Global life satisfaction in adolescence:

The role of personality traits, self-esteem, and self-efficacy

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Abstract

Positive levels of global life satisfaction are associated with a broad range of positive personal, psychological, and social outcomes both in the present and future. However, for adolescents, little is known about the underlying personal characteristics that predict global life satisfaction. Thus, the aim of the study was to investigate the relationship between personality traits, self-esteem, self-efficacy, and global life satisfaction in a sample of 437 Swiss adolescents attending the second last year of compulsory school. Results have shown that conscientiousness, neuroticism, extraversion, self-esteem, and self-efficacy are significantly associated with global life satisfaction. Moreover, self-esteem seems to be a mediator of the relationship between personality traits and global life satisfaction, suggesting that it might be considered as a process variable regulating behaviors, feelings, and thoughts that are related to personality dimensions.

Keywords: adolescence, global life satisfaction, personality, self-esteem, self-efficacy

Global life satisfaction in adolescence: The role of personality traits, self-esteem and self-efficacy

For adolescents who have to cope with forthcoming life changes induced by their transition to post-compulsory education, being satisfied with their lives is an important resource upon which they can build and plan their future life (Bowman, 2010). For instance, high levels of life satisfaction during the transition from compulsory school to upper secondary education were found to predict academic and school engagement in post-compulsory academic education and vocational training (Salmela-Aro & Tuominen-Soini, 2010). In fact, global life satisfaction is associated with a broad range of positive personal, psychological, and social outcomes both during adolescence (Proctor, Linley, & Maltby, 2009) and adulthood (DeNeve & Cooper, 1998). ~~According to Diener's (1984) well-known model, subjective well-being has three main components: positive affect, negative affect, and global life satisfaction.~~ Global life satisfaction is the cognitive component of subjective well-being and is defined as an individual's appraisal of the overall quality of his or her life (Diener, 1984). Compared to the other components of subjective well-being (i.e. positive and negative affects) global life satisfaction is less influenced by mood states and changes less quickly to life events (Diener, Suh, Lucas, & Smith, 1999).

Despite an increasing interest in studying global life satisfaction, little is known about the predictors of adolescent's life satisfaction. In particular, the association between the five-factor model of personality traits and life satisfaction has been well documented in adults (for a review see Steel, Schmidt, & Shultz, 2008) but remains only partially investigated in adolescents. In fact, in their literature review, Proctor et al. (2009) reported only four studies on adolescents, and all were limited on the relationships between neuroticism, extraversion and life satisfaction. Recently, three more studies were performed, which considered also openness, agreeableness and conscientiousness (Garcia, 2011; Suldo, Minch, & Hearon, in press; Weber & Huebner, 2015). Moreover, possible mediators of these relationships should

be further examined, with some studies suggesting that self-esteem (Furnham & Cheng, 2000; Kwan, Bon, & Singelis, 1997) and self-efficacy (Strobel, Tumasjan, & Spoörrle, 2011) could be potential candidates. Testing these effects could be of interest, given that as suggested by Rossier (2015a), mediation effects could be the result of a regulation process, which allows adapting the expression of relatively stable dispositions to changing social expectations and evolving environments. The first aim of this research was to study the respective contribution of personality traits, considering all the main dimensions of the five-factor model, self-esteem, and self-efficacy to global life satisfaction in adolescents. The second aim of our research was to test if self-esteem and/or self-efficacy mediate the relationship between personality traits and global life satisfaction.

Personality Traits, Subjective Well-being, and Global Life Satisfaction

Many studies have provided extensive evidence of ~~strong~~ associations between personality traits and life satisfaction in adults (DeNeve & Cooper, 1998; Steel, Schmidt, & Shultz, 2008). Indeed, the meta-analyses by DeNeve and Cooper (1998) showed that the strongest correlation with life satisfaction for adults was a negative one with neuroticism (-.24), followed by positive ones with conscientiousness (.22), extraversion (.17), agreeableness (.16), and openness to experience (.14), whereas the review by Steel et al. (2008) found the strongest correlations with respectively neuroticism (-.38) and extraversion (.28), followed by conscientiousness (.22), agreeableness (.14), and openness to experience (.03). In youth, neuroticism and extraversion were found to predict mental well-being and life satisfaction 40 years later (Gale, Booth, Mõttus, Kuh, & Deary, 2013). In a population of undergraduate students, Jovanovic (2010) found that neuroticism seems to be a slightly weaker predictor of global life satisfaction, the cognitive component of subjective well-being, compared to its contribution to the affective component (i.e. positive and negative affect). The review by Proctor et al. (2009) concerning youths' life satisfaction, found that only a few

studies have considered the associations between personality traits and life satisfaction in adolescents (for instance, Fogle, Huebner, & Laughlin, 2002), and among these rare studies, all focused on the neuroticism and extraversion dimensions.

