

Personality and perfectionism as predictors of life satisfaction: The unique contribution of having high standards for others

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Abstract

Life satisfaction is directly related to positive mental and physical health outcomes. As such, the promotion of life satisfaction is desirable. To facilitate this process, it is beneficial to identify significant predictors of life satisfaction. Although previous research has established that personality is a reliable predictor of life satisfaction, personality is not easily modifiable. In contrast, perfectionism can be effectively adapted with appropriate therapy, leading to decreases in mental illness symptomology. The present study sought to determine if different aspects of perfectionism predicted life satisfaction beyond the influence of personality. A total of 448 online participants (75% female) completed questionnaires assessing life satisfaction, perfectionism, and personality. Results of a hierarchical multiple regression analysis revealed that lower scores on neuroticism (being emotionally stable; p < 0.001) and higher scores on extraversion (p < 0.001) and conscientiousness (p = 0.003) significantly predicted life satisfaction. In addition, one aspect of perfectionism, high standards for others (p = 0.001), positively predicted life satisfaction beyond the influence of personality. We suggest that encouraging individuals to hold others to high standards is an effective strategy that may foster shared goals and achievements, which in turn may improve overall life satisfaction.

Key words: life satisfaction, personality, perfectionism, high standards for others

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Introduction

Life satisfaction involves a cognitive judgment wherein an individual compares his or her current life circumstances with an ideal (Diener et al. 1985). The magnitude of the resulting discrepancy is inversely related to satisfaction with life. That is, a small discrepancy between actual and desired life circumstances is indicative of higher life satisfaction, whereas a large discrepancy is reflective of lower life satisfaction. A high level of life satisfaction is a desirable goal in its own right, and many individuals seek therapy with the aim of enhancing their sense of subjective well-being (Lent 2004; Diener et al. 2017). Individual differences in life satisfaction relate to mental and physical health outcomes. For instance, high life satisfaction is associated with reduced incidence of mental illnesses (Fergusson et al. 2015) and chronic health conditions (Siahpush et al. 2008). As such, it is important to identify factors that contribute to an individual's life satisfaction so that intervention can target these factors.



Personality has been studied extensively in relation to life satisfaction. The default model of personality is the Five-Factor Model (McCrae and Costa 2013). This model is comprised of five personality characteristics: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Together, these factors account for between 18% (Steel et al. 2008) and 32% (Hayes and Joseph 2003) of the variation in life satisfaction. The strongest relations tend to be with neuroticism, extraversion, and conscientiousness (e.g., DeNeve and Cooper 1998; Steel et al. 2008). In spite of the predictive value of personality characteristics, these factors are not readily amenable to change as personality traits remain relatively stable across the lifespan (Costa and McCrae 1997). To illustrate, results from a multitude of studies and a comprehensive meta-analysis by Roberts and DelVecchio (2000) indicated that test-retest correlations for the big five traits from childhood to later adulthood are moderate to strong in magnitude (Roberts and DelVecchio 2000; Donnellan et al. 2015). Furthermore, the contribution of personality to life satisfaction is considered a trait variance that appears to be stable across the life span (Lucas and Donnellan 2007; Baird et al. 2010). Thus, researchers have shifted their attention to explore other factors that contribute to life satisfaction beyond the influence of personality (Lent 2004). The present study explored perfectionism in this context.

Although definitions of perfectionism vary, core features include setting unreasonably high standards for oneself and experiencing distressing concern over mistakes (Frost et al. 1990). Some researchers have characterized these tendencies as a personality disposition (e.g., Zuroff 1994; Fry and Debats 2009); however, other researchers have argued that perfectionism is more complex, encompassing cognitive and behavioural tendencies as well (Egan et al. 2011). Proponents of this perspective report that perfectionistic tendencies can be modified through therapy (Egan et al. 2015). This malleability is seen as evidence that perfectionism is not a stable personality trait (Egan et al. 2015). Furthermore, empirical research has identified only moderate overlap between perfectionism and the big five personality traits (e.g., Cruce et al. 2012). Thus, it is possible that perfectionistic tendencies contribute to life satisfaction beyond the influence of personality.

Traditionally, perfectionism has been conceptualized in terms of its maladaptive and adaptive components (e.g., Frost et al. 1993; Cox et al. 2002). As their names imply, maladaptive components (e.g., concern over mistakes, doubts about actions, self-oriented perfectionism, and socially prescribed perfectionism) are associated with psychological issues such as depression, anxiety, and hostility (Frost et al. 1990; Hewitt and Flett 1991; Hill et al. 2004). In contrast, adaptive components (e.g., organization and personal standards) are generally unrelated to these psychopathologies (Frost et al. 1990). Furthermore, several studies have examined the relation between perfectionism and life satisfaction. Unsurprisingly, maladaptive components are negatively correlated with life satisfaction, whereas adaptive components are positively correlated (Chang et al. 2004; Öngen 2009; Gnilka et al. 2013; Suh et al. 2017).

Suh et al. (2017) examined the relations among personality (neuroticism and conscientiousness), perfectionism (adaptive, maladaptive, and nonperfectionists), and well-being. These researchers found that adaptive perfectionists (those who did not engage in negative self-evaluations and maintained high standards for themselves), who also had lower scores on neuroticism and higher scores on conscientiousness, had higher life satisfaction scores than maladaptive perfectionists and nonperfectionists. Importantly, this study demonstrated the adaptive aspects of perfectionism for life satisfaction; however, it only focused on two personality traits, neglecting the influences of extraversion, agreeableness, and openness. Moreover, these authors did not tease apart the effects of personality from perfectionism. The present study investigated the unique influences of personality and perfectionism on life satisfaction, with a particular emphasis on the independent contribution of perfectionism.

