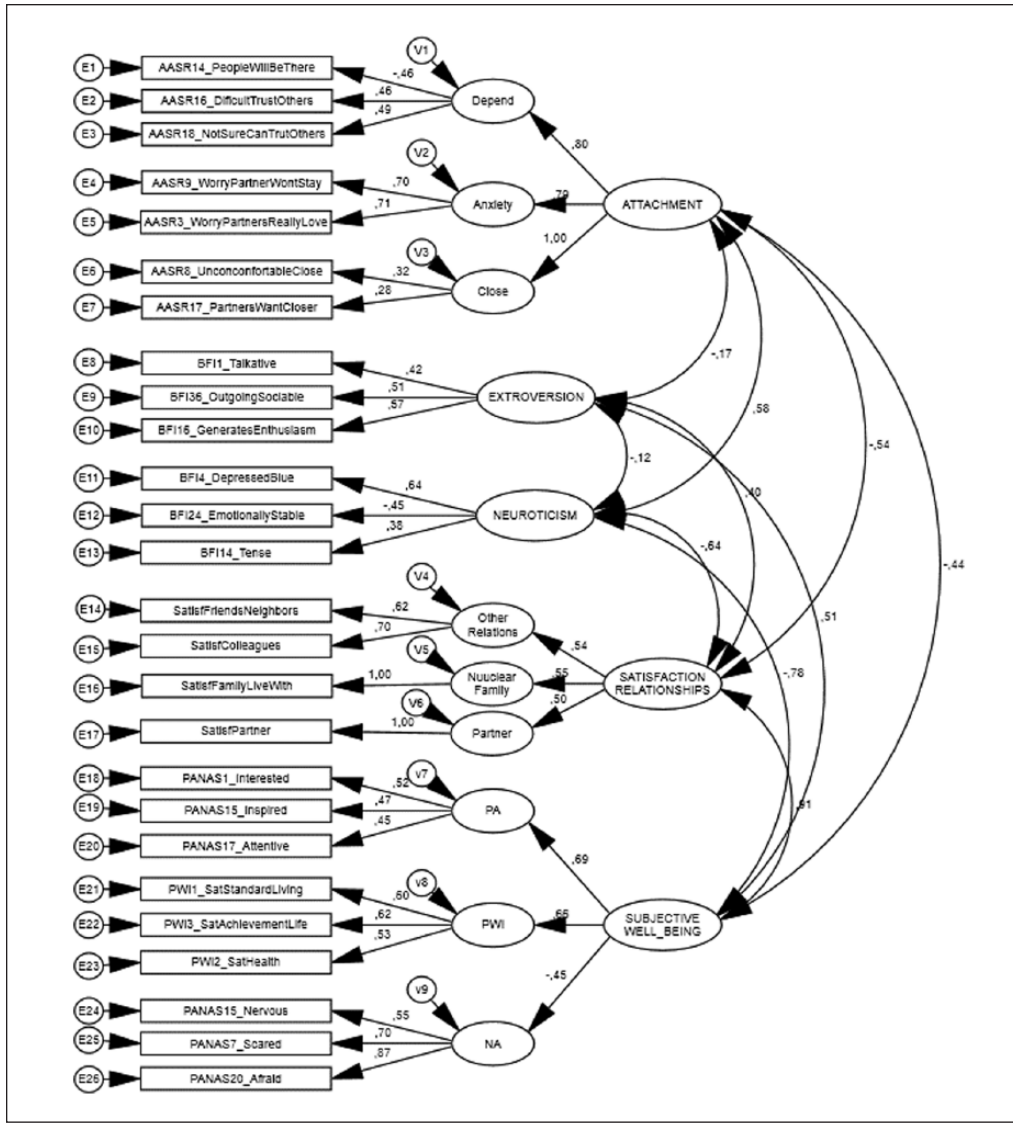

Figure 1. Measurement model, Indian sample (standardized estimates).
Note. BFI = Big Five Inventory; PANAS = positive and negative affect schedule; PA = positive affect; PWI = Personal Well-Being Index; NA = negative effect; AAS-R = Adult Attachment Scale; E = measurement error; V = error variance.

Structural Relations Among Key Variables Across Cultures

As we observed in the measurement model (Figure 1), almost all latent variables in the model correlated with one another weakly to moderately. The highest correlations in the three samples were between Neuroticism and SWB and between Satisfaction With Relationships and SWB. Having obtained the configural and metric equivalence of the model in the three samples, we addressed each of the objectives of the study. We started by analyzing a structural model specifying personality, Attachment, and Satisfaction With Relationships as independent variables, and SWB as the dependent variable. Our first objective was to answer the question: What is the

greatest predictor of SWB—Extroversion, Neuroticism, Attachment Security, or Satisfaction With Relationships—while controlling for each the other independent variables?

In the Indian sample, according to the standardized regression coefficients, the main contributors to SWB were Satisfaction With Relationships (.62), followed by Neuroticism (−.49), Extroversion (.24), and Attachment insecurity (.22). Only Attachment insecurity exhibited a nonsignificant contribution to SWB, after the prediction of the other variables. The independent variables in the model explained 91% of the variance of SWB. In the Swedish sample (see Figure 2), the variable that exhibited the highest contribution to SWB was Neuroticism (−.74), followed by Satisfaction With Relationships (.28). The latent variables Extroversion (.12) and Attachment insecurity (.08) showed no significant effects on SWB, after accounting for the effect of Neuroticism and Satisfaction With Relationships. The independent variables explained 85% of the variability of SWB. In the U.S. sample, the best predictor of SWB was Neuroticism (−.47), followed by Satisfaction With Relationships (.29) and Extroversion (.25). Attachment insecurity (.03) did not significantly predict SWB, beyond the other predictors. The independent variables explained 61% of the variability of SWB.