Recently, three studies analyzed the relationships between all five personality traits and life satisfaction in adolescents. In a Swedish sample of adolescents, Garcia (2011) observed that neuroticism (β=-.37) and extraversion (β = .34) predicted life satisfaction whereas conscientiousness predicted rather global psychological well-being (β = .32). No relationship was observed between agreeableness and openness to experience and subjective well-being or psychological well-being. Suldo, Minch, and Hearon (in press) recently conducted a study on the relationship between the five-factor model of personality traits and global life satisfaction in a sample of southeastern American high school students. They found that personality globally accounted for 47% of the variance of global life satisfaction. In their study, four personality traits emerged as significant predictors, neuroticism being the strongest (β = -.59), followed by conscientiousness (β = .12), extraversion (β = .10), and agreeableness (β = .08). Finally, the study by Weber and Huebner (2015) confirmed the important role played by neuroticism (β = -.38), followed by conscientiousness (β = .22), agreeableness (β = .13), and extraversion (β = .10) in predicting southeastern American 7th grade students' life satisfaction. Personality traits are therefore clearly associated with adolescents' global life satisfaction. However, results highlight some differences in the proportion of variance explained by single dimensions However, the specific role of conscientiousness is not clear for adolescents and studies conducted in other cultural settings could give an idea about the generalizability of these results. Moreover, it would be interesting to further study if the impact of personality traits is mediated by some other variables such as self-esteem and general self-efficacy as suggested by results obtained by Furnham and Cheng (2000), Kwan et al. (1997) and Strobel et al. (2011).

Self-Esteem and Global Life Satisfaction

Self-esteem refers to the subjective and emotional evaluation of one's own worth and includes self-acceptance and self-respect (Rosenberg, 1965), and therefore tends to capture an affective evaluation of the self (Chen, Gully, & Eden, 2001). Self-esteem was shown to be strongly associated with life satisfaction for adults (see Baumeister, Campbell, Krueger, & Vohs, 2003 for a review) and adolescents (Dew & Huebner, 1994; Diener & Diener, 1995; Furnham & Cheng, 2000). Coopersmith (1967) showed that children and adolescents with high levels of academic self-esteem tend to be more exploratory, persevering, and active participants in their academic environment, and the literature review by Baumeister et al. (2003), highlighted that individuals high in self-esteem seem to have a more wise and prudent persistence at tasks. Finally, Aunola, Stattin, and Nurmi (2000) found an association between low self-esteem and the use of maladaptive academic achievement strategies. These results seem to support the notion that individuals who perceive high self-esteem apply more adaptive self-regulatory strategies than individuals having low self-esteem (Baumeister et al., 2003). These strategies may in fact influence their higher levels of reported satisfaction with life. Moreover, some studies found that self-esteem is a full mediator of the relationship between the conscientiousness and agreeableness traits of personality, and global life satisfaction; and a partial mediator of the relationship between extraversion and neuroticism, and global life satisfaction (Furnham & Cheng, 2000; Kwan, Bon, & Singelis, 1997).

General Self-Efficacy and Global Life Satisfaction

General self-efficacy, which was also shown to be strongly associated with life satisfaction for adults (Judge et al. 1998) and adolescents (Bradley & Corwyn, 2004; Suldo & Huebner, 2006), is defined as "one's estimate of one's capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise general control over events in one's life" (Judge et al., 1998, p.19). General self-efficacy captures beliefs regarding task-

specific capabilities, and can therefore strengthen or weaken motivation (Chen, Gully, & Eden, 2001). Thus people with high general self-efficacy beliefs can choose to perform more challenging tasks, set themselves higher goals, and be more perseverant (Bandura, 1997), whereas adolescents or young adults having low self-efficacy beliefs may be more likely to use self-handicapping strategies, such as avoiding test situations at school or work (Pulford, Johnson, & Awaida, 2005). Moreover, the study conducted by Strobel et al. (2011) seems to indicate self-efficacy as a possible mediator of the effects of neuroticism, extraversion, openness, and conscientiousness on global life satisfaction.

The Present Study

The literature suggests that personality traits, self-esteem, and general self-efficacy are predictors of global life satisfaction both in adults and in adolescents. However, given the few studies conducted that analyze all five personality traits in association with global life satisfaction, it is not clear for adolescents, which specific personality traits affect global life satisfaction and whether these traits have a direct or indirect effect. Moreover, some rare studies suggest that self-esteem and general self-efficacy could mediate the relationship between personality traits and global life satisfaction. Therefore, the first aim of this study was to verify the effects of personality traits, self-esteem, and general self-efficacy on adolescents' global life satisfaction, and the second aim was to test a model in which self-esteem and self-efficacy act as full or partial mediators of the relationship between personality traits and global life satisfaction. Given the fact that no other studies were done so far on this issue on an Italian-speaking sample of Swiss adolescents, this research is fundamentally exploratory in nature. However, results on other adolescents' samples permitted to delineate some assumptions. More precisely, as already observed in the US and in Sweden, we expected neuroticism, extraversion, and conscientiousness to have the strongest relationships with global life satisfaction. We also expected to find strong

associations between both self-esteem and self-efficacy, and global life satisfaction. Finally, as suggested by some scarce studies, we ~~supposed/~~assumed~~/proposed~~ that self-esteem and self-efficacy would fully or partially mediate the effect of some personality traits on global life satisfaction.

Method

Participants and Procedure

The study was conducted in the Swiss state of Ticino, where Italian is the official language. The total sample consisted of 437 students, 204 girls and 233 boys. The sample represented about one-sixth of the total population of students in the second last year of compulsory school (Rigoni, 2013) and can be considered as quite representative of the students of that age and of that state of Switzerland. Their age ranged from 12 to 16 years, with a mean age of 13.37 and a standard deviation of 0.61. Most students were 13-years old ($n = 298$). Three hundred and sixteen were Swiss and 121 non-Swiss.

Students of that specific academic year from seven middle schools of the state of Ticino were invited to answer an online questionnaire in an IT classroom in the presence of the first author. Students who had difficulties understanding some questions could ask the researcher for additional explanations. This research complied with the ethical rules of the Swiss Society of Psychology.