According to previous literature, demographic characteristics are related to personality and perfectionism. For instance, females reliably score higher than males on the personality factors of



neuroticism and agreeableness (Benet-Martínez and John 1998). Furthermore, scores on perfectionistic dimensions tend to decline with age (Landa and Bybee 2007). Thus, the present study controlled for the effects of demographic factors that could affect the relations among personality, perfectionism, and life satisfaction.

It is important to identify the unique contribution of perfectionism to life satisfaction, because numerous studies have shown that using evidence-based treatment to target dimensions of maladaptive perfectionism can produce lasting reductions in perfectionistic tendencies and, consequently, decreases in mental illness symptomology. In particular, a recent meta-analysis (Lloyd et al. 2015) showed that interventions designed to reduce maladaptive perfectionistic tendencies produced decreases in anxiety, depression, eating disorders, and obsessive-compulsive symptomology. Handley et al. (2015) also reported decreases in psychopathologies following group cognitive behavioural therapy for perfectionism. Furthermore, these researchers reported increases in quality of life and self-esteem as a result of the perfectionism intervention.

The present study took a nuanced approach to examine the relations among the perfectionistic dimensions and satisfaction with life, as previous researchers tended to focus on the higher order factors of perfectionism (i.e., adaptive and maladaptive; Chang et al. 2004; Öngen 2009; Gnilka et al. 2013). In particular, we were interested in determining which specific characteristics of perfectionism added unique variance in the prediction of life satisfaction beyond the influence of personality. Based on previous research (e.g., DeNeve and Cooper 1998; Steel et al. 2008), we hypothesized that lower neuroticism and higher extraversion and conscientiousness scores would contribute to life satisfaction; however, we did not have specific predictions regarding the perfectionism subscales, as these have not been examined previously in relation to life satisfaction.

Materials and methods

Participants

In total, 448 adults participated in an online survey. The mean age of the sample was 28.77 years (SD = 10.42), and participants ranged in age from 19 to 65 years. The sample was predominantly female (75%) and Caucasian (86%).

Measures

Participants completed a series of questionnaires assessing demographic information, satisfaction with life, personality, and perfectionism. The demographics form was presented first, followed by the remaining questionnaires in random order. Information regarding the descriptive statistics and internal reliabilities for each scale can be found in **Table 1**.

Demographics questionnaire

Participants completed a brief demographics form assessing age and gender.

Satisfaction with life scale (SWLS)

The SWLS is a widely used measure of life satisfaction (Diener et al. 1985; Pavot and Diener 2008). Its popularity among researchers is likely due to its excellent psychometric properties and brevity. Specifically, Diener et al. (1985) found that the scale had very good internal reliability ($\alpha = 0.87$), was stable for a two-month period (r = 0.82), and was correlated in the expected directions with other measures of well-being and distress. Since the development of this scale, other studies have confirmed its psychometric properties (see Pavot and Diener (2008) for a review). The scale asks participants to rate their level of agreement with five statements (e.g., "I am satisfied with my life") on a seven-point



Table 1. Descriptive statistics and internal reliabilities of life satisfaction, personality, and perfectionism.

Measure	Possible range	Mean	Standard deviation	Internal reliability
Life satisfaction	1-7	4.6	1.51	0.91
Personality				
Neuroticism	1–5	3.2	0.85	0.86
Extraversion	1–5	3.0	0.87	0.87
Openness	1–5	3.5	0.57	0.71
Agreeableness	1–5	3.8	0.58	0.73
Conscientiousness	1–5	3.7	0.63	0.78
Perfectionism				
Concern over mistakes	1–5	3.2	0.97	0.91
High standards for others	1–5	3.2	0.86	0.87
Need for approval	1–5	3.6	0.90	0.89
Organization	1–5	3.5	0.87	0.89
Parental pressure	1-5	3.1	1.18	0.94
Planfulness	1–5	3.9	0.73	0.88
Striving for excellence	1-5	3.4	0.89	0.88
Rumination	1-5	3.5	0.91	0.87

Note: N = 432-444 due to missing data where participants chose not to respond.

Likert scale (1 = strongly disagree to 7 = strongly agree). These items were averaged to produce a total life satisfaction score between 1 and 7.

Big five inventory (BFI)

The BFI measures five factors of personality: neuroticism (e.g., "...gets nervous easily"), extraversion (e.g., "...is outgoing, sociable"), openness (e.g., "...is curious about many different things"), agreeableness (e.g., "...is considerate and kind to almost everyone"), and conscientiousness (e.g., "...makes plans and follows through with them") (John and Srivastava 1999). Participants were presented with the following statement: "I see myself as someone who..." followed by a list of descriptions. They were asked to indicate their agreement on a five-point Likert scale where 1 = strongly disagree and 5 = strongly agree. For example, agreement with the statement "I see myself as someone who... is outgoing, sociable" is indicative of an extraverted personality. The items were averaged to produce total scores for each subscale, ranging between 1 and 5. This scale was chosen as our measure of personality because of its balance between length and psychometric properties. The BFI contains only 44 items but is strongly related to longer measures of personality, most notably the revised NEO personality inventory (NEO-PI-R) (240 items; John et al. 2008). Furthermore, the scale has good internal reliability ($\alpha = 0.79-0.87$) and test–retest reliability over a three-month period (r = 0.80-0.90; John et al. 2008).