We next tested whether the structural relations among Attachment, personality, Satisfaction With Relationships, and SWB were different across the three cultures. To this end, we constrained the regression paths between the latent variables in the model across the three samples to be equal. The fit of the constrained model was significantly worse than the baseline model, $\Delta\chi^2(10) = 15.4$, $p = .052$, indicating that the structural effects in the three samples were different. Next, to clarify between which groups the differences emerged, we tested the structural multigroup models two by two. We found significant differences between the Indian and Swedish samples, $\Delta\chi^2(4) = 10.31$, $p = .036$, but not between India and the United States, $\Delta\chi^2(4) = 4.9$, $p = .298$, nor between the United States and Sweden, $\Delta\chi^2(4) = 6.05$, $p = .195$.

One of the main differences we observed between the three samples was the effect of Satisfaction With Relationships (standardized estimates) on SWB: higher in India (.62) than in Sweden (.28) or the United States (.29). Similarly, Attachment insecurity predicted SWB more strongly in India (.22) than in Sweden (.08) or the United States (.03). Moreover, Neuroticism was a higher negative predictor in Sweden (−.74) than in India (−.49) or the United States (−.47). The significance of these specific differences were tested, defining a model where all structural effects were constrained to be equal with a model where all structural effects were constrained except Satisfaction With Relationships and Attachment insecurity in India and Neuroticism in Sweden (freely estimated). The difference between both models was also significant, $\chi^2(3) = 13.3$, $p = .04$, indicating that these are the main differences between the samples. Testing each of these specific structural effects alone showed no significant differences, except a marginally significant difference between the structural effect of Satisfaction With Relationships on SWB in India, compared with Sweden and the United States, $\Delta\chi^2(1) = 3$, $p = .069$.[7]

Our results show that—for the Americans and the Swedish in our samples—Neuroticism is a more important predictor of global SWB than Satisfaction With Relationships. The difference is significant comparing a model with both effects constrained with a model with both effects freely estimated in Sweden, $\Delta\chi^2(1) = 6$, $p < .001$, and in the United States, $\Delta\chi^2(1) = 6$, $p < .001$. In the same way, for Indian respondents, Satisfaction With Relationships is a more important predictor of global SWB than Neuroticism, $\Delta\chi^2(1) = 6$, $p = .014$. The three samples were similar, however, in the nonsignificant effect of Attachment insecurity on SWB, after the contribution of Satisfaction With Relationships and Neuroticism. This result does not mean that Attachment is not an important predictor of SWB. Rather, it is explained by the moderate-high correlation that Attachment insecurity shows with Neuroticism in India, Sweden, and the United States (.58, .70, and .58, respectively). Extroversion has a specific and significant contribution to SWB in India and in the United States (but not Sweden), above the other predictors.