Measures

Satisfaction with Life Scale. The Italian version of the Satisfaction with Life Scale (SWL; Diener et al., 1985; Di Fabio & Palazzeschi, 2012) was used. This 5-item scale measures the global cognitive judgment of satisfaction with one's life using a 7-point Likert-type response scale ranging from 1 (strongly disagree) to 7 (strongly agree). Cronbach's alpha was .87 for the original English scale (Diener et al., 1985) and .88 for the Italian scale (Di Fabio & Palazzeschi, 2012).

NEO Five-Factor Inventory-3. To assess personality traits, the Italian version of the NEO Five-Factor Inventory-3 (NEO-FFI-3; McCrae & Costa, 2010; Terracciano, 2003) was used. This questionnaire is a brief version of the Italian version of the revised NEO Personality Inventory-3. The NEO-FFI-3 is a 60-item questionnaire that assesses the five main personality dimensions of the Five-Factor Model: Neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C). The response scale is a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Cronbach's alphas reported by McCrae and Costa (2010) were respectively .79, .79, .80, .75, .83 for N, E, O, A, and C. However, Caruso (2000) reported slightly lower values for some scales, in particular O and A.

Rosenberg Self-Esteem Scale. To assess self-esteem, the Italian version of the Rosenberg Self-Esteem Scale was used (RSES; Rosenberg, 1965; Prezza et al., 1997). The scale consists of 10 items, rated using a 4-point Likert-type scale ranging from 1 (strongly disagree) to 4 (strongly agree). The Cronbach's alpha of the original English scale, as well of the validated Italian version, was .84.

General Self-Efficacy Scale. To measure self-efficacy, the Italian version of the General Self-Efficacy Scale was used (GSE; Schwarzer & Gerusalem, 1995; Sibilia et al., 1995). This unidimensional scale contains 10 items, rated using a 4-point Likert-type scale ranging from 1 (not at all true) to 4 (exactly true). Validated in a sample of 23 countries, Cronbach's alphas ranged from .75 to .91, with the majority in the high .80s. The Italian version has psychometric qualities similar to the English one (Scholz et al., 2002).

Data analysis

Scale internal consistencies were measured using Cronbach's alpha. Correlation analyses were performed to describe the relationships between all the considered variables. These variables were then included in hierarchical multiple regression analyses in order to

test the single, as well as the overall effect of demographic variables, personality traits, and self-evaluation processes on global life satisfaction. These hierarchical regressions identified the variables that had a unique direct effect on global life satisfaction that were then included in the overall mediation model. Indeed, a direct association is a prerequisite for standard mediation analyses (Baron & Kenny, 1986). Path analysis using SEM was computed using the AMOS statistical package. The χ^2 per degree of freedom (χ^2/df), the comparative fit index (CFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA) were used to assess the model fit. According to literature, a model is considered to have a satisfactory fit if the χ^2/df is lower than 3, if the GFI, CFI, and TLI values are about .90 or above (Medsker, Williams, & Holahan, 1994), and if the RMSEA is about .05 or less (RMSEA of about .08 or less being acceptable, Byrne, 2001). Finally, using bootstrapping on 5000 samples we estimated the 95% confidence intervals for the direct, simple indirect, and total indirect mediation effects. Specific indirect effects were computed using the phantom model approach (Macho & Ledermann, 2011).

Results

In a first step, Cronbach's alpha coefficients and correlations between gender, nationality, the five personality traits, self-esteem, self-efficacy, and global life satisfaction were computed. As can be seen from Table 1, the internal reliabilities were all above the threshold of .60 (Kline, 1999), except openness (.58). Significant positive correlations were found between global life satisfaction and self-esteem, self-efficacy, extraversion, openness to experience, agreeableness and conscientiousness, whereas a moderate negative correlation was found between global life satisfaction and neuroticism (see Table 1). Self-esteem and self-efficacy (with the exception of self-efficacy with agreeableness) were both correlated with all personality traits, and especially negatively with neuroticism and positively with conscientiousness. Some gender differences were also observed: girls scored higher than boys

on all personality traits except conscientiousness, whereas they scored lower on self-esteem.

Being Swiss or non-Swiss had no impact. To assess what the correlations would look like

without measurement errors, we recomputed correlations correcting for attenuation. As

expected, correlations were associated with slightly larger effects-sizes but the pattern of

associations was similar with conscientiousness ($r = .60$) and neuroticism ($r = -.37$) having

the strongest associations with global life satisfaction, followed by extraversion, openness to

experience and agreeableness with a r of .36, .27 and .21 respectively.

To measure the effect of demographics variables, personality traits, self-esteem and

self-efficacy on global life satisfaction, two hierarchical linear multiple regressions were

computed (see Table 2). In a first hierarchical regression, demographics variables were added

in the first step, personality traits were added in the second step, and a third step included

self-esteem and general self-efficacy. In the second hierarchical regression step 2 and step 3

were inverted: self-esteem and self-efficacy were added in the second step and personality

traits in the third step.