Perfectionism inventory (PI)

The PI is a comprehensive measure of perfectionism (Hill et al. 2004). This inventory contains 59 items measured on a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. A total score can be computed, as well as eight subscale scores consisting of concern over mistakes



(e.g., "I overreact to making mistakes"), high standards for others (e.g., "I am frequently aggravated by the lazy or sloppy work of others"), need for approval (e.g., "I am over-sensitive to the comments of others"), organization (e.g., "I am well-organized"), perceived parental pressure (e.g., "I have always felt pressure from my parent(s) to be the best"), planfulness (e.g., "I find myself planning many decisions"), rumination (e.g., "I spend a lot of time worrying about things I've done, or things I need to do"), and striving for excellence (e.g., "My work needs to be perfect in order for me to be satisfied"). The items of this scale were averaged to produce total scores on each of the eight subscales, ranging between 1 and 5. This scale was chosen over other scales because of its excellent psychometric properties and its relation to psychological outcome measures. Specifically, Hill et al. (2004) found that the eight subscales had very good internal reliability ($\alpha = 0.83-0.91$) and test–retest reliability over a 3- to 6-week period (r = 0.71-0.91). Furthermore, the subscales of the PI were found to add unique variance in the prediction of 10 psychological outcomes (i.e., fear of negative evaluation, global severity index, depression, obsessive-compulsive symptomology, anxiety, interpersonal sensitivity, hostility, phobic anxiety, paranoid ideation, and psychoticism) over and above that contributed by commonly used scales (Hill et al. 2004).

Procedure

Online participants were recruited through announcements on our university's web portal, on social media, and on relevant discussion boards. Interested individuals were directed to Qualtrics, an online survey platform, to complete the consent form and questionnaire package. The survey took approximately 20–30 min to complete. In exchange for their participation, participants could be entered into a draw for a \$50 Amazon gift card. Following completion of the study, participants emailed the primary researchers if they were interested in being entered in the draw for the gift card and if they wanted to receive feedback on the results of the study. All measures and procedures were approved by the University of New Brunswick's Research Ethics Board prior to the beginning of the study.

Results

Gender differences

Independent samples *t*-tests were conducted to assess gender differences on the study variables. Levene's test of homogeneity of variance indicated unequal variances in only two cases (conscientiousness and need for approval); however, the conclusions based on equal and unequal variances were identical. Several gender differences were identified in the present study (see Table 2). Specifically, females scored higher than males on the personality factors of neuroticism, extraversion, and conscientiousness as well as the perfectionism subscales of need for approval, organization, and rumination. There were no statistically significant gender differences on any of the other study variables, including life satisfaction.

Age differences

Age was correlated with several of the study variables. Younger individuals scored higher on neuroticism (r=-0.19, p<0.001) and lower on conscientiousness (r=0.14, p=0.004). Furthermore, younger participants scored higher on the perfectionism subscales of concern over mistakes (r=-0.13, p=0.009), need for approval (r=-0.12, p=0.018), perceived parental pressure (r=-0.15, p=0.002), striving for excellence (r=-0.10, p=0.035), and rumination(r=-0.13, p=0.008).

Bivariate correlations

Correlations among life satisfaction, personality, and perfectionism are presented in Table 3. The perfectionism subscales of concern over mistakes, need for approval, perceived parental pressure, and



Table 2. Gender differences.

	Males (N	Males (N = 109)		Females (<i>N</i> = 337)			
Measure	Mean	SD	Mean	SD	t test	Þ	Effect size (d)
Life satisfaction	4.49	1.36	4.67	1.55	1.06	0.289	0.12
Personality							
Neuroticism	2.90	0.99	3.29	0.82	3.99	< 0.001	0.43
Extraversion	2.84	0.86	3.08	0.87	2.49	0.013	0.28
Openness	3.56	0.59	3.50	0.56	0.88	0.378	0.10
Agreeableness	3.81	0.51	3.83	0.59	0.30	0.767	0.04
Conscientiousness	3.51	0.69	3.75	0.60	3.32	0.002	0.37
Perfectionism							
Concern over mistakes	3.07	1.01	3.23	0.96	1.52	0.128	0.16
High standards for others	3.25	0.94	3.18	0.84	0.70	0.486	0.08
Need for approval	3.36	1.02	3.67	0.85	2.89	0.004	0.33
Organization	3.31	0.90	3.57	0.84	2.67	0.008	0.30
Parental pressure	2.95	1.13	3.14	1.19	1.44	0.151	0.16
Planfulness	3.80	0.74	3.89	0.72	1.13	0.258	0.12
Striving for excellence	3.35	0.89	3.46	0.89	1.18	0.239	0.12
Rumination	3.30	0.92	3.59	0.90	2.82	0.005	0.32

Note: Gender was coded 0 = male and 1 = female; two participants recorded their gender as other than male or female and are not included in these analyses. Results in bold are significant at the p < 0.05 level. SD, standard deviation.

Table 3. Correlations among perfectionism dimensions, personality, and life satisfaction.

	Life satisfaction	Concern over mistakes	High standards for others	Need for approval	Organization	Parental pressure	Planfulness	Rumination	Striving for excellence
Life satisfaction	1	-0.36^{c}	0.08	-0.35^{c}	0.10^{a}	-0.10^{a}	0.05	-0.37^{c}	-0.08
Neuroticism	-0.45^{c}	0.60 ^c	0.09	0.62 ^c	-0.07	0.22^c	0.18^{c}	0.63 ^c	0.29 ^c
Extraversion	0.39^{c}	-0.32^{c}	0.12^{a}	-0.38^{c}	0.14^b	-0.05	-0.18^{c}	-0.29^{c}	-0.03
Openness	0.10^{a}	-0.07	0.07	-0.12^{a}	-0.03	0.08	0.01	-0.04	0.07
Agreeableness	0.21 ^c	-0.16^{c}	-0.36^{c}	-0.03	0.07	-0.07	-0.01	-0.15^{b}	-0.08
Conscientiousness	0.30 ^c	-0.12^{a}	0.18 ^c	-0.18^{c}	0.58 ^c	0.08	0.29 ^c	-0.07	0.34 ^c

Note: N = 432-444.