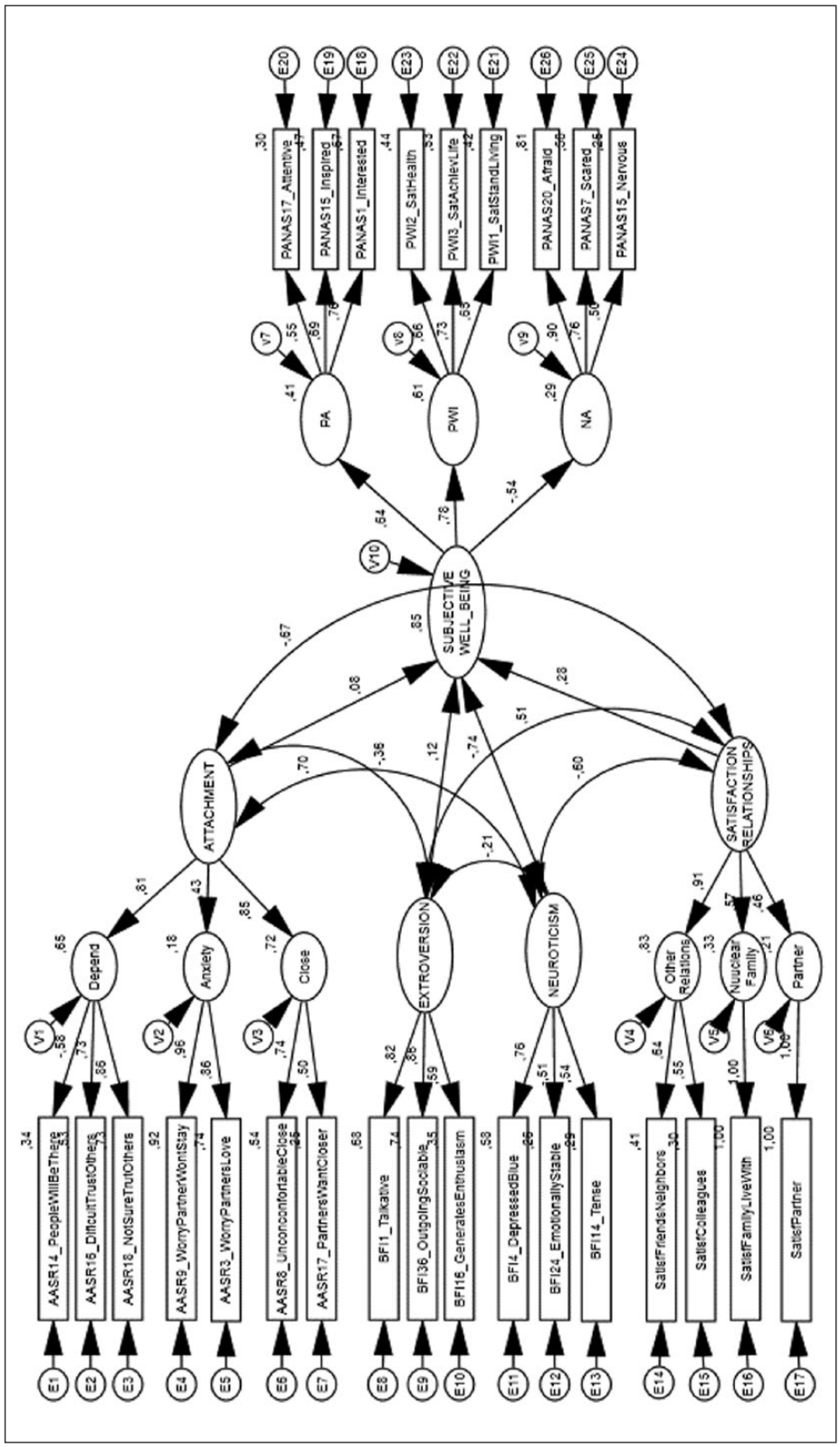

Figure 2. Structural model of the predictors of SWB, Swedish sample (standardized estimates).
Note. SWB = subjective well-being; BFI = Big Five Inventory; PA positive affect; PWI = personal well-being index; NA = negative effect; PANAS = positive and negative affect schedule; E = measurement error; V = error variance.

Mediation Effects Between the Predictors of SWB

To achieve our final objective, we built a mediating model (A) to test whether Attachment mediated the relations between personality (Extroversion and Neuroticism) and SWB or between Satisfaction With Relationships and SWB (Figure 3). Using the Sobel (1982) test, we did not observe a mediation effect of Attachment insecurity between either Extroversion or Neuroticism and SWB in any of the samples (see Table 1). However, in the Swedish sample, Attachment insecurity mediated the relations between these personality traits and Satisfaction With Relationships. Next, we tested whether Satisfaction With Relationships mediated the relation between either Extroversion or Neuroticism and SWB; these effects were only observed in the Indian sample.

A second mediation model (B) was tested to evaluate whether Extroversion or Neuroticism mediated the relation between Attachment and SWB or between Attachment and Satisfaction With Relationships. Across all samples, Neuroticism significantly mediated both relations (Attachment—SWB and Attachment—Satisfaction With Relationships). In the Swedish sample, we also found the significant mediating effect of Extroversion between Attachment and Satisfaction With Relationships. Our results show that the effect of Attachment on Neuroticism is higher than the reverse, and that there is a mediating role of Neuroticism between Attachment and SWB, as well as between Attachment and Satisfaction With Relationships.

Discussion

Culture-Specific Predictors of SWB

In the present study, we tested the conjoint contribution of personality traits (Extroversion and Neuroticism), Attachment Security and Satisfaction With Relationships as predictors of SWB, across three countries. Replicating and extending Galinha et al. (2013), which compared Mozambican, Portuguese, and American samples, the present study compared Indian and Swedish samples, while retaining the American sample as a comparison standard. We chose the American sample as the common thread because most psychological theories and measures have been developed based largely on samples from Western, highly developed countries (Henrich et al., 2010; Norenzayan & Heine, 2005). The Indian and Swedish samples in the present study further address our goal of testing the universality of the scientific assumptions related to SWB—such as whether its major predictors are similar across different cultures and countries.

In the U.S. sample, as expected, the best predictor of SWB was low Neuroticism, followed by Extroversion and Satisfaction With Relationships (marginally significant); Attachment Security did not significantly predict SWB, above and beyond these variables. In the Swedish sample, we observed a similar pattern of results, with low Neuroticism as the main predictor of SWB, followed by Satisfaction With Relationships, Extroversion (marginally significant), and Attachment Security (not significant). In contrast, in the Indian sample, we observed a different pattern of results: Satisfaction With Relationships was the main predictor of SWB, followed by Neuroticism, Extroversion, and Attachment Security (not significant).

The relatively stronger effect for Satisfaction with Relationships on SWB in the Indian sample is consistent with the fact that India is a more collectivistic and low developed country, while Sweden and the United States are more individualistic and highly developed (Hofstede et al., 2010; UNDP, 2015). The development level and collectivism–individualism level of India compared with Sweden and the United States may help explain the results and are likely related factors. Previous authors highlighted the importance of social support among members of poorer communities, where social security is usually scarce (Hofstede et al., 2010; Veenhoven, 2012). Looking to the previous study of Galinha et al. (2013), where Mozambique,