Demographic variables explained 1% of global life satisfaction's variance. The

second step of both hierarchical regressions (involving respectively personality traits or self-

esteem and self-efficacy) explained 27% of global life satisfaction's variance. At this level,

neuroticism, extraversion and conscientiousness, and self-esteem and general self-efficacy

were found to significantly explain variance in global life satisfaction. The complete model

involving the three steps explained 35% of the variance of global life satisfaction. In this last

model, only conscientiousness, self-esteem, and self-efficacy, were found to significantly

predict global life satisfaction ~~suggesting that self-esteem or self-efficacy might mediate the~~

~~relationships between personality traits (and in particular neuroticism, extraversion, and~~

~~conscientiousness) and global life satisfaction.~~ Considering that neuroticism, extraversion and

conscientiousness were related to global life satisfaction, self-esteem and general self-

efficacy, and that self-esteem and general self-efficacy were related to life satisfaction after controlling for the three personality traits, the hierarchical regressions performed suggested that self-esteem and general self-efficacy might partially or fully mediate the relationship between personality traits and life satisfaction.

Path analysis was then conducted to assess the direct and indirect effects of the three personality traits that had a unique contribution to global life satisfaction considering self-esteem and self-efficacy as potential mediators. To avoid the negative impact of the relatively low loadings of some personality items on their respective latent variable, we created four homogeneous parcels per personality scale. This was done in pairing items with the highest correlations and then using the mean score of the three items (Rogers & Schmitt, 2004). After applying this technique, standardized parcels weights ranged from .45 to .72 for E, from .51 to .76 for N and from .69 to .76 for C. The models proved to fit the data well, with CFI and TLI above .95, RMSEA between .01 and .07 and χ^2/df lower than 3. Finally to further simplify the model, we used the mean score of the self-esteem and self-efficacy scales as suggested by Kline (1998). In AMOS, this was performed adding an exogenous observed variable with a path fixed to one, in order to ensure that the AMOS software did not treat the endogenous variables (mediators) as residual or exogenous variables associated with some other latent variables (neuroticism, extraversion, or conscientiousness). The model tested (Figure 1) adequately fitted the data, $\chi^2/df = 2.19$, CFI = .94, TLI = .93, and RMSEA = .05. Standardized coefficient estimates showed that both extraversion and self-efficacy do not have any direct impact on global life satisfaction, that extraversion does not directly affect self-esteem, neuroticism does not directly affect global life satisfaction, and that there is no co-variation of self-esteem and self-efficacy (see Figure 1). Therefore, self-efficacy does not seem to mediate the effect of the three personality traits on global life satisfaction, whereas

self-esteem seems to partially mediate the impact of conscientiousness on global life satisfaction and to fully mediate the impact of neuroticism on global life satisfaction.

To more precisely analyze the relationships between the variables of our model, we performed bootstrapping on 5000 samples to obtain point estimates, standard errors, and confidence intervals of the direct and indirect effects of conscientiousness, neuroticism, and extraversion on global life satisfaction. The results of these analyses are provided in Table 3 and confirm the significance of the direct effect of conscientiousness on global life satisfaction and the indirect effects of conscientiousness and neuroticism on global life satisfaction. While no significant direct effect of extraversion on global life satisfaction was found, an indirect effect was detected. Estimation of the simple indirect effects confirmed that also for extraversion, the indirect effect on global life satisfaction is mediated by self-esteem.

Discussion

Considering that previous studies have shown that global life satisfaction is related to the overall quality of life in the present but also in the future (Diener & Chan, 2011), the study of the individual characteristics underlying adolescents' global life satisfaction is of importance. In line with previous findings, we observed that conscientiousness, neuroticism, extraversion, and self-esteem globally make a strong contribution to global life satisfaction. Moreover, we found that self-esteem seems to mediate the relationship between these personality traits and global life satisfaction, suggesting that self-esteem might be an especially important process to consider in adolescents.

The present study confirms that only specific personality traits are directly associated with global life satisfaction as reported by Steel et al. (2008) in their literature review. The results of the present study are however slightly different. In our study, only conscientiousness had a direct effect, whereas neuroticism and extraversion had indirect

effects on global life satisfaction. Another difference is in the small contribution of neuroticism, compared to the large one of conscientiousness on global life satisfaction observed in this study. ~~Besides a possible explanation which could partly attribute~~ This result could be partly attributed to the better reliability of the conscientiousness scale. However, as suggested by Judge and Ilies (2002), the relationship between conscientiousness and global life satisfaction might be due to the fact that this personality domain is linked with overall motivation (Judge & Ilies, 2002), which leads conscientious individuals to be more efficient and perseverant (McGregor & Little, 1998). This in turn has a positive impact on global life satisfaction (DeNeve & Cooper, 1998). In fact, these associations could be even stronger during adolescence, when motivation to succeed at school has an important impact on personal identity but is also a crucial resource to manage the first vocational transition to vocational training or higher-education, one of the most challenging life situations that adolescents face. It is important to note that in Switzerland about two-thirds of the adolescents will choose vocational training and that in this case they have to make their first career choice very early. Moreover, adolescents have to apply for an apprenticeship in the open labor market and their school grades will have a strong impact on the choices or opportunities they will concretely have. For these reasons, the strength of the association between conscientiousness and global life satisfaction could be age- and vocational education system-specific. Concerning the slightly weaker contribution of neuroticism, this seems in line with the results of Jovanovic (2010) conducted with Serbian undergraduate students, who found neuroticism to be a better predictor of the affective component of subjective well-being, rather than the cognitive one. With regards to the indirect effect of extraversion observed in this research, other studies reported similar results in adults. Some studies found an indirect effect of extraversion on subjective well-being through intrinsic goal importance

in a group of older adults (Gomez, Allemand, & Grob, 2012) and through social self-efficacy for students (Fogle, Huebner, & Laughlin, 2002).