 $^{a}p < 0.05$.

 $^{b}p < 0.01.$

 $^{c}p < 0.001.$

rumination were negatively correlated with life satisfaction. In contrast, organization was positively correlated with life satisfaction. Perfectionism subscales were also significantly related to personality, most notably with neuroticism, extraversion, and conscientiousness. Furthermore, personality factors



were correlated with life satisfaction; lower scores on neuroticism and higher scores on extraversion, openness, agreeableness, and conscientiousness were associated with greater life satisfaction.

Hierarchical multiple regression

A hierarchical multiple regression analysis was conducted to determine if the perfectionism subscales predicted life satisfaction above and beyond the influence of personality. Given the significant gender and age differences, these variables were entered on the first step to control for their effects (gender was dummy coded such that 0 = males and 1 = females). The personality factors of neuroticism, extraversion, openness, agreeableness, and conscientiousness were entered in the second step. Finally, the eight perfectionism subscales were added in the third step. This model met the required assumptions for a multiple regression analysis. Specifically, the assumptions of linearity, homoscedasticity, and normality were met. Furthermore, tolerance and variance inflation factor (VIF) values were within acceptable limits.

The overall model was statistically significant, predicting 35% of the variance in life satisfaction $(F_{[15, 400]} = 14.1, \text{ multiple } R = 0.59, \text{ adjusted } R^2 = 0.32, p < 0.001)$. In the first step, age and gender did not significantly predict life satisfaction ($F_{[2, 413]} = 0.20, p > 0.05$). In contrast, the addition of personality factors in the second step was statistically significant and contributed 31% of the total variance $(F_{\text{inc}[5, 408]} = 36.7, p < 0.001)$. Low neuroticism (p < 0.001), high extraversion (p < 0.001), and high conscientiousness (p = 0.003) were the unique predictors at this step (see Table 4). Finally, when the perfectionism subscales were added in the third step, they contributed unique variance to the model ($R^2_{\text{change}} = 0.04$, $F_{\text{inc}[8, 400]} = 2.64$, p = 0.008). Specifically, having high standards for others (p = 0.001) was predictive of high life satisfaction.

Discussion

The purpose of the present study was to assess the relations among personality, perfectionism, and life satisfaction. At the bivariate level, we identified several significant correlations among these constructs. Neuroticism was positively correlated with most subscales of perfectionism. Given that anxiety is a component of neuroticism (McCrae and Costa 2010), it makes intuitive sense that individuals high on this trait would endorse perfectionistic qualities, even though they are not adaptive. Conscientiousness was also correlated with several perfectionism subscales. Conscientious individuals are organized and pay attention to details (McCrae and Costa 2010). Thus, it is not surprising that this trait was positively correlated with having high standards for others, organization, planfulness, and striving for excellence. In contrast, these individuals are less concerned about making mistakes and have a lower need for approval from others. It seems then, that being conscientious is associated with more adaptive and less maladaptive aspects of perfectionism.

Extraversion and agreeableness were related to various perfectionistic tendencies, whereas openness was generally unrelated to perfectionism. The magnitude of these correlations suggests that although perfectionism and the factors of personality are related constructs, they are also distinct and have the potential to contribute uniquely in models predicting life satisfaction. Furthermore, the pattern of results was comparable with that obtained in previous research (Cruce et al. 2012). This result is particularly remarkable given the differences in samples and measures. Specifically, Cruce et al. (2012) recruited from a population of undergraduate students at a private, religiously affiliated university, whereas the participants for the current study were drawn from an online sample of community adults including, but not limited to, university students. Furthermore, Cruce et al. (2012) utilized the NEO-PI-R and the present study used the more concise BFI to measure personality. Thus, the relations among personality factors and perfectionism subscales appear to be robust to differences in study characteristics.



Table 4. Results of hierarchical multiple regression predicting life satisfaction.

					95%	95% CI		
	В	SE (B)	β	t	LB	UB	ΔR^2	
Step one							0.00	
Age	-0.00	0.01	-0.01	0.63	-0.02	0.01		
Gender	0.11	0.17	0.03	-0.10	-0.23	0.45		
Step two							0.31 ^c	
Neuroticism	-0.65	0.09	-0.36^{c}	-7.32	-0.82	-0.47		
Extraversion	0.38	0.08	0.22^c	4.86	0.22	0.53		
Openness	-0.10	0.11	-0.00	-0.10	-0.23	0.21		
Agreeableness	0.19	0.11	0.07	1.70	-0.03	0.42		
Conscientiousness	0.32	0.11	0.13^{b}	2.95	0.11	0.54		
Step three							0.04^b	
Concern over mistakes	-0.18	0.13	-0.11	-1.34	-0.44	0.09		
High standards for others	0.30	0.09	0.17 ^c	3.38	0.12	0.47		
Need for approval	0.13	0.13	0.09	0.98	-0.13	0.38		
Organization	-0.13	0.09	-0.07	-1.38	-0.31	0.06		
Parental pressure	-0.02	0.06	-0.01	-0.31	-0.13	0.10		
Planfulness	0.09	0.11	0.04	0.86	-0.12	0.30		
Striving for excellence	0.02	0.11	0.01	0.15	-0.20	0.23		
Rumination	-0.25	0.14	-0.15	-1.76	-0.52	0.03		

Note: N = 416. B, unstandardized coefficient; LB, lower bound; UB, upper bound.

