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Achievement motivation and attributional style as mediators between perfectionism and subjective well-being in Chinese university students

Yuan Li, Jijun Lan *, Chengting Ju

School of Psychology, Shaanxi Normal University and Shaanxi Provincial Key Laboratory of Behavior and Cognitive Neuroscience, Xi'an, China

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ABSTRACT

This study examined both the mediation effects of achievement motivation and attributional style on the relationship between perfectionism and subjective well-being in a sample of Chinese university students. Four hundred ninety-three participants with an age range of 18–24 (206 males and 287 females) completed the Hewitt and Flett Multidimensional Perfectionism Scale (HMPS), the Achievement Motivation Scale (AMS), the Multidimensional–Multiattributional Causality Scale (MMCS) and the General Well-Being Schedule (GWB). Correlation analysis indicated that perfectionism was positively correlated with subjective well-being. Structural equation modeling exhibited the partial mediation effects of attributional style and achievement motivation on the relationship between perfectionism and subjective well-being. Moreover, a multi-group analysis indicated that the mediation model was not moderated by gender. These findings contribute to the complex nature of the association between perfectionism and subjective well-being. This study's implications for future research and limitations of the present findings are discussed.

1. Introduction

Early studies suggested that the most fundamental purpose of human existence is to adapt to the living environment continually in a better manner. The pursuit of perfection is an intrinsic motivation to promote the change and development of human beings, and the motivation to pursue perfection is inherent (Adler, Ansbacher, & Ansbacher, 1956). In subsequent studies, perfectionism was defined as a personality trait of striving to complete tasks with high standards and critical self-assessment tendencies (Hollender, 1965; Frost, Marten, Lahart, & Rosenblate, 1990; Flett & Hewitt, 2002). Establishing high standards is a naturally positive personal behavior, but studies have demonstrated that perfectionism also has a negative impact on individuals, which is specifically reflected in excessively harsh self-assessment and self-imposed high standards in the process of pursuing personal perfection, even if such standards cannot be met and eventually have negative consequences, rather than being waived (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993; Horney, 1950; Stoeber & Otto, 2006).

So, the impact of perfectionism on individuals can also be positive or negative. Thus in recent years, researchers have divided perfectionism into adaptive perfectionism and maladaptive perfectionism. Adaptive perfectionists are featured by the following qualities: setting high and precise task standards, keeping living and working order and fully considering all the details. All these are qualities conducive to individual development, and are even necessary for some work, such as doctors and scientists, etc. Therefore, from the Self Determination Theory (SDT) based perspective, adaptive perfectionism must have a positive effect on individual well-being. Because SDT believes that people are positive organisms that have the potential innate psychological growth and development, they tend to engage in activities they are interested in and that are beneficial to the development of individual abilities, while well-being is one of the ultimate forms of individual psychological development and potential realization (David, Charles, Carlos, & Thomas, 2006; David, David, Krik, 2006; David, Kirk, David, Sandra, & Denise, 2006; Jay, Robert, & Jams, 2012). Meanwhile, adaptive perfectionists can get pleasure from the hard work, and regard pressure as a challenge rather than a threat. And they are able to make an assessment of the practical problems encountered in accordance with their own advantages and disadvantages, and thus develop appropriate coping strategies. Adaptive perfectionists are able to focus on what they are dealing with and treat them in relaxed and cautious attitudes. Therefore, adaptive perfectionism can, to a certain extent, play an important role in maintaining a good sense of well-being for individuals (David, Charles, et al., 2006; David, David, et al., 2006; David, Kirk et al., 2006).

* Corresponding author. Tel.: +86 13060393102.
E-mail address: lanjijun@snnu.edu.cn (J. Lan).

