

Self-Compassion and Authentic-Durable Happiness During COVID-19 Pandemic: The Mediating Role of Meaning of Life and the Moderating Role of COVID-19 Burnout

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Backgrounds and Aims: Self-compassion is important for authentic-durable happiness, particularly during the COVID-19 pandemic. To better understand the potential complexity of effects, this study sought to explore (a) the mediating role of meaning of life in the association between self-compassion and authentic-durable happiness and (b) the moderating role of COVID-19 burnout in the relationship between self-compassion and meaning of life.

Methods: We conducted a cross-sectional online survey study in China from February 1 to 14, 2021. Online survey questionnaire technique and convenience sampling method were used for data collection. Participants anonymously completed the measures of self-compassion scale short form, COVID-19 burnout scale, meaning in life questionnaire, and subjective authentic-durable happiness scale. The data were examined utilizing Pearson's r correlations and moderated mediation analysis.

Results: This study included 1165 Chinese college students ($M_{age} = 19.68$ years, $SD = 1.37$). Self-compassion ($M = 3.39$, $SD = 0.49$) was significantly positively associated with authentic-durable happiness ($M = 3.82$, $SD = 0.66$) ($r = 0.45$, $p < 0.001$), and mediation analyses indicated that meaning of life ($M = 4.65$, $SD = 0.86$) partially mediated this association (indirect effect = 0.103, $SE = 0.016$, 95% $CI = [0.073, 0.135]$). Moderated mediation analysis further revealed that COVID-19 burnout ($M = 1.87$, $SD = 0.72$) buffered the relation between self-compassion and meaning of life ($\beta = -0.05$, $p < 0.033$).

Discussion and Conclusion: Findings of this study shed light on a correlation between self-compassion and authentic-durable happiness. In addition, this study underlines the importance of intervening in COVID-19 burnout among college students and enhancing the meaning of life in order to promote and safeguard authentic-durable happiness in the setting of COVID-19.

Keywords: coronavirus, students, self-compassion, meaning of life, happiness, psychological burnout

Introduction

The novel coronavirus disease (COVID-19) continues to spread widely around the world. This global pandemic has been labeled a pandemic and a health emergency of international concern (PHEIC).¹ This important event had a negative impact on numerous facets of people's lives around the world. COVID-19 not only poses a threat to public health and life but also has significant short- and long-term psychological effects on human society. The COVID-19 pandemic affected the physical and mental health of Asians to varying degrees, according to research concentrating on seven middle-income countries in Asia.^{2,3} The post-epidemic mean depression score was considerably higher among Iranian medical science students.⁴ In addition, the COVID-19 pandemic contributes to mental health burden in China.⁵⁻⁷ The desire to be happy is universal, and happiness is an important part of mental health. Authentic happiness seeks life satisfaction, whereas

well-being aims for flourishing.⁸ Happiness in the sense of a personal characteristic might serve as a “proxy” for well-being. Nevertheless, it is a required but insufficient requirement for exceptionally high levels of well-being.⁹ Some researchers claim that the purpose of government is to increase the well-being of individuals.^{10,11} During the COVID-19 pandemic, studies indicated that people’s happiness diminished.^{12,13} Under the epidemic situation, individuals need to actively cooperate to fight the epidemic, and society needs more altruistic and pro-social behaviors nowadays. According to Anik et al¹⁴ and Lyubomirsky et al¹⁵ happiness also affects a country’s social and health sectors. Moreover, it serves as an evaluative function in the process of self-determination.¹⁶ Happier people are healthier, display more altruistic behavior, are more positive, more creative, better at problem-solving, more social, and exhibit less anti-social behavior.¹⁷ These qualities are also important in epidemic prevention and control.

Authentic-durable happiness is characterized as an ideal way of being, a state of persistent plenitude based on a consciousness that accepts each experience, emotion, and behavior with optimism and allows us to embrace all the pleasure and sorrow with which we are confronted.¹⁸ Humans strived to achieve happiness and considered it the most important goal in life.¹⁹ Positive psychology variables are considered protective factors of mental health.^{20,21} Self-compassion refers to being accepting and patient of oneself in the face of failures and flaws, or following a traumatic experience.²² Self-compassion is an emotionally supportive self-attitude that may shield against the harmful effects of self-criticism, etc.²² However, authentic-durable happiness served as a state of flourishing originating from mental equilibrium and insight into the nature of reality.¹⁸ Numerous studies have demonstrated that self-compassion is significant and positively correlated with happiness.^{23–26} That is, individuals with greater self-compassion may experience greater happiness. During the pandemic, however, this association has not been examined. In addition, the mediators and moderators between self-compassion and authentic-durable happiness remain obscure. By collecting data during the COVID-19 epidemic, this study investigated the relationship between self-compassion and authentic-durable happiness. In addition, we explored the potential mediating effect of meaning of life and the moderating role of COVID-19 burnout in the first path of this relationship.

Self-Compassion and Authentic-Durable Happiness

COVID-19 may have short- and long-term detrimental psychological effects on human societies. Nonetheless, not all individuals will be affected psychologically in the same way by the virus for inevitable individual variations. Neff considers self-compassion a stable trait,²⁷ which can also contribute to this difference. It entails being kind to oneself when addressing personal inadequacies or challenging circumstances and being mindful of negative emotions so as to neither suppress nor dwell on them.²⁸ Specifically, self-compassionate individuals are apt to accept themselves without prejudice, and they do aware of their pains and sufferings but not avoiding or dwelling on them.²² Furthermore, self-compassion involves recognizing one’s common humanity and treating oneself with kindness.²