Both personality and perfectionism were related to life satisfaction in the expected directions. Specifically, we found that the personality factors of low neuroticism (i.e., being emotionally stable) and high extraversion, openness, agreeableness, and conscientiousness were related to greater life satisfaction. These results are consistent with the meta-analytic findings of DeNeve and Cooper (1998) and Steel et al. (2008; with the exception of openness, which was not significantly correlated).

In previous research (Chang et al. 2004; Öngen 2009; Gnilka et al. 2013), maladaptive qualities of perfectionism tended to be negatively correlated with life satisfaction, whereas adaptive components were positively correlated. In the present study, perfectionism subscales were generally negatively correlated with life satisfaction. Interestingly, the negative correlations tended to be on the perfectionism subscales that are self-evaluative and can be interpreted as maladaptive. Indeed, Hill et al. (2004) found that these subscales of perfectionism are related to somatic complaints, depression, obsessive-compulsive symptomology, anxiety, interpersonal sensitivity, hostility, paranoia, and psychoticism. This pattern is consistent with the theoretical notion that perfectionism is maladaptive and is associated with mental illnesses, such as depression, anxiety, eating disorders, and obsessive-compulsive disorder (e.g., Sassaroli et al. 2008; Egan et al. 2011; Martinelli et al. 2014).

 $^{^{}a}p < 0.05.$

 $^{^{}b}p < 0.01.$

 $^{^{}c}p < 0.001.$



In contrast, organization was modestly positively correlated with life satisfaction in the present study. However, in the hierarchical multiple regression analysis, it did not reach statistical significance. This lack of a statistically significant effect is likely due to shared variance with conscientiousness, since these two variables were highly correlated. Organization has long been considered an important component of perfectionism and is included as a subscale in a number of perfectionism measures. During the development of the Frost Multidimensional Perfectionism Scale, Frost et al. (1990) found that organization was unrelated to mental health pathologies, leading it to be considered an adaptive perfectionism dimension in the subsequent literature (e.g., Frost et al. 1993). In contrast, when establishing the properties of the PI used in the current study, Hill et al. (2004) reported that organization was positively correlated with mental illness symptomology, although the magnitude of the relations were smaller than those reported for other perfectionism subscales. Nevertheless, the results of our study suggest that organization does not contribute to life satisfaction beyond the effects of conscientiousness.

A hierarchical multiple regression was conducted to organize the above results into one theoretically driven model. In this analysis, we found that low neuroticism (i.e., being emotionally stable), as well as high extraversion and conscientiousness predicted 31% of the variance in life satisfaction. Previous studies have estimated that between 18% (Steel et al. 2008) and 32% (Hayes and Joseph 2003) of the variance in life satisfaction is accounted for by personality. Thus, our study replicated previous studies using an online sample.

Consistent with previous literature (e.g., DeNeve and Cooper 1998; Hayes and Joseph 2003; Steel et al. 2008), we found that low neuroticism was the strongest personality predictor of life satisfaction. This result is unsurprising given that the neuroticism encompasses traits such as depression, anxiety, angry hostility, and self-conscientiousness (McCrae and Costa 2010). Furthermore, high levels of neuroticism are associated with negative outcomes such as romantic relationship dissatisfaction and conflict (Karney and Bradbury 1995) and decreased job satisfaction (Judge et al. 2002).

Our research also replicated the findings of others (e.g., DeNeve and Cooper 1998; Schimmack et al. 2004; Steel et al. 2008) in that higher scores on extraversion predicted life satisfaction. High levels of extraversion reflect an individual who is friendly, upbeat, and enthusiastic (McCrae and Costa 2010). These tendencies may lead to positive interactions with others, which could contribute to greater life satisfaction (Schimmack et al. 2004). Indeed, extraversion is associated with a host of positive interpersonal outcomes such as satisfaction with romantic and friend relationships (Tov et al. 2016).

Finally, in terms of personality, conscientiousness positively predicted life satisfaction; this result is consistent with previous research (e.g., DeNeve and Cooper 1998; Hayes and Joseph 2003; Steel et al. 2008). Highly conscientious individuals are motivated to achieve goals, and this motivation manifests itself in traits such as orderliness, self-discipline, and deliberation (McCrae and Costa 2010). Although these characteristics are typically associated with outcomes such as occupational (Barrick et al. 2001) and academic performance (Paunonen 2003), conscientious individuals also report high levels of dating relationship satisfaction (Watson et al. 2000) and friendship quality (Demir and Weitekamp 2007). Given the role that personality plays in these domains of functioning, the finding that emotional stability (i.e., low neuroticism), extraversion, and conscientiousness predict life satisfaction is consistent with previous research.

In terms of perfectionism, only the subscale high standards for others predicted life satisfaction beyond the influence of personality. This result was surprising for several reasons: (i) high standards for others was not correlated with life satisfaction at the bivariate level, (ii) several other perfectionism subscales were moderately correlated with life satisfaction, and (iii) during the development of the PI,



Hill et al. (2004) found that high standards for others correlated with mental illness symptomology. The first two points can be explained by considering the relations between the perfectionism subscales and neuroticism. The subscales that were moderately correlated with life satisfaction (i.e., concern over mistakes, need for approval, and rumination) were also strongly correlated with neuroticism, whereas high standards for others was unrelated to neuroticism. Thus, it is possible that once neuroticism was controlled for, the effects of other perfectionism subscales were attenuated in the model, and high standards for others was free to exert its unique influence. Although perfectionism accounted for a small proportion of variance, this result speaks to the importance of controlling for personality when investigating the correlates of life satisfaction given that personality traits can contribute a large proportion of the variance to life satisfaction and may share variance with other factors. Nevertheless, once personality was in the model, there was still a small but significant proportion of variance accounted for by including high standards for others.