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Maladaptive perfectionism refers to the tendency of unduly high standards that individuals pursue in fear of failure and disappointment. Maladaptive perfectionists believe it will be not enough no matter how many efforts have been made, and any work can and should be able to be well done, so they can never get satisfaction from hard working. Compared to the relaxed and cautious attitude of adaptive perfectionists towards their work, maladaptive perfectionists are nervous and hesitant about their work. Maladaptive perfectionists are even more susceptible to failure and more prone to self-criticism. They tend to set unduly high and unrealistic objectives, and cannot make appropriate adjustments in line with changes in the reality. The purpose of maladaptive perfectionists to go after objectives is to enhance self-worth. Once failed, they would negate self-worth, and resort to strong self-criticism. Thus, maladaptive perfectionism may produce a negative impact on the well-being of individuals (David, Charles, et al., 2006; David, David, et al., 2006; David, Kirk et al., 2006).

1.1. Perfectionism and subjective well-being

Perfectionism has been proven to be significantly correlated with subjective well-being (Frost et al., 1993; Joachim & Franziska, 2009). Studies indicate that perfectionists focus on the regularity of life and place an emphasis on handling affairs in an accurate and orderly manner. These studies indicate a higher level of subjective well-being (Rice & Dellwo, 2001). However, studies have suggested that perfectionists sometimes may over-worry about making mistakes and become undecided, thus affecting subjective well-being (Chang & Rand, 2000). Consequently, there are complex links between perfectionism and subjective well-being, and a large number of further studies are required to probe into the specific contents of such links.

1.2. Perfectionism, achievement motivation, attributional style and subjective well-being

Meanwhile, similar to perfectionism, achievement motivation and attributional style have also been demonstrated to be closely linked with subjective well-being. Numerous studies have shown that there is a high correlation between achievement motivation and subjective well-being, and high achievement motivation plays an important part in improving subjective well-being (Cassidy, 1988; Joachim & Anna, 2007). Individuals with high achievement motivation show a strong demand for self-realization in life and experience a higher sense of subjective well-being in the process of self-realization (Miquelon & Vallerand, 2006; Janice, Michael, & James, 2009). Similarly, studies have demonstrated that there is also a high correlation between attributional style and subjective well-being. Depression may be generated if people believe life events are beyond their control, thereby reducing their subjective well-being (Anthony, Winefield, & Shirley, 1987; Diana, 2002). Likewise, the subjective well-being of life is enhanced if an individual attributes the occurrence of positive events to himself and believes positive results will occur again for his sake (Helen & Adrian, 2003; Judith, Philip, David, & Graham, 2009). Therefore, regardless of positive results or negative results, individuals who tend to attribute to internal causes will show a higher sense of subjective well-being. In previous studies, perfectionism, achievement motivation and attributional style have, respectively been proven to be closely linked with subjective well-being, but the specific mechanisms of interaction remain unclear. Thus, further studies are required for deeper exploration.

1.3. The current study

The aim of this study is to test the concurrent mediation effects of attributional style and achievement motivation on the relationship between perfectionism and subject well-being through structural equation modeling (SEM). Based on the preceding rationale and the available literature that has shown the relationships of perfectionism with subjective well-being (Flett & Hewitt, 2002; Joachim & Franziska, 2009), of achievement motivation with subjective well-being (Joachim & Anna, 2007; Janice et al., 2009), and of attributional style with subjective well-being (Anthony et al., 1987; Judith et al., 2009), it was predicted in this study that achievement motivation and attributional style might act as a mediator on the impact of perfectionism on subjective well-being. Furthermore, previous research has shown that a multi-mediator model may be more meaningful than a single-mediator model because it may indicate the relative significance of these mediators. For instance, it was found that only maladaptive coping might directly mediate between perfectionism and psychological distress, although the mediating effects of maladaptive coping and self-esteem have been examined separately in the previous literature (Park, Heppner, & Lee, 2010). Conversely, a major limitation in the previous literature is that most of the research was conducted in Western countries. Testing the mediation models in an Asian culture would provide significant evidence of external validity. Therefore, based on the previous studies, we proposed a hypothesized model concerning the mediator role of achievement motivation and attributional style in the relationship between perfectionism and subjective well-being, as presented in Fig. 1.