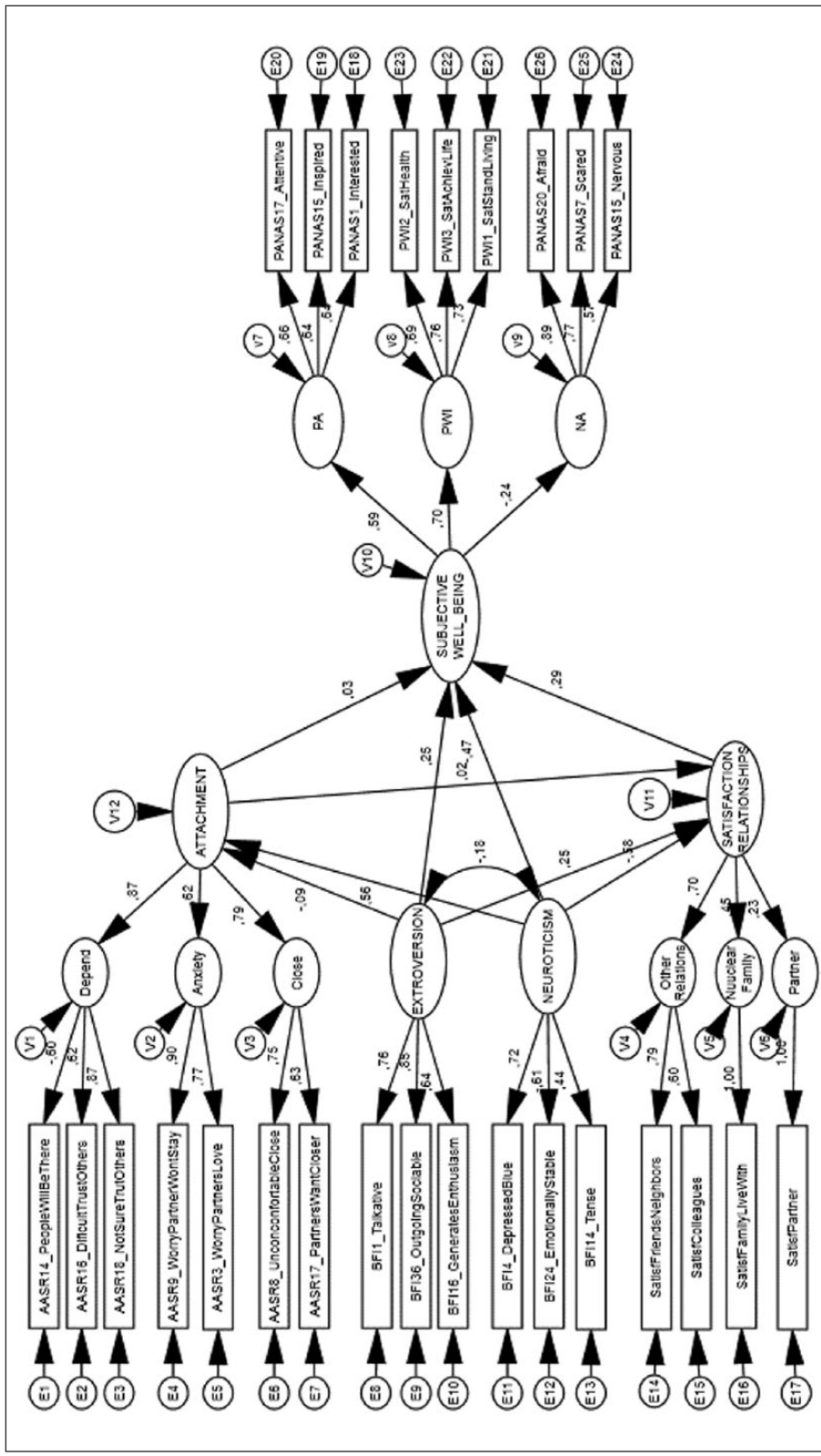

Figure 3. Mediation model (A) of the predictors of SWB, U.S. sample (standardized estimates).
Note. SWB = subjective well-being; BFI = Big Five Inventory; PA positive affect; PWI = personal well-being index; NA = negative effect; PANAS = positive and negative affect schedule; E = measurement error; V = error variance.

Table 1. Significance of the Mediating Effects Between the Predictors of SWB.

		India		Sweden		The United States	
Mediator	Between	*Z*	*p*	*Z*	*p*	*Z*	*p*
Model A							
ATT	EXTRO − SWB	−1.02	.308	−0.61	.542	−0.26	.799
	NEURO − SWB	1.50	.133	0.62	.538	0.26	.797
	EXTRO − SR	1.02	.310	2.30	.021*	−0.15	.878
	NEURO − SR	1.49	.135	−2.67	.008**	−0.15	.877
SR	EXTRO − SWB	1.94	.052*	1.89	.059	1.61	.106
	NEURO − SWB	1.93	.047*	−1.60	.109	−1.71	.087
	ATT − SWB	−1.34	.179	−1.65	.089	0.15	.877
Model B							
NEURO	ATT-SWB	−2.25	.024*	4.49	.000***	−2.73	.006**
	ATT-SR	−2.67	.008**	−2.48	.013*	−3.85	.000***
EXTRO	ATT−SWB	−1.12	.263	−1.58	.115	−1.45	.146
	ATT-SR	−1.21	.228	−3.01	.003**	−1.48	.140

Source. Sobel (1982).
Note. SWB = subjective well-being; Z = Tests of mediation; ATT = attachment insecurity; EXTRO = Extroversion; NEURO = Neuroticism; SR = Satisfaction With Relationships.
*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$.