The third point may be related to the nature of life satisfaction. As noted previously, life satisfaction is a cognitive judgement based on overall life circumstances (Diener et al. 1985; Pavot and Diener 2008). The items of the satisfaction with life scale are purposefully ambiguous, allowing respondents to select and weigh the aspects of their lives that are personally salient and meaningful (Diener et al. 1985). Individuals with high scores on high standards for others are perfectionists themselves and expect others to live up to their standards (Hill et al. 2004). As perfectionists, these individuals are likely to emphasize personal achievements (e.g., scholastic, occupational, or sporting) and successes when evaluating their life conditions. Having high standards for others (e.g., coworkers and teammates) may enable them to achieve goals thereby increasing their satisfaction with life. For instance, a supervisor who has high expectations for his/her employees may incite his/her employees to perform well and, consequently, have a successful department. As a result, the supervisor may receive positive feedback from his/her superiors, bonuses, or promotions. When the supervisor evaluates his/her life conditions, he/she may heavily weigh occupational success and perceive overall life conditions as highly satisfactory. Furthermore, we speculate that individuals high on this dimension may surround themselves with like-minded individuals who also maintain high standards (e.g., friends and spouses). These shared high standards may contribute to less frustrated expectations, which in turn may lead to more positive interactions and life satisfaction.

Implications

Our study demonstrated that there are adaptive aspects of perfectionism, such as having high standards for others. Cognitive behaviour therapy tends to focus on reducing maladaptive perfectionism dimensions at the expense of promoting adaptive perfectionism tendencies. The results of the current study suggest that encouraging individuals to maintain high standards for themselves and others may improve satisfaction with life irrespective of personality traits. This strategy is appropriate for individuals without mental illness who want to add meaningfulness and satisfaction to their lives. In contrast, for individuals with a mental illness (e.g., depression or anxiety), reduction of maladaptive perfectionism dimensions is an evidence-based treatment that has shown to be effective in reducing the symptoms of these illnesses (Handley et al. 2015; Lloyd et al. 2015). Thus, our results have implications for the broader population of typical community dwellers, whereas previous research has tended to focus on a narrow band of individuals with mental illness. Subjective well-being encompasses more than the absence of mental illness (Seligman and Csikszentmihalyi 2000), and personality traits and having high standards for others contributes to life satisfaction.

Strengths and limitations of the current study

We selected a relatively underused measure of perfectionism. This scale was reliable and enabled us to assess a full range of perfectionism subscales. In fact, the only perfectionism dimension that



contributed to the prediction of life satisfaction beyond the influence of personality was one that was unique to this scale.

The current study used online recruitment to obtain a community-based sample as opposed to an undergraduate or clinical sample. We consider this approach to be a strength of the present study; however, despite our best efforts, the majority of our participants were young adult, Caucasian females, which limits the generalizability of our findings.

Finally, the cross-sectional nature of the study is a limitation. It is possible that having high standards for others is advantageous over a short time period (e.g., when up for a promotion or during sports playoffs), but that constantly demanding too much from others can endanger relationships in the long run. The resulting alienation from others could contribute to the relation between high standards for others and mental illness symptomology as documented by Hill et al. (2004).

Future directions

Future research should explore the relation between perfectionism subscales and life satisfaction in a longitudinal design with an emphasis on potential mediators. Based on the results of the current study, we speculated that having high standards for others would contribute to the achievement of personal goals and that the successful fulfillment of these goals would contribute life satisfaction; however, further empirical research is needed to establish this relation. Given the interpersonal nature of the high standards for others subscale, it would be pertinent to examine the relations between this dimension and relationship quality and the resulting impact on life satisfaction. Finally, from a developmental perspective, various age groups (i.e., younger, middle, and older adults) should be examined to determine whether there are differences in the relations among these variables across the life span.

Conclusions

Overall, the results of the study suggest that there are relations among perfectionism and life satisfaction; however, only high standards for others predicts satisfaction with life beyond the influence of personality. This perfectionism dimension may be targeted to improve satisfaction with life among individuals who do not have a mental illness diagnosis.

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Author contributions

SAF, LLD, LEB, and LAB conceived and designed the study. SAF and LLD performed the experiments/collected the data. SAF, LLD, LEB, and LAB analyzed and interpreted the data. SAF, LLD, LEB, and LAB contributed resources. SAF, LLD, LEB, and LAB drafted or revised the manuscript.

Competing interests

The authors have declared that no competing interests exist.

Data accessibility statement

All relevant data are within the paper.



References

Baird BM, Lucas RE, and Donnellan MB. 2010. Life satisfaction across the lifespan: findings from two nationally representative panel studies. Social Indicators Research, 99(2): 183-203. PMID: 21113322 DOI: 10.1007/s11205-010-9584-9

Barrick MR, Mount MK, and Judge TA. 2001. Personality and performance at the beginning of the new millennium: what do we know and where do we go next? International Journal of Selection and Assessment, 9(1-2): 9-30. DOI: 10.1111/1468-2389.00160

Benet-Martínez V, and John OP. 1998. Los Cinco Grandes across cultures and ethnic groups: multitrait multimethod analyses of the big five in Spanish and English. Journal of Personality and Social Psychology, 75(3): 729-750. PMID: 9781409 DOI: 10.1037/0022-3514.75.3.729

Chang EC, Watkins A, and Banks KH. 2004. How adaptive and maladaptive perfectionism relate to positive and negative psychological functioning: testing a stress-mediation model in black and white female college students. Journal of Counseling Psychology, 51(1): 93-102. DOI: 10.1037/ 0022-0167.51.1.93

Costa PJ, and McCrae RR. 1997. Longitudinal stability of adult personality. In Handbook of personality psychology. Edited by R Hogan, JA Johnson, and SR Briggs. Academic Press, San Diego, California. pp. 269-290.