2. Methods

2.1. Participants

The participants were 493 university students (206 males and 287 females) from four universities in Xi'an, a mid-sized city in the middle of China. The age range was 18–24 (mean age = 21.03 years, standard deviation = 1.17 years).

2.2. Instruments

2.2.1. Perfectionism

The current study utilized the Hewitt and Flett Multidimensional Perfectionism Scale (HMPS) to assessed perfectionism (Hewitt & Flett, 1991; Labrecque, Stephenson, Boivin, & Marchand, 1998). The HMPS is a 45-item questionnaire that usually generates scores based on three factors of perfectionism, as follows: self-oriented

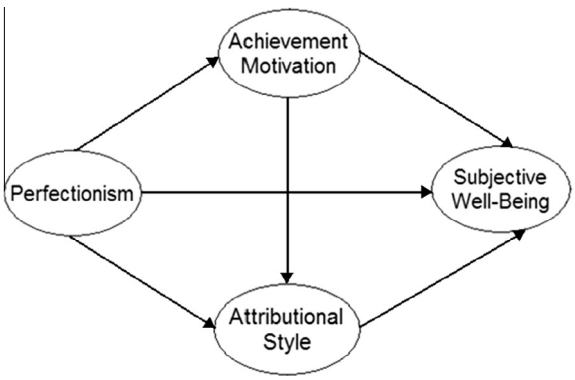

Fig. 1. The hypothesized model concerning the mediator role of achievement motivation and attributional style in the relationship of perfectionism with subjective well-being.

perfectionism (SOP) reflects a tendency to be overly perfectionistic with oneself, other-oriented perfectionism (OOP) reflects a tendency to expect perfection from other people, and socially prescribed perfectionism (SPP) is a measure of a person's beliefs regarding other people's expectations regarding oneself. Participants answered on a 7-point Likert-type response format scale ranging from 1 (disagree) to 7 (agree). The total perfectionism score is the sum of all the subscales, with higher sum scores reflecting a higher level of perfectionism on the involved dimension. With respect to its psychometric properties, the HMPS has good internal consistency and appears to be a reliable and valid measure of perfectionism (Céline & Francoise, 2011). The Cronbach alpha coefficients for the three subscales were: SOP = .87; OOP = .85; SPP = .79. The Cronbach alpha coefficient for all 45 items was .83.

2.2.2. Achievement motivation

The Achievement Motivation Scale (AMS) was utilized to assess achievement motivation (Dahme, Jungnickel, & Rathje, 1993). The AMS is based on achievement motivation theory and is comprised of the following: (1) items referring to positive affect and negative affect, respectively, and (2) items focusing on situations that supposedly arouse a similar degree of uncertainty as to the possibility of success. To illustrate, the following item is intended to measure MS (motivation of hope of success): "I feel pleasure at working on tasks that are fairly difficult for me", while the following item is meant to measure MF (motivation of fear of failure): "I become anxious when I meet a problem I don't understand at once". The AMS consists of 30 statements about affect experienced in connection with achievement situations, which are rated on a 4 Likert-type response scale from 1 (not at all true of me) to 4 (very true of me). The total achievement motivation score is the MS score minus the MF score, with a higher total score reflecting a higher level of achievement motivation. The AMS has good levels of reliability and validity (Christophersen & Rand, 1982). The Cronbach alpha coefficients for the two subscales were excellent (MS = .82; MF = .77). In this study, the Cronbach alpha coefficient for the AMS was .81.

2.2.3. Attributional style

The Multidimensional–Multiattributions Causality Scale (MMCS); is designed to assess the extent to which individuals attribute their success or failure in achievement and affiliation to 4 causal variables: ability, luck, effort, and context (Lefcourt, Vanbaeyer, Ware, & Cox, 1979). For the purposes of this study, only 24 achievement items were used (Zhang, Miao, Sun, Xiao, & Ren, 2014). Within these, each of the 4 attribution subscales (ability, luck, effort, and context) consists of 6 items, 3 of which measure attributions regarding success, and 3 of which measure attributions regarding failure. The items consist of statements that are rated using a 5-point Likert-type response format (0 = disagree, 4 = agree). Higher scores indicate that the individuals tend to attribute to internal causes. MMCS has good internal consistency and appears to be a reliable and valid measure of attributional style (Suzanne & Susan, 2004). In this study, the Cronbach alpha coefficients for ability, effort, context and luck attribution subscales were .72, .75, .78, and .80. The Cronbach alpha coefficient for the MMCS was .79.