Portugal, and the United States were compared, we observed a similar pattern. In the more collectivistic and less developed countries (Mozambique and Portugal), Satisfaction With Relationships was the main predictor of SWB, whereas in the U.S. sample, low Neuroticism was the main predictor of SWB. Therefore, the cultural values of collectivism–individualism and the developmental level of countries may have an impact on the factors that most predict the SWB of individuals.

Other cultural dimensions may also contribute to explaining the differences observed across countries. The power distance dimension—concerning the perception of inequality in power distribution among the members in a society—is lower in the United States (40) and Sweden (31) compared with India (77; Hofstede et al., 2010; Singelis, Triandis, Bhawuk, & Gelfand, 1995). The low power distance is probably placing Americans and Swedish in a better position to provide their own SWB and to perceive it as dependent on personal variables, instead of depending on the quality of relationships within the social group, as in India. Moreover, the higher level of *indulgence* (vs. *restraint*) in the United States (68) and Sweden (78) allows for greater personal gratification and enjoyment of life compared with India (26), in which social norms would generally prescribe inhibition. Differences in this cultural dimension may also help explain why personality variables are more important predictors of the SWB of Americans and the Swedish, compared with Indians where SWB is likely perceived as more dependent on the quality of one's relationships with others (see Hofstede et al., 2010).

In the present study, besides the culture-specific results, we have also found similarities across samples. Common to all samples was the nonsignificant contribution of Attachment Security to SWB, beyond the other predictors. The nonsignificant prediction of SWB by Attachment was not expected, given previous studies (T.-G. Li et al., 2006; Mikulincer & Shaver, 2007). Looking at the measurement model, we do observe moderate correlations between Attachment insecurity and SWB in the three samples. We also observe that Attachment insecurity shows moderate to high correlations with Neuroticism and with Satisfaction With Relationships. Probably Attachment is sharing variance with both variables in predicting SWB.

A second common result across the three samples was the low or nonsignificant contribution of Extroversion to SWB. Previous results place Extroversion as one of the most important predictors of SWB (Diener & Biswas-Diener, 2008; Kjell et al., 2013; Lucas, 2008), making this a surprising outcome of the current study. In fact, the correlational estimates show a moderate, significant relation between Extroversion and SWB in the three samples (.51, .40, and .43); however, it loses prediction power when combined with the other predictors. Satisfaction With Relationships is probably the variable with which Extroversion is sharing higher variability in the prediction of SWB, because of the moderate correlation between both (.40, .51, .35). The greater sociability associated with Extroversion may improve Satisfaction With Relationships, and both share variance in predicting SWB. Of particular interest is that the same pattern of results was found in our previous study, in the Mozambican and Portuguese samples, using the same latent variables (Galinha et al., 2013). Taken together, we observe that across five samples, regardless of culture, development level, and language of the countries, we found similar results, suggesting a certain universality.

Mediation Effects Between the Predictors of SWB

Further exploring the results through a mediation model analysis, we observed that Neuroticism is significantly mediating both the relationship between Attachment and SWB as well as between Attachment and Satisfaction With Relationships, in all three samples. This finding suggests that Attachment Security has an effect on Neuroticism, which in turn has an effect on both SWB and Satisfaction With Relationships. Similar mediation effects were previously found among Portuguese, but not Mozambicans (Galinha et al., 2013). We could not find other studies that showed this specific mediation effect; however, Crawford, Shaver, and Goldsmith (2007) also found correlations up to .50 between Attachment and Neuroticism, explaining that high Neuroticism may be related with a greater need for obtaining comfort from Attachment figures, which can increase the probability of feeling worry about its availability.

Our mediation results show that Attachment Security affects Neuroticism, more than the other way around. According to theory, Attachment trait is mainly developed through early and later relationship experiences with primary caregivers and tends to be a trait-like characteristic via the formation of an internal working model. In turn, personality is developed by innate temperament (Costa & McCrae, 2000) and also by social context and experiences (Fulcher & Scott, 2011; Sanson, Hamphill, & Smart, 2002). Although our results should be interpreted with caution because causal effects are not possible to assess in cross-sectional data, and the results may be merely reflecting the higher association between Neuroticism and SWB, our results are consistent across samples in demonstrating that Attachment is a better predictor of personality, rather than the reverse. As previous authors suggested, whether both psychological traits may develop together through childhood in a shared environment, or whether they are both heritable (Crawford, Livesely, et al., 2007). These results point out the relevance of further studying the relations between Attachment and Neuroticism.

Independent of the discussion about the origins of Attachment and development of personality traits, our results show that Attachment has an indirect effect on SWB and on Satisfaction With Relationships, through Neuroticism. Therefore, Attachment may be a key target of intervention—affecting Neuroticism, and consequently, promoting SWB and Satisfaction With Relationships, supporting previous findings on the mental health benefits of lowering the levels of Attachment insecurity (Mikulincer, Shaver, & Berant, 2013). Furthermore, Attachment Security predicts satisfaction and success with interpersonal relationships—a second important way of promoting SWB—supporting the assumption that Attachment Security allows individuals to maintain emotional stability and contributes to mutually satisfying social interactions (Mikulincer & Shaver, 2015). Our results not only empirically show these dual mediation effects

in three different samples (India, Sweden, the United States) with distinct cultures, they are similar to the ones found in a Portuguese sample, but not among Mozambicans (Galinha et al., 2013). Further studies should explore the relationships between these variables using different SWB measures, excluding the chance of the results being related with the specific measures used in our study.