Cox BJ, Enns MW, and Clara IP. 2002. The multidimensional structure of perfectionism in clinically distressed and college student samples. Psychological Assessment, 14(3): 365-373. PMID: 12214443 DOI: 10.1037/1040-3590.14.3.365

Cruce SE, Pashak TJ, Handal PJ, Munz DC, and Gfeller JD. 2012. Conscientious perfectionism, selfevaluative perfectionism, and the five-factor model of personality traits. Personality and Individual Differences, 53(3): 268–273. DOI: 10.1016/j.paid.2012.03.013

Demir M, and Weitekamp LA. 2007. I am so happy 'cause today I found my friend: friendship and personality as predictors of happiness. Journal of Happiness Studies, 8(2): 181-211. DOI: 10.1007/ s10902-006-9012-7

DeNeve KM, and Cooper H. 1998. The happy personality: a meta-analysis of 137 personality traits and subjective well-being. Psychological Bulletin, 124(2): 197-229. PMID: 9747186 DOI: 10.1037/ 0033-2909.124.2.197

Diener E, Emmons RA, Larsen RJ, and Griffin S. 1985. The satisfaction with life scale. Journal of Personality Assessment, 49(1): 71-75. PMID: 16367493 DOI: 10.1207/s15327752jpa4901_13

Diener E, Heintzelman SJ, Kushlev K, Tay L, Wirtz D, Lutes LD, et al. 2017. Findings all psychologists should know from the new science on subjective well-being. Canadian Psychology/Psychologie Canadienne, 58(2): 87-104. DOI: 10.1037/cap0000063

Donnellan MB, Hill PL, and Roberts BW. 2015. Personality development across the life span: current findings and future directions. In Handbook of personality and social psychology. Edited by L Cooper and M Mikulincer. American Psychological Association, Washington, D.C. pp. 107-126.

Egan SJ, Wade TD, and Shafran R. 2011. Perfectionism as a transdiagnostic process: a clinical review. Clinical Psychology Review, 31(2): 203-212. PMID: 20488598 DOI: 10.1016/j.cpr.2010.04.009



Egan SJ, Piek JP, and Dyck MJ. 2015. Positive and negative perfectionism and the big five personality factors. Behaviour Change, 32(2): 104-113. DOI: 10.1017/bec.2015.3

Fergusson DM, McLeod GFH, Horwood LJ, Swain NR, Chapple S, and Poulton R. 2015. Life satisfaction and mental health problems (18 to 35 years). Psychological Medicine, 45(11): 2427-2436. PMID: 25804325 DOI: 10.1017/S0033291715000422

Frost RO, Marten P, Lahart C, and Rosenblate R. 1990. The dimensions of perfectionism. Cognitive Therapy and Research, 14(5): 449-468. DOI: 10.1007/BF01172967

Frost RO, Heimberg RG, Holt CS, Mattia JI, and Neubauer AL. 1993. A comparison of two measures of perfectionism. Personality and Individual Differences, 14(1): 119-126. DOI: 10.1016/0191-8869 (93)90181-2

Fry PS, and Debats DL. 2009. Perfectionism and the five-factor personality traits as predictors of mortality in older adults. Journal of Health Psychology, 14(4): 513-524. PMID: 19383652 DOI: 10.1177/ 1359105309103571

Gnilka PB, Ashby JS, and Noble CM. 2013. Adaptive and maladaptive perfectionism as mediators of adult attachment styles and depression, hopelessness, and life satisfaction. Journal of Counseling & Development, 91(1): 78–86. DOI: 10.1002/j.1556-6676.2013.00074.x

Handley AK, Egan SJ, Kane RT, and Rees CS. 2015. A randomised controlled trial of group cognitive behavioural therapy for perfectionism. Behaviour Research and Therapy, 68: 37-47. PMID: 25795927 DOI: 10.1016/j.brat.2015.02.006

Hayes N, and Joseph S. 2003. Big 5 correlates of three measures of subjective well-being. Personality and Individual Differences, 34(4): 723-727. DOI: 10.1016/S0191-8869(02)00057-0

Hewitt PL, and Flett GL. 1991. Perfectionism in the self and social contexts: conceptualization, assessment, and association with psychopathology. Journal of Personality and Social Psychology, 60(3): 456-470. PMID: 2027080 DOI: 10.1037/0022-3514.60.3.456

Hill RW, Huelsman TJ, Furr RM, Kibler J, Vicente BB, and Kennedy C. 2004. A new measure of perfectionism: the perfectionism inventory. Journal of Personality Assessment, 82(1): 80-91. PMID: 14979837 DOI: 10.1207/s15327752jpa8201_13

John OP, and Srivastava S. 1999. The big-five trait taxonomy: history, measurement, and theoretical perspectives. In Handbook of personality: theory and research. 2nd Edition. Edited by LA Pervin and OP John. Guilford Press, New York City, New York. pp. 102-138.

John OP, Naumann LP, and Soto CJ. 2008. Paradigm shift to the integrative big five trait taxonomy: history, measurement, and conceptual issues. In Handbook of personality: theory and research. 3rd Edition. Edited by LA Pervin and OP John. Guilford Press, New York City, New York. pp. 114-158.