2.2.4. Subjective well-being

Subjective well-being was measured using the total score from the 18-item General Well-Being Schedule (GWB; Taylor, Haddock, Blackburn, Heber, & Heymsfield, 2003). Items 1–14 are rated along a six-point scale and Items 15–18 are rated along a 0–10-point scale. The total score is obtained by summing the scores across each of the 18 items. For each item, respondents rate how they have been feeling over the previous month, with higher scores representing greater levels of well-being. Psychometric studies have established the reliability and validity of the GWB (Taylor et al., 2003). In the current study, the scale had a Cronbach alpha coefficient of .91.

2.3. Procedure

Four hundred ninety-three participants completed the questionnaires in a classroom environment. All procedures were executed in compliance with relevant laws and institutional guidelines and were approved by the ethics committee of the school of Psychology of Shaanxi Normal University. Each participant volunteered to participate in this study. All participants were briefly instructed on the purpose of this study and signed a written consent form. Instruments took approximately 25 min to complete.

2.4. Analysis strategy

Missing items and outliers were discarded. And the data distribution was normal. To analyze the mediation effects, the two-step procedure outlined by Anderson and Gerbing (1988) was used. The measurement model was first tested to assess whether each of the latent variables were represented by its indicators. If the measurement model was satisfactory, then the structural model was tested using the maximum likelihood estimation in the AMOS program. The measurement model consisted of four interrelated latent variables, including perfectionism, achievement motivation, attributional style and subjective well-being. To control for inflated measurement errors caused by multiple items for the latent variable and improve the psychometric properties of the variables, and to control for inflated measurement errors caused by multiple items for the latent variable, we divided the items of the subjective well-being factor into three parcels to serve as indicators of the factors using an item-to-construct balance approach (Little, Cunningham, Shahar, & Widaman, 2002). To evaluate the overall fit of the model to the data, several indices recommended by Hu and Bentler (1999) and Kline (2011) were calculated in the current study: the chi-square statistic (X^2), X^2/df ratio, Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI). According to Hu and Bentler (1999) and Kline (2011), the goodness-of-fit criteria used in the current study indicated the potential for acceptable (X^2/df ratio < 3, CFI and TLI > 0.90, SRMR < 0.10, RMSEA < 0.08) and excellent fit (X^2/df ratio < 2, CFI and TLI > 0.95, SRMR < 0.08, RMSEA < 0.06).

3. Results

3.1. Measurement model

The measurement model consisted of four latent factors (perfectionism, achievement motivation, attributional style and subjective well-being) and 12 observed variables. The results of the confirmatory factor analysis (CFA) analysis indicated that the measurement model provided a good fit to the observed data: X^2 (12, $N = 493$) = 16.407 ($p < 0.001$), X^2/df ratio = 1.37, SRMR = .042, RMSEA = .047 (95% CI = .032, .062), CFI = 0.946, TLI = 0.963. The means, standard deviations, and correlations between perfectionism, achievement motivation, attributional style and subjective well-being are presented in Table 1.

3.2. Structural model

The direct path coefficient from the predictor perfectionism to the criterion subjective well-being in the absence of mediators

Table 1
Means, standard deviations (SD), and zero-order correlations for all study variables (N = 493).