Cross-Cultural Comparison of the Predictors of SWB

Addressing the need to test the universality of theories developed and tested largely in Western, highly developed countries, our results show both significant structural differences and similarities across the three samples, suggesting not only that part of the relationships between the variables are culture-specific but also that some processes may be universal.

The main differences in structural effects were observed in a model where Satisfaction With Relationships and Attachment Security were greater predictors of SWB in India (although only the structural effect of Satisfaction With Relationships on SWB was marginally significant, when tested alone) compared with Sweden and the United States, and where Neuroticism was a stronger predictor of SWB in Sweden, compared with India and the United States. Considering the characteristics of these countries, according to the Henrich et al. (2010) approach, we can say that the United States and Sweden share similarities such as their high development level and high individualism. India, on the other hand, can be described as having a medium-low development level and greater collectivism (Hofstede et al., 2010; UNDP, 2015). As discussed above, these differences across countries may be explaining the results (Hofstede et al., 2010; Veenhoven, 2012), which were also found in Portugal and Mozambique in a previous study (Galinha et al., 2013). Other differences across countries, such as higher power distance and lower indulgence levels in India compared with Sweden and the United States, may also be contributing to the results. These cultural dimensions may be related to the differential importance of social relationships to peoples' SWB. Our results highlight the importance of considering cultural context and values when developing SWB theories as they may be shaping the contribution of predictors.

Measurement Issues and Limitations

Measures of psychological constructs developed in Anglo-Saxon countries and initially developed through statistical analyses that have not considered measurement errors pose frequent difficulties to researchers, particularly in terms of obtaining measurement equivalence across countries with different cultures and languages. Although we could obtain metric equivalence across samples, it would be preferable that latent variables representing multidimensional constructs like Neuroticism and Extroversion could include more observed variables to represent the complexity of the constructs, which was not possible due to metric equivalence constraints.

It should be noted that our samples are not nationally representative but were collected in specific regions of India, Sweden, and the United States. For example, Goa is not considered a typical state in India, due to its higher European influences. Consequently, generalization of the present results requires additional (ideally representative) samples from these countries and across additional cultural contexts. Longitudinal studies would also be important to test the stability of the structural effects between the variables. The relationship between Attachment Security and Neuroticism should be further analyzed, as this emerged as an interesting and consistent pathway across cultures. Finally, although gender differences are beyond the scope of this article, they might be another important direction for future research.

Conclusion

The current research provides new knowledge regarding cultural differences and similarities in the predictors of SWB among Indian, Swedish, and American samples. In the Swedish and American samples, low Neuroticism was the main predictor of global SWB. In the Indian sample, Satisfaction With Relationships was the main predictor of SWB. In all three samples, Attachment Security showed no significant effect on SWB, and Extroversion exhibited a small or nonsignificant effect beyond the contribution of the other predictors, suggesting that these variables share variance with Neuroticism and Satisfaction With Relationships in the prediction of SWB. These results are comparable with those previously obtained in Portuguese and Mozambican samples. Further analysis showed significant mediation effects of Neuroticism—between Attachment Security and SWB, as well as between Attachment Security and Satisfaction With Relationships—in the three samples.

Our study contributes with new knowledge to SWB research and theory, with two major empirical results: (a) Satisfaction With Relationships is a main predictor of SWB in collectivistic and medium-low development countries, while Neuroticism is a main predictor of SWB in individualistic and highly developed countries, suggesting culture-specific differences; and (b) Neuroticism is a mediator of the relationship between Attachment Security and SWB and between Attachment Security and Satisfaction With Relationships across samples, suggesting universal processes.

Besides the theoretical applications in the domains of SWB, Personality, Attachment, and cross-cultural psychology, these results have important clinical applications. For example, Attachment Security emerges as a core variable for the promotion of mental health, through its direct effects on personality traits, such as Neuroticism, and its indirect effects on outcomes such as satisfaction with interpersonal relationships—both of which are fundamental predictors of SWB and human mental health.

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Notes

1. However, individualism–collectivism has been understood as a multifaceted construct, either vertical or horizontal, considering the extent that people accept social inequalities and hierarchies (Singelis, Triandis, Bhawuk, & Gelfand, 1995), related with power distance cultural dimension (Hofstede, Hofstede, & Minkov, 2010), and in varying degrees, depending on peoples' specific relationships with different others, such as kin or coworkers (Triandis, McCusker, & Hui, 1990).
2. We also analyzed the measures in our study using Cronbach's alpha, yet some coefficients were below the recommended criteria. This can be due to the reduced number of items for each measure in the study. For that reason, we developed a factorial analysis to test the psychometric quality of our

measures using SEM, because it controls for the measurement error of the items (Bollen, 1989). In the "Results" section, we further demonstrate the quality of our measurement model using a multigroup analysis, yielding good fit indices and metric equivalence between the three samples. Further data on all measures are available from the authors upon request.

3. Correlating errors of Big Five Inventory (BFI) 4 Depressed/Blue and BFI 14 Tense of the latent variable Neuroticism, the comparative fit index (CFI) in the Swedish sample improves to .90.
4. Although what is considered in-group or out-group relationships may differ across individualist and collectivist cultures, we included all relationships in one latent variable as our purpose in this study was to assess satisfaction with relationships in general. The measurement model shows reliability of the latent variable in the three samples.
5. Constraining the error variance of the latent variable *Close*.
6. We opted to keep the variable, although it is slightly below the ideal standard, because it is better to have three observed variables instead of two for measuring the latent variable.
7. In a supplementary analysis, we controlled for age and sex in the structural model to be sure that the differences observed between the samples were not due to different distributions of age or sex in the samples. The structural effects remained identical.