Judge TA, Heller D, and Mount MK. 2002. Five-factor model of personality and job satisfaction: a meta-analysis. Journal of Applied Psychology, 87(3): 530-541. PMID: 12090610 DOI: 10.1037/ 0021-9010.87.3.530

Karney BR, and Bradbury TN. 1995. The longitudinal course of marital quality and stability: a review of theory, methods, and research. Psychological Bulletin, 118(1): 3-34. PMID: 7644604 DOI: 10.1037/ 0033-2909.118.1.3



Landa CE, and Bybee JA. 2007. Adaptive elements of aging: self-image discrepancy, perfectionism, and eating problems. Developmental Psychology, 43(1): 83–93. PMID: 17201510 DOI: 10.1037/0012-1649.43.1.83

Lent RW. 2004. Toward a unifying theoretical and practical perspective on well-being and psychosocial adjustment. Journal of Counseling Psychology, 51(4): 482–509. DOI: 10.1037/0022-0167.51.4.482

Lloyd S, Schmidt U, Khondoker M, and Tchanturia K. 2015. Can psychological interventions reduce perfectionism? A systematic review and meta-analysis. Behavioural and Cognitive Psychotherapy, 43(6): 705–731. PMID: 26393777 DOI: 10.1017/S1352465814000162

Lucas RE, and Donnellan MB. 2007. How stable is happiness? Using the STARTS model to estimate the stability of life satisfaction. Journal of Research in Personality, 41(5): 1091–1098. PMID: 18836511 DOI: 10.1016/j.jrp.2006.11.005

Martinelli M, Chasson GS, Wetterneck CT, Hart JM, and Björgvinsson T. 2014. Perfectionism dimensions as predictors of symptom dimensions of obsessive-compulsive disorder. Bulletin of the Menninger Clinic, 78(2): 140–159. PMID: 24870847 DOI: 10.1521/bumc.2014.78.2.140

McCrae RR, and Costa PT. 2010. NEO Inventories professional manual for the NEO Personality Inventory-3, NEO Five-Factor Inventory-3, and NEO Personality Inventory-Revised. PAR, Inc., Lutz, Florida.

McCrae RR, and Costa PT. 2013. Introduction to the empirical and theoretical status of the five-factor model of personality traits. *In* Personality disorders and the five-factor model of personality. 3rd edition. *Edited by* TA Widiger and PJ Costa. American Psychological Association, Washington, D.C. pp. 15–27.

Öngen DE. 2009. The relationship between perfectionism and multidimensional life satisfaction among high school adolescents in Turkey. Journal of Multicultural Counseling and Development, 37(1): 52–64. DOI: 10.1002/j.2161-1912.2009.tb00091.x

Paunonen SV. 2003. Big five factors of personality and replicated predictions of behavior. Journal of Personality and Social Psychology, 84(2): 411–424. PMID: 12585813 DOI: 10.1037/0022-3514.84.2.411

Pavot W, and Diener E. 2008. The satisfaction with life scale and the emerging construct of life satisfaction. The Journal of Positive Psychology, 3(2): 137–152. DOI: 10.1080/17439760701756946

Roberts BW, and DelVecchio WF. 2000. The rank-order consistency of personality traits from child-hood to old age: a quantitative review of longitudinal studies. Psychological Bulletin, 126(1): 3–25. PMID: 10668348 DOI: 10.1037/0033-2909.126.1.3

Sassaroli S, Romero Lauro LJ, Ruggiero GM, Mauri MC, Vinai P, and Frost R. 2008. Perfectionism in depression, obsessive-compulsive disorder and eating disorders. Behaviour Research and Therapy, 46(6): 757–765. PMID: 18394588 DOI: 10.1016/j.brat.2008.02.007

Schimmack U, Oishi S, Furr RM, and Funder DC. 2004. Personality and life satisfaction: a facet-level analysis. Personality and Social Psychology Bulletin, 30(8): 1062–1075. PMID: 15257789 DOI: 10.1177/0146167204264292

Seligman MP, and Csikszentmihalyi M. 2000. Positive psychology: an introduction. American Psychologist, 55(1): 5–14. PMID: 11392865 DOI: 10.1037/0003-066X.55.1.5



Siahpush M, Spittal M, and Singh GK. 2008. Happiness and life satisfaction prospectively predict self-rated health, physical health, and the presence of limiting, long-term health conditions. American Journal of Health Promotion, 23(1): 18–26. PMID: 18785370 DOI: 10.4278/ajhp.061023137

Steel P, Schmidt J, and Shultz J. 2008. Refining the relationship between personality and subjective well-being. Psychological Bulletin, 134(1): 138–161. PMID: 18193998 DOI: 10.1037/0033-2909.134.1.138

Suh H, Gnilka PB, and Rice KG. 2017. Perfectionism and well-being: a positive psychology framework. Personality and Individual Differences, 111: 25–30. DOI: 10.1016/j.paid.2017.01.041

Tov W, Nai ZL, and Lee HW. 2016. Extraversion and agreeableness: divergent routes to daily satisfaction with social relationships. Journal of Personality, 84(1): 121–134. PMID: 25345667 DOI: 10.1111/jopy.12146

Watson D, Hubbard B, and Wiese D. 2000. General traits of personality and affectivity as predictors of satisfaction in intimate relationships: evidence from self- and partner-ratings. Journal of Personality, 68(3): 413–449. PMID: 10831308 DOI: 10.1111/1467-6494.00102

Zuroff DC. 1994. Depressive personality styles and the five-factor model of personality. Journal of Personality Assessment, 63(3): 453–472. PMID: 7844736 DOI: 10.1207/s15327752jpa6303_5