Measure	M(SD)	1	2	3	4
1 HMPS	96.01(25.94)	1			
2 AMS	13.67(5.98)	0.28***	1		
3 MMCS	53.28(17.49)	0.35***	0.24***	1	
4 GWB	92.04(37.61)	0.56***	0.32***	0.29***	1

Note: HMPS, Hewitt and Flett Multidimensional Perfectionism Scale, perfectionism; AMS, Achievement Motivation Scale, achievement motivation; MMCS, Multidimensional–Multiattributional Causality Scale, attributional style; GWB, General Well-Being Schedule, subjective well-being.
*** $p < .001$.

was significant (β = .38, SE = .09, $p < .001$), which supported a partially mediated model (Model 1). The partially mediated model (Model 1) with the two mediators of achievement motivation and attributional style between perfectionism and subjective well-being and a direct path from perfectionism to subjective well-being revealed a good fit to the data: X^2 (13, N = 493) = 18.415; p = .129; X^2/df ratio = 1.42; RMSEA = .034 (95% CI: .010, .049); SRMR = .031; CFI = .99; TLI = 0.98;AIC = 88.652; ECVI = .210 (95% CI: .147, .352).

However, the standardized path coefficient from achievement motivation to attributional style became non-significant ($p > .05$). Thus the path was removed and the model was re-tested (Model 2). The results indicated a very satisfactory fit to the data: X^2 (13, N = 493) = 19.618; p = .143; X^2/df ratio = 1.401; RMSEA = .032, (95% CI: .017, .047); SRMR = .030; CFI = .99; TLI = 0.98; AIC = 79.132; ECVI = .207 (95% CI: .145, .349). When comparing Model 2 to Model 1, a slightly smaller AIC indicated that the fit of Model 2 was more satisfactory. Taken together, Model 2 was selected as the best model (see Fig. 2).

The bootstrapping procedure in AMOSS was used to test the significance of the mediating effects of achievement motivation and attributional style. Specifically, 1000 bootstrap samples were generated using random sampling with replacement from the data set (N = 493, MacKinnon, Lockwood, & Williams, 2004). The mediating effects of achievement motivation and attributional style and their associated 95% confidence intervals were displayed in Table 2. According to the results, perfectionism exerted its effect on subjective well-being through both the direct path and the indirect path via achievement motivation and attributional style.

3.3. Gender differences

There was no significant gender differences in perfectionism, attributional style and subjective well-being, but males scored higher than females on achievement motivation at a statistically significant level. Further, we used multi-group analysis to identify whether the path coefficients differ significantly across gender. First, we tested for invariance of the measurement models across gender before constraining path coefficients (Byrne, 2001) and found non-significant chi-square differences between the two models, X^2 (13, N = 493) = 8.21, $p > .05$. Then, we calculated the critical ratios of differences (CRD) by dividing the difference between the two estimates by an estimate of the standard error of the difference (Arbuckle, 2003). All the paths did not differ across sexes ($p > .05$).

4. Discussion

The goal of the present study was to test the role of achievement motivation and attributional style on the relationship between perfectionism and subjective well-being in Chinese university students. Correlational analysis indicated that perfectionism, achievement motivation and attributional style were positively related to subjective well-being. These results are consistent with previously reported relationships between perfectionism and subjective well-being (Frost et al., 1990; Dahme et al., 1993; Flett & Hewitt, 2002; Stoeber & Otto, 2006; Joachim & Franziska, 2009), achievement motivation and subjective well-being (Joachim & Anna, 2007; Janice & Franziska, 2009) and attributional style and subjective well-being (Anthony et al., 1987; Judith