References

Bollen, K. A. (1989). *Structural equations with latent variables*. New York, NY: John Wiley & Sons.

Bost, K. K., Wiley, A. R., Fiese, B., Hammons, A., & McBride, B. (2014). Associations between adult attachment style, emotion regulation, and preschool children's food consumption. *Journal of Developmental and Behavioral Pediatrics*, *35*, 50-61. doi:10.1097/01.DBP.0000439103.29889.18

Chou, K. L. (1999). Social support and subjective well-being among Hong Kong Chinese young adults. *Journal of Genetic Psychology*, *160*, 319-331. doi:10.1080/00221329909595402

Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, *54*, 644-663.

Costa, P. T., Jr., & McCrae, R. R. (2000). A theoretical context for adult development. In T. D. Wachs & G. A. Kohnstamm (Eds.), *Temperament in context* (pp. 1-21). Hillsdale, NJ: Lawrence Erlbaum.

Crawford, T. N., Livesley, W. J., Jang, K. L., Shaver, P. R., Cohen, P., & Ganiban, J. (2007). Insecure attachment and personality disorder: A twin study of adults. *European Journal of Personality*, *21*, 191-208.

Crawford, T. N., Shaver, P. R., & Goldsmith, H. H. (2007). How affect regulation moderates the association between anxious attachment and neuroticism. *Attachment & Human Development*, *9*, 95-109. doi:10.1080/14616730701349747

Crocker, J., & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin*, *130*, 392-414.

Diener, E. (2012). New findings and future directions for subjective well-being research. *American Psychologist*, *67*, 590-597. doi:10.1037/a0029541

Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the mysteries of psychological wealth*. Malden, MA: Blackwell. doi:10.1002/9781444305159

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*, 403-325. doi:10.1146/annurev.psych.54.101601.145056

Diener, E., & Ryan, K. (2009). Subjective well-being: A general overview. *South African Journal of Psychology*, *39*, 391-406. doi:10.1177/008124630903900402

Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology*, *73*, 1246-1256.

Fulcher, J., & Scott, J. (2011). *Sociology* (4th ed.). Oxford, UK: Oxford University Press.

Galinha, I. C., Oishi, S., Pereira, C., Wirtz, D., & Esteves, F. (2013). The role of personality traits, attachment style, and satisfaction with relationships in the subjective well-being of Americans, Portuguese, and Mozambicans. *Journal of Cross-Cultural Psychology*, *44*, 416-437. doi:10.1177/0022022112453317

Gomez, V., Krings, F., Bangerter, A., & Grob, A. (2009). The influence of personality and life events on subjective well-being from a life span perspective. *Journal of Research in Personality*, *43*, 345-354. doi:10.1016/j.jrp.2008.12.014

Hendriks, M., Ludwigs, K., & Veenhoven, R. (2016). Why are locals happier than internal migrants? The role of daily life. *Social Indicators Research*, *125*, 481-508. doi:10.1007/s11205-014-0856-7

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? (Target article, commentaries, and response). *Behavioral and Brain Sciences*, *33*, 61-83; 111-135.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). New York, NY: McGraw-Hill.

International Wellbeing Group. (2006). *Personal Well-Being Index*. Melbourne: Australian Centre on Quality of Life, Deakin University.

Ispas, D., Iliescu, D., Ilie, A., & Johnson, R. E. (2014). Exploring the cross-cultural generalizability of the five-factor model of personality: The Romanian NEO PI-R. *Journal of Cross-Cultural Psychology*, *45*, 1074-1088. doi:10.1177/0022022114534769

John, O., & Srivastava, S. (1999). The big-five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102-139). New York, NY: Guilford Press.

Kang, S. M., Shaver, P. R., Sue, S., Min, K. H., & Jing, H. (2003). Culture-specific patterns in the prediction of life satisfaction: Roles of emotion, relationship quality, and self-esteem. *Personality and Social Psychology Bulletin*, *29*, 1596-1608. doi:10.1177/0146167203255986

Kjell, O. N., Nima, A. A., Sikström, S., Archer, T., & García, D. (2013). Iranian and Swedish adolescents: Differences in personality traits and well-being. *PeerJ*, *1*, e197. doi:10.7717/peerj.197

Li, T., & Fung, H. H. (2014). How avoidant attachment influences subjective well-being: An investigation about the age and gender differences. *Aging & Mental Health*, *18*, 4-10. doi:10.1080/13607863.2013.775639.

Li, T.-G., Li, N.-X., & Li, M. (2006). Correlation of adult attachment with social support and subjective well-being. *Chinese Journal of Clinical Rehabilitation*, *10*, 47-49.

Li, X., & Zheng, X. (2014). Adult attachment orientations and subjective well-being: Emotional intelligence and self-esteem as moderators. *Social Behavior and Personality*, *42*, 1257-1266. doi:10.2224sbp.2014.42.8.1257

Lucas, R. E. (2008). Personality and subjective well-being. In R. J. Larsen & M. Eid (Eds.), *The science of subjective well-being* (pp. 171-194). New York, NY: Guilford Press.