In our study, self-esteem played an especially important role, by having an important direct effect, along with conscientiousness, and by mediating the effect of neuroticism and extraversion. Notably, only very few studies have considered self-esteem as a possible mediator and most studies on the impact of personality on global life satisfaction were conducted with adults, even if interest on adolescents seems to have recently increased. This study confirms the results of some previous studies (i.e. Suldo & Huebner, 2006) but also emphasizes the importance of self-esteem for adolescents. The differences according to the impact of personality traits and the mediators considered, as already said, could be due to the age group studied but also to the cultural setting, considering that culture is known for having an impact on this relationship (Bradley & Corwyn, 2004; Pulford, Johnson, & Awaida, 2005).

The important effect of self-esteem on global life satisfaction, and the absence of an association between self-efficacy and global life satisfaction, could indicate that in adolescence the acceptance or respect individuals have for themselves has more of an impact on their global life satisfaction than the perception of their capabilities and resources to exercise control over their life. Importantly, for some authors self-esteem and self-efficacy are very similar and for others self-efficacy might be a component of self-esteem (Judge, Erez, Bono, & Thoresen, 2002). If we consider that self-esteem refers to the subjective and emotional evaluation of one's own worth and includes self-acceptance and self-respect, it is interesting to note that it mediates the two personality traits, neuroticism and extraversion, that are associated respectively with negative and positive affectivity (Revelle & Scherer, 2009).

This research investigated the respective contributions of personality traits, self-esteem, and self-efficacy on global life satisfaction in order to better understand the

contributions and functions of stable and processual individual characteristics in adolescents. Although the results are encouraging, this study has several limitations. Firstly, the cross-sectional nature of the study does not allow us to draw any conclusion considering causal relationships. Secondly, reliability of the openness to experience scale, in particular, is slightly low. A third limitation is that the sample is somewhat representative of only one linguistic region of Switzerland. Future studies could adopt a longitudinal and multi-centric approach, in order to describe more precisely the causal relationships and the impact of the cultural setting. Moreover, given the exploratory nature of this research, it would be useful to replicate the study on bigger samples of Swiss-Italian adolescents, permitting also to assess possible age and vocational education system differences. Future studies might also benefit from the use of a longer / more comprehensive personality inventory.

To conclude, consistent with the results of Diener and Seligman (2002) in their study with adults, and with those of Suldo and Huebner (2006) in their study with adolescents, global life satisfaction seems to stem from a combination of multiple elements. Nevertheless, some components seem to be more essential than others. In this study, the conscientiousness personality dimension and self-esteem had the strongest associations with global life satisfaction. These results are consistent with those of the study of Salmela-Aro and Tuominen-Soini (2010) which showed that global life satisfaction during the transition from compulsory school to academic or vocational training is predicted by adolescents' academic achievement and self-esteem, which, in turn, were found to be related to conscientiousness (for a review see De Raad & Schouwenburg, 1996). Moreover, the mediator role of self-esteem between personality traits and global life satisfaction is consistent with the conceptualization suggested by Rossier (2015a, 2015b), who argues that self-regulatory processes mediate the expression of stable dispositions such as personality traits. Self-esteem seems to mediate the impact of personality traits related with emotions. Thus preventive

health and well-being promotion efforts, psychosocial interventions, vocational guidance, and career interventions might then be aimed at also increasing these personal "resources", which could increase global life satisfaction levels and decrease the risk of entering in a vicious circle that lowers global life satisfaction consistently.

References

Aunola, K., Stattin, H., & Nurmi, J.-E. (2000). Adolescents' achievement strategies, school adjustment, and externalizing and internalizing problem behaviors. *Journal of Youth and Adolescence, 29*, 289–306. doi:10.1023/A:1005143607919

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173–1182. doi:10.1037/0022-3514.51.6.1173

Baumeister, R. F., Campbell, J. D., Krueger, J. I., & Vohs, K. D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in the Public Interest, 1*, 1-44. doi: 10.1111/1529-1006.01431

Bowman, N. A. (2010). The development of psychological well-being among first-year college students. *Journal of College Student Development, 51*, 180–200. doi:10.1353/csd.0.0118

Bradley, R. H., & Corwyn, R. F. (2004). Life Satisfaction among European American, African American, Chinese American, Mexican American, and Dominican American adolescents. *International Journal of Behavioral Development, 28*, 385–400. doi:10.1080/01650250444000072

Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Caruso, J. C. (2000). Relibility generalization of the NEO personality scales. *Educational and Psychological Measurement, 60*, 236-254. doi: 10.1177/00131640021970484

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational Research Methods, 4*, 62–3. doi:10.1177/109442810141004

Coopersmith, S. (1967). *The antecedents of self-esteem*. San Francisco, CA: Freeman.

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.

    doi:10.1037/0033-2909.124.2.197

De Raad, B., & Schouwenburg, H. C. (1996). Personality in learning and education: A

    review. *European Journal of Personality, 10*, 303–336. doi:10.1002/(SICI)1099-

    0984(199612)10:5<303::AID-PER262>3.0.CO;2-2

Dew, T. & Huebner, E. S. (1994). Adolescents' perceived quality of life: An exploratory

    investigation. *Journal of School Psychology, 32*, 185–199. doi:10.1016/0022-

    4405(94)90010-8

Diener, E. (1984). Subjective well-being. *Psychological Bulletin , 95*, 542–575.

    doi:10.1037/0033-2909.95.3.542

Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being

    contributes to health and longevity. *Applied Psychology: Health and Well-Being. 3*, 1–

    43. doi:10.1111/j.1758-0854.2010.01045.x

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem.