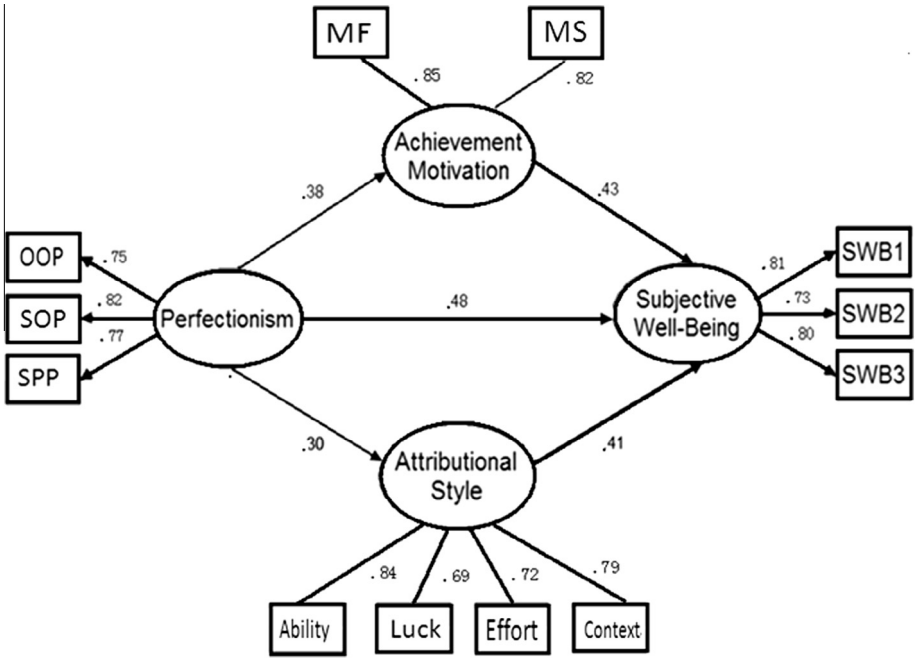

Fig. 2. The structural equation model regarding the mediating effects of achievement motivation and attributional style on the relation between perfectionism and subjective well-being. *Note:* OOP: other-oriented perfectionism; SOP: self-oriented perfectionism; SPP: socially prescribed perfectionism; MF: motivation of fear of failure; MS: motivation of hope of success.

Table 2
Bootstrapping indirect effects and 95% confidence intervals (CI) for the mediational model.

Model pathways	Estimated	95% CI	
		Lower	Upper
Perfectionism → achievement motivation → subjective well-being	.17[a]	.05	.30
Perfectionism → attributional style → subjective well-being	.09[a]	.02	.21

[a] Empirical 95% confidence interval does not overlap with zero.

et al., 2009). The relationship between them can be explained as follows: Perfectionism can have a positive impact on the well-being of individuals; the motivation of personal achievement will affect the level of individual well-being, that is, higher achievement motivation will lead to higher individual well-being; furthermore, individual attribution also has a strong predictive effect on well-being, that is, in the context of success or failure, the more inclined an individual is to internal attribution, the higher well-being he will experience.

In accordance with our expectations, achievement motivation and attributional style partially mediated the association between perfectionism and subjective well-being. The first path of perfectionism → achievement motivation → subjective well-being was significant. This path indicates that high perfectionism tendencies will often result in higher achievement motivation and thus show a high sense of subjective well-being. Because perfectionism are embodied in higher individual objectives and standards of conduct that have been set for themselves, such highly self-required behavioral tendencies also contribute to individuals showing higher achievement motivation and stronger demand for self-realization and showing a more positive attitude towards life and more proactive behaviors. Meanwhile, such individuals may experience a stronger sense of accomplishment and subjective well-being when the objectives are met. Another finding of the study is that a significant path of perfectionism → attributional style → subjective well-being was obtained. This path indicated that individuals with high perfectionism often show a tendency to attribute to internal causes. They are conditioned to attribute the results of success or failure to their own reasons and thus show a strong expectation for self-improvement, which also enables these individuals to constantly maintain positive emotional experience and healthy behaviors in life, thus maintaining a higher level of subjective well-being on a stable, long-term basis.

The findings regarding gender differences indicate that there was no significant difference in the scores of perfectionism and achievement motivation between males and females, suggesting that all of them are important sources of subjective well-being for both males and females. This result is consistent with previous findings (Janice et al., 2009; Joachim & Franziska, 2009; Judith et al., 2009). However, males scored higher than females on achievement motivation. This difference may result from gender roles. In Chinese culture, boys are taught that they should have career ambitions from childhood. By contrast, girls are taught to pay more attention to the family. In addition, multi-group analysis found no gender difference in the mediation model, which may reflect that males and females have the same mechanism involved in the link between perfectionism and subjective well-being.