Lucas, R. E., & Diener, E. (2015). Personality and subjective well-being: Current issues and controversies. In M. Mikulincer, P. R. Shaver, M. L. Cooper, & R. J. Larsen (Eds.), *APA handbook of personality and social psychology, Vol. 4: Personality processes and individual differences* (pp. 577-599). Washington, DC: American Psychological Association. doi:10.1037/14343-029

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, *131*, 803-55. doi:10.1037/0033-2909.131.6.803

McCrae, R. R., & Costa, P. T. (2003). The five-factor theory of personality. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 159-181). New York, NY: The Guilford Press.

McCrae, R. R., & Terracciano, A., & 78 Members of the Personality Profiles of Cultures Project. (2005). Universal features of personality traits from the observer's perspective: Data from 50 cultures. *Journal of Personality and Social Psychology*, *88*, 547-561. doi:10.1037/0022-3514.88.3.547

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change*. New York, NY: The Guilford Press.

Mikulincer, M., & Shaver, P. R. (2015). The psychological effects of the contextual activation of security-enhancing mental representations in adulthood. *Current Opinion in Psychology*, *1*, 18-21. doi:10.1016/j.copsyc.2015.01.008

Mikulincer, M., Shaver, P. R., & Berant, E. (2013). An attachment perspective on therapeutic processes and outcomes. *Journal of Personality*, *81*, 606-616. doi:10.1111/j.1467-6494.2012.00806.x

Neff, K. D., & Suizzo, M. (2006). Culture, power, authenticity and psychological well-being within romantic relationships: A comparison of European American and Mexican Americans. *Cognitive Development*, *21*, 441-457.

Norenzayan, A., & Heine, S. J. (2005). Psychological universals: What are they and how can we know? *Psychological Bulletin*, *131*, 763-784.

Oishi, S., & Diener, E. (2001). Re-examining the general positivity model of subjective well-being: The discrepancy between specific and global domain satisfaction. *Journal of Personality*, *69*, 641-666. doi:10.1111/1467-6494.694158

Plaut, V. C., Markus, H. R., Treadway, J. R., & Fu, A. S. (2012). The cultural construction of self and well-being: A tale of two cities. *Personality and Social Psychology Bulletin*, *38*, 1644-1658. doi:10.1177/0146167212458125

Ponterotto, J. G., Costa-Wofford, C. I., Brobst, K. E., Spelliscy, D., Kacanski, J. M., Scheinholtz, J., & Martines, D. (2007). Multicultural personality dispositions and psychological well-being. *Journal of Social Psychology*, *147*, 119-135. doi:10.3200/SOCP.147.2.119-135

Sanson, A., Hamphill, S., & Smart, D. (2002). Temperament and social development. In P. Smith & C. Hart (Eds.), *Handbook of developmental cognitive science* (pp. 97-116). Malden, MA: Blackwell.

Schimmack, U., Radhakrishnan, P., Oishi, S., Dzokoto, V., & Ahadi, S. (2002). Culture, personality, and subjective well-being: Integrating process models of life-satisfaction. *Journal of Personality and Social Psychology*, *82*, 582-593. doi:10.1037//0022-3514.82.4.582

Singelis, T. M., Triandis, H. C., Bhawuk, D. P. S., & Gelfand, M. J. (1995). Horizontal and vertical dimensions of individualism and collectivism: A theoretical and measurement refinement. *Cross-Cultural Research*, *29*, 240-275.

Sobel, M. E. (1982). Asymptotic intervals for indirect effects in structural equations models. In S. Leinhart (Ed.), *Sociological methodology* (pp. 290-312). San Francisco, CA: Jossey-Bass.

Soto, C. J. (2015). Is happiness good for your personality? Concurrent and prospective relations of the Big Five with subjective well-being. *Journal of Personality*, *83*, 45-55. doi:10.1111/jopy.12081

Steel, P., Schmidt, J., & Shultz, J. (2008). Refining the relationship between personality and subjective well-being. *Psychological Bulletin*, *134*, 138-161. doi:10.1037/0033-2909.134.1.138

Suh, E., & Oishi, S. (2004). Culture and subjective well-being: Introduction to the special issue. *Journal of Happiness Studies*, *5*, 219-222.

Tam, K. P., Lau, H. P., & Jiang, D. (2012). Culture and subjective well-being: A dynamic constructivist view. *Journal of Cross-Cultural Psychology*, *43*, 23-31. doi:10.1177/0022022110388568

Tanksale, D. (2015). Big Five personality traits: Are they really important for the subjective well-being of Indians? *International Journal of Psychology*, *50*, 64-69. doi:10.1002/ijop.12060

Triandis, H. C., McCusker, C., & Hui, C. H. (1990). Multimethod probes of individualism and collectivism. *Journal of Personality and Social Psychology*, *59*, 1006-1020.

United Nations Development Program. (2015). *Human development report 2014—Sustaining human progress: Reducing vulnerabilities and building resilience*. New York, NY: Author. Retrieved from http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf

Veenhoven, R. (2012). Cross-national differences in happiness: Cultural measurement bias or effect of culture? *International Journal of Wellbeing*, *2*, 333-353. doi:10.5502/ijw.v2.i4.4

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063-1070.

Western, D., Burton, L., & Kowalski, R. (2006). *Psychology: Australian and New Zealand edition*. Milton, Australia: John Wiley.

Whitton, S. W., Rhoades, G. K., & Whisman, M. A. (2014). Fluctuation in relationship quality over time and individual well-being: Main, mediated, and moderated effects. *Personality and Social Psychology Bulletin*, *40*, 858-871. doi:10.1177/0146167214528988