    Journal of Personality and Social Psychology, 68, 653–663. doi:10.1037/0022-

    3514.68.4.653

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life

    Scale. *Journal of Personality Assessment, 49*, 71–75.

    doi:10.1207/s15327752jpa4901_13

Diener, E., & Seligman, M. E. P. (2002). Very happy people. *Psychological Science, 13*, 81–

    84. doi:10.1111/1467-9280.00415

Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. E. (1999). Subjective well-being: Three

decades of progress. *Psychological Bulletin, 125*, 276-302. doi:10.1037/0033-

2909.125.2.276

Di Fabio, A., & Palazzeschi, L. (2012). La Satisfaction With Life Scale (SWLS): un

contributo alla validazione italiana con lavoratori adulti [The Satisfaction With Life

Scale (SWLS): A contribution to the Italian validation with adults workers].

Counseling, 5(2), 207–215.

Fogle, L. M., Huebner, E. S., & Laughlin, J. E. (2002). The relationship between

temperament and life satisfaction in early adolescence: Cognitive and behavioral

mediation models. *Journal of Happiness Studies, 3*, 373–392.

doi:10.1023/A:1021883830847

Furnham, A., & Cheng, H. (2000). Perceived parental behavior, self-esteem and happiness.

Social Psychiatry and Psychiatric Epidemiology, 35, 463–470. doi:

10.1007/s001270050265

Garcia, D. (2011). Two models of personality and well-being among adolescents. *Personality

and Individual Differences, 50*, 1208–1212. doi:10.1016/j.paid.2011.02.009

Gale, R. G., Booth, T., Mõttus, R., Kuh, D., & Deary, I. J. (2013). Neuroticism and

extraversion in youth predict mental well-being and life satisfaction 40 years later.

Journal of Research in Personality, 47, 687–697. doi:10.1016/j.jrp.2013.06.005

Gomez, V., Allemand, M., & Grob, A. (2012). Neuroticism, extraversion, goals, and

subjective well-being: Exploring the relations in young, middle-aged, and older adults.

Journal of Research in Personality, 46, 317–325. doi:10.1016/j.jrp.2012.03.001

Jovanovic, V. (2010). Personality and subjective well-being: One neglected model of

personality and two forgotten aspects of subjective well-being. *Personality and

Individual Differences, 50*, 631–635. doi:10.1016/j.paid.2010.12.008

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, *83*, 693–710. doi:10.1037/0022-3514.83.3.693

Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology, 87*, 797–807. doi:10.1037//0021-9010.87.4.797

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83*, 17–34. doi:10.1037/0021-9010.83.1.17

Kline, R. B. (1998). *Principles and practice of structural equation modeling*. New York, NY: Guilford.

Kline, P. (1999). *The handbook of psychological testing* (2nd ed.). London, UK: Routledge.

Kwan, V. S. Y., Bond, M. H., & Singelis, T. M. (1997). Pancultural explanations for life-satisfaction: Adding relationship harmony to self-esteem. *Journal of Personality and Social Psychology, 73*, 1038–1051. doi: 10.1037/0022-3514.73.5.1038

Macho, S., & Ledermann, T. (2011). Estimating, testing, and comparing specific effects in structural equation models: The phantom model approach. *Psychological Methods, 16*, 34-43. doi:10.1037/a0021763

McCrae, R. R., & Costa, P. T. (2010). *NEO inventories professional mannual: NEO-PI-3, NEO-FFI-3, NEO PI-R*. Lutz, FL: Psychological Assessment Resources.

Medsker, G. J., Williams, L. J., & Holahan, P. J. (1994). A review of current practices for evaluating causal-models in organizational-behavior and human-resources management research. *Journal of Management, 20*, 439–464. doi:10.1016/0149-2063(94)90022-1

McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: On doing

well and being yourself. *Journal of Personality and Social Psychology, 74*, 494–512.

doi:10.1037/0022-3514.74.2.494

Prezza, M., Trombaccia, F. R., & Armento, L. (1997). La scala dell'autostima di Rosenberg:

traduzione e validazione italiana [The Rosenberg's self-esteem scale: Translation and

Italian validation]. *Bollettino di Psicologia Applicata, 223*, 35–44.

Proctor, C. L., Linley, P. A., & Maltby, J. (2009). Youth life satisfaction: A review of the

literature. *Journal of Happiness Studies, 10*, 583–630. doi: 10.1007/s10902-008-9110-9

Pulford, B. D., Johnson, A., & Awaida, M. (2005). A cross-cultural study of predictors of

self-handicapping in university students. *Personality and Individual Differences*, *39*,

727–737. doi:10.1016/j.paid.2005.02.008

Revelle, W., & Scherer, K. R. (2009). Personality and emotions. In D. Sanders & K. S.

Scherer (Eds), *The Oxford companion to emotion and the affective sciences* (pp. 304–

306). Oxford, UK: Oxford University Press.

Rigoni, B. (2013). *Statistica degli allievi 2012-13* [Students' statistic 2012-13]. Bellinzona,

Switzerland: UMSS.

Rogers, W. M., & Schmitt, N. (2004). Parameter recovery and model fit using

multidimensional composites: A comparison of four empirical parceling algorithms.

Multivariate Behavioral Research, *39*, 379–412. doi:10.1207/S15327906MBR3903_1

Rosenberg, M. (1965). *Society and the adolescence self-image*. Princeton, NY: Princeton

University Press.