To sum up, the present study provides substantial insight into a complicated interplay among perfectionism, achievement motivation, attributional style and subjective well-being in Chinese university students. These findings highlight a previously unidentified mechanism explaining the relation between perfectionism and subjective well-being. The employment of Chinese participants provides evidence for external validity of perfectionism, achievement motivation and attributional style as the predictors of subjective well-being. In consideration of the probable mechanisms, it provides valuable guidance on how to implement psychological interventions aimed at enhancing individuals' subjective well-being. However, several important limitations of the present study must be considered. Firstly, the data in this study were collected only through self-report scales. One of the largest drawbacks of self-report measures lies in its failure to completely inhibit the effect of social desirability, as the subjects may more or less guess the intents of questions in the answering process, while the effect of social desirability will cause the subjects to choose the best option they consider, rather than the option truly in line with their actual conditions, resulting in decreased effectiveness of measurement. In addition, it is impossible for a good scale to accomplish perfect questions, so it is difficult to completely get rid of the errors arising from the effect of social desirability. The use of multiple methods for evaluation may reduce the impact of subjectivity. Secondly, the study relied on a Chinese university student sample, which limits the generalizability of the findings of the current study. Finally, the present study was a cross-sectional design. Thus, the findings described in this report reflect associations and predictions but not cause–effect relations between the variables. Therefore, for further studies, longitudinal and experimental studies would provide additional insights into relationships between perfectionism, achievement motivation, attributional style and subject well-being.

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References

Adler, A., Ansbacher, H. L., & Ansbacher, R. (1956). *The individual psychology of Alfred Adler: A systematic presentation in selections from his writings*. New York: Harper & Row.
Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin, 103*, 411–423.
Anthony, H., Winefield, M. T., & Shirley, S. (1987). Unemployment, attributional style and psychological well-being. *Personality and Individual Differences, 8*, 659–665.
Arbuckle, J. L. (2003). *AMOS 5.0 update to the AMOS user's guide*. Chicago, IL: Smallwaters.
Byrne, B. M. (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. London: Lawrence Erlbaum Associates Publishers.
Céline, D., & Francoise, L. (2011). Interactive effect of perfectionism dimensions on depressive symptoms: A reply to Gaudreau and Thompson. *Personality and Individual Differences, 50*, 1147–1151.
Cassidy, A. J. (1988). The cultural evolution of achievement motivation and subjective well-being: A longitudinal analysis. *Sunderland Polytechnic, 7*, 11–17.
Chang, E. C., & Rand, K. L. (2000). Perfectionism as a predictor of subsequent adjustment:evidence for a specific diathesis-stress mechanism among college students. *Journal of Counseling Psychology, 47*, 129–137.
Christophersen, K. A., & Rand, P. (1982). Factor structure of the achievement motives scale (AMS): Two factors–Two samples. *Scandinavian Journal of Educational Research, 26*, 13–28.
Dahme, G., Jungnickel, D., & Rathje, H. (1993). Psychometric properties of a German translation of the Achievement Motives Scale (AMS): Comparison of results from Norwegian and German samples. *Diagnostica, 39*, 257–270.
David, M. D., Charels, A. S., Carlos, M. G., & Thomas, H. M. (2006a). Perfectionism and depressive symptoms 3 years later: Negative social interactions, avoidant coping, and perceived social support as mediators. *Comprehensive Psychiatry, 47*(2), 106–115.
David, M. D., David, C. Z., & Kirk, R. B. (2006b). Specific perfectionism components versus self-criticism in predicting maladjustment. *Personality and Individual Differences, 40*(4), 665–675.
David, M. D., Kirk, R. B., David, C. Z., Sandra, L., & Denise, H. (2006c). Self-critical and personal standards factors of perfectionism located within the five-factor model of personality. *Personality and Individual Differences, 40*(3), 409–420.