Rossier, J. (2015a). Career adaptability and life designing. In L. Nota & J. Rossier (Eds.),

Handbook of life design: From practice to theory and from theory to practice (pp. 153–

167). Göttingen, Germany: Hogrefe.

Rossier, J. (2015b). Personality and career interventions. In P. J. Hartung, M. L. Savickas, &
     W. B. Walsh (Eds.), *APA handbook of career intervention: Foundations* (Vol. 1, pp.
     327–350). Washington, DC: American Psychological Association. doi:10.1037/1438-
     018

Salmela-Aro, K., & Tuominen-Soini, H. (2010). Adolescents' life satisfaction during the
     transition to post-comprehensive education: Antecedents and consequences. *Journal of
     Happiness Studies, 11*, 683–701. doi:10.1007/s10902-009-9156-3

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. (2002). Is perceived self-efficacy a
     universal construct? Psychometric findings from 25 countries. *European Journal of
     Psychological Assessment, 18*, 242–251. doi:10.1027//1015-5759.18.3.242

Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S.
     Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio.
     Causal and control beliefs* (pp. 35–37). Windsor, UK: NFER-NELSON.

Sibilia, L., Schwarzer, R., & Jerusalem, M. (1995). *Generalized perceived self-efficacy*.
     Retrieved from http://userpage.fu-berlin.de/~health/selfscal.htm

Strobel, M., Tumasjan, A., & Spörrle, M. (2011). Be yourself, believe in yourself, and be
     happy: Self-efficacy as a mediator between personality factors and subjective well-
     being. *Scandinavian Journal of Psychology, 52*, 43–48. doi:11/j.1467-
     9450.2010.00826.x

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

Suldo, S., & Huebner, E. S. (2006). Is extremely high life satisfaction during adolescence
     advantageous? *Social Indicators Research, 78*, 179–203. doi:10.1007/s11205-005-
     8208-2

Suldo, S. M., Minch, D. R., & Hearon, B. V. (in press). Adolescent life satisfaction and

   personality characteristics: Investigating relationships using a five factor model.

   Journal of Happiness Studies. doi:10.1007/s10902-014-9544-1

Terracciano, A. (2003). The Italian version of the NEO PI-R: Conceptual and empirical

   support for the use of targeted rotation. *Personality and Individual Differences*, *35*,

   1859–1872. doi:10.1016/S0191-8869(03)00035-7

Weber, M., & Huebner, E. S. (2015). Early adolescents' personality and life satisfaction: A

   closer look at global vs. domain-specific satisfaction. *Personality and Individual

   Differences, 83*, 31-36. doi:10.1016/j.paid.2015.03.042

Table 1

Means, standard deviations, reliabilities and correlations

	M	*SD*	1	2	3	4	5	6	7	8	9	10
1. Life satisfaction	24.39	6.22	(.85)									
2. Gender	-	-	.01	-								
3. Nationality	-	-	.09	-.05	-							
4. Self-esteem	29.27	4.95	.49**	-.16**	.07	(.82)						
5. Self-efficacy	28.41	4.47	.36**	-.00	.03	.39**	(.83)					
6. Neuroticism	25.43	6.15	-.28**	.25**	.07	-.50**	-.30**	(.67)				
7. Extraversion	29.35	5.30	.26**	.18**	-.03	.27**	.33**	-.13**	(.63)			
8. Openness	27.27	5.22	.19**	.13**	.05	.19**	.34**	-.01	.34**	(.58)		
9. Agreeableness	27.61	5.81	.16**	.25**	.02	.13**	.05	-.17**	.25**	.17**	(.67)	
10. Conscientiousness	27.42	6.36	.49**	.07	-.00	.47**	.43**	-.30**	.32**	.34**	.23**	(.78)

Note. Gender: 0 = Boy, 1 = Girl; Nationality: 0 = Non-Swiss, 1 = Swiss. Gender and Nationality were dichotomous variables and for this reason

Spearman's rhos were computed for these variables. In parentheses, Cronbach's alpha coefficients are reported for each scale.

* $p < .05$, ** $p < .01$

Table 2

Hierarchical multiple linear regression analyses predicting global life satisfaction

Variables	Step 1 of regressions 1 and 2			Step 2 of regression 1			Step 2 of regression 2			Step 3 of regressions 1 and 2		
	B	SEB	β	B	SEB	β	B	SEB	β	B	SEB	β
Gender	0.19	0.60	.02	-0.12	0.56	-.01	1.01	0.52	.08	0.31	0.54	.03
Nationality	1.12	0.67	.08	1.01	0.57	.07	0.69	0.57	.05	0.84	0.55	.06
Neuroticism				-0.13	0.05	-.13 **				0.00	0.05	.00
Extraversion				0.13	0.05	.11 *				0.07	0.05	.06
Openness				0.00	0.06	-.00				-0.04	0.05	-.04
Agreeableness				0.02	0.05	.02				0.04	0.05	.03
Conscientiousness				0.41	0.05	.42 ***				0.29	0.05	.29 ***
Self-esteem							0.54	0.06	.43 ***	0.38	0.06	.31 ***
Self-efficacy							0.26	0.06	.19 ***	0.15	0.07	.11 *
Total R^2		.01			.28			.28			.35	
ΔR^2					.27			.27			.07	
F		1.43			23.85 ***			42.99 ***			25.60 ***	

Note. Total R^2, ΔR^2 and F always refer to results obtained when the last step reported in the column is added to the model.

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 3

Estimated effects and 95% bootstrapped confidence intervals for direct and indirect effects of C, N and E on global life satisfaction

Effect	Contrast being tested	Value[a]	95% bias-corrected CI	
			LL	*UL*
1	Direct effect of C on GLS	0.279	0.169	0.410
2	Direct effect of N on GLS	0.021	-0.116	0.149
3	Direct effect of E on GLS	0.102	-0.090	0.295
4	Total indirect effect of C on GLS	0.081	0.032	0.147
5	Total indirect effect of N on GLS	-0.133	-0.225	-0.070
6	Total indirect effect of E on GLS	0.064	0.001	0.154
7	Simple indirect effect of C on GLS through self-esteem	0.067	0.023	0.121
8	Simple indirect effect of N on GLS through self-esteem	-0.122	-0.206	-0.061
9	Simple indirect effect of E on GLS through self-esteem	0.041	0.001	0.009
10	Simple indirect effect of C on GLS through self-efficacy	0.013	-0.012	0.053
11	Simple indirect effect of N on GLS through self-efficacy	-0.012	-0.043	0.011
12	Simple indirect effect of E on GLS through self-efficacy	0.022	-0.022	0.087

Note. GLS = Global life satisfaction; C = Conscientiousness; N = Neuroticism; E = Extraversion; CI = confidence interval; *LL* = lower limit; *UL* = upper limit. [a] Unstandardized estimate of the effect obtained with the Maximum Likelihood procedure
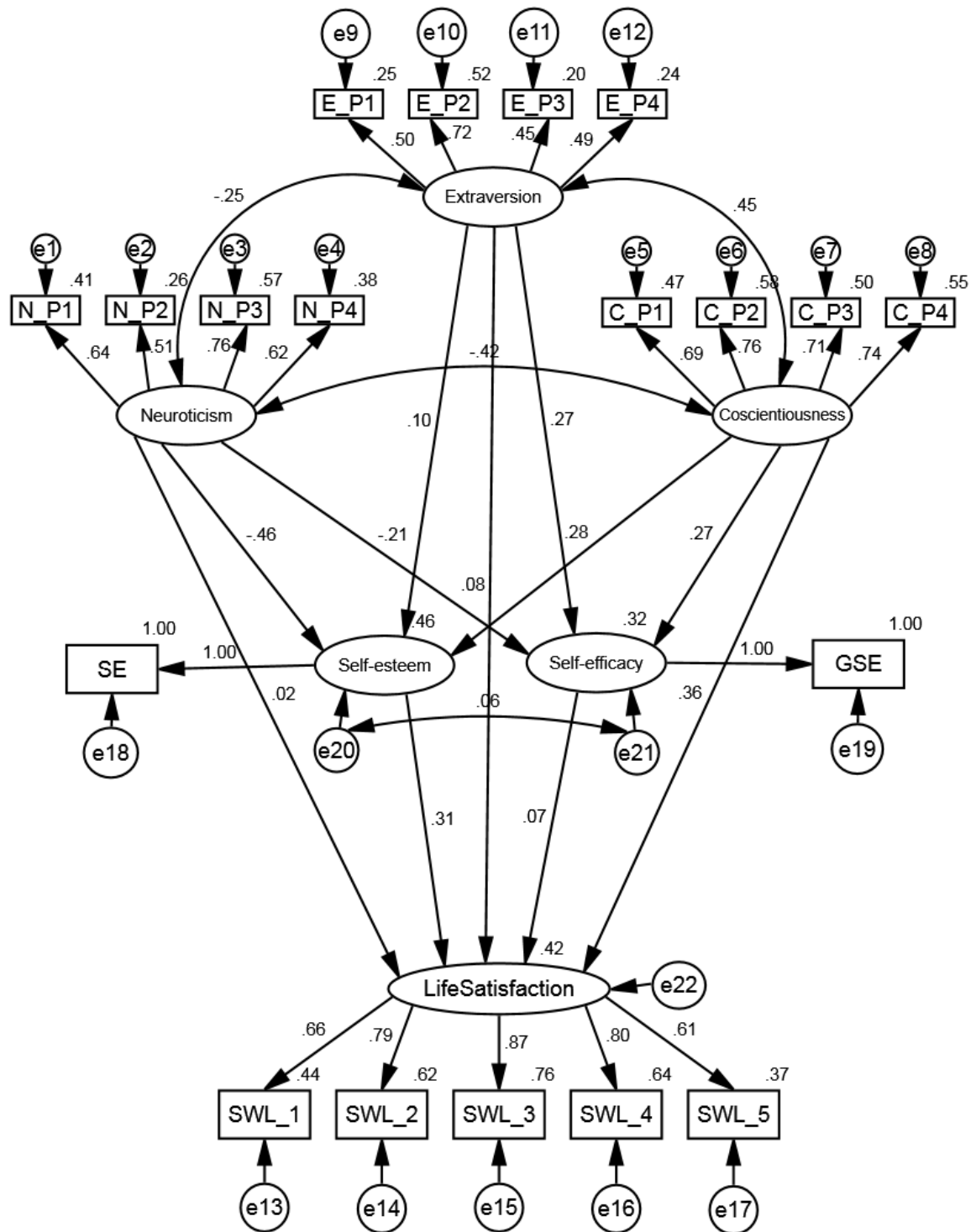
Figure 1. Structural equation model with standardized coefficients estimates.