Diana, S. (2002). Attributional style and self-esteem in vulnerability to adolescent depressive symptoms following life stress: A 14-week prospective study. *Coginitive Therapy and Research, 26*, 563–579.
Flett, G. L., & Hewitt, P. L. (2002). *Perfectionism and maladjustment: An overview of theoretical, definitional, and treatment issues*. Washington, DC: American Psychological Association.
Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*, 119–126.
Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449–468.
Helen, C., & Adrian, F. (2003). Attributional style and self-esteem as predictors of psychological well-being Counseling Psychology quarterly. *Counseling Psychology quarterly, 16*, 121–130.
Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopatholog. *Journal of Personality and Social Psychology, 60*, 456–470.
Hollender, M. H. (1965). Perfectionism. *Comprehensive Psychiatry, 6*, 94–103.
Horney, K. (1950). *Neurosis and Human Growth: The Struggle Toward Self- Realization*. New York: W.W. Norton.
Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55.
Janice, L. F., Michael, J. S., & James, M. C. (2009). Incongruence between implicit and self-attributed achievement motives and psychological well-being: The moderating role of self-directedness, self-disclosure and locus of control. *Personality and Individual Differences, 47*, 99–104.
Jay, L. L., Robert, G., & Jams, A. D. (2012). Trait perfectionism, self-determination, and self-presentation processes in relation to exercise behavior. *Psychology of Sport and Exercise, 13*(2), 224–235.
Joachim, S., & Anna, R. (2007). Perfectionism in adolescent school students: Relations with motivation, achievement, and well-being. *Personality and Individual Differences, 42*, 1379–1389.
Joachim, S., & Franziska, S. (2009). Domains of perfectionism: Prevalence and relationships with perfectionism, gender, age, and satisfaction with life. *Personality and Individual Differences, 46*, 530–535.
Judith, G. P., Philip, J. C., David, E. G., & Graham, D. (2009). Cognitive-behavioural training to change attributional style improves employee well-being, job satisfaction, productivity, and turnover. *Personality and Individual Differences, 46*, 147–153.
Kline, R. B. (2011). *Principles and practices of structural equation modeling* (3rd ed.). New York: Guilford Press.
Labrecque, J., Stephenson, R., Boivin, I., & Marchand, A. (1998). Validation of the Multidimensional Perfectionism Scale in the French-speaking population of Quebe. *Clinique Comportementalet Cognitive, 10*, 1–14.
Lefcourt, H. M., Vanbaeyer, C. L., Ware, E. E., & Cox, D. V. (1979). The Multidimensional–Multiattributional Causality Scale: The development of a goal specific locus of control scale. *Canadian Journal of Behavioural, 11*, 286–304.
Little, T. D., Cunningham, W. A., Shahar, G., & Widaman, K. F. (2002). To parcel or not to parcel: Exploring the question, weighing the merits. *Structural Equation Modeling: A Multidisciplinary Journal, 9*, 151–173.
MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 99–128.
Miquelon, P., & Vallerand, R. J. (2006). Goal Motives, well-being, and physical health: Happiness and self-realization as psychological resources under challenge. *Motivation and Emotion, 30*, 259–272.
Park, H., Heppner, P., & Lee, D. (2010). Maladaptive coping and self-esteem as mediators between perfectionism and psychological distress. *Personality and Individual Differences, 48*, 469–474.
Rice, K. G., & Dellwo, J. P. (2001). Within-semester stability and adjustment correlates of the Multidimensional Perfectionism Scale. *Measurement and Evaluation in Counseling and Development, 34*, 146–156.
Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review, 10*, 295–319.
Suzanne, W., & Susan, M. (2004). Excuses: Self-Handicapping in an Australian Adolescent Sample. *Journal of Youth and Adolescence, 33*, 64–71.
Taylor, J. E., Haddock, C. K., Blackburn, G. L., Heber, D., & Heymsfield, S. B. (2003). Psychometric characteristics of the General Well-Being Schedule (GWB) with African–American women. *Quality of Life Research, 12*, 1–9.
Zhang, J. X., Miao, D. M., Sun, Y. F., Xiao, R. X., & Ren, L. (2014). The impacts of attributional styles and dispositional optimism on subject well-being: A structural equation modelling analysis. *Social Indicators Research, 119*(2), 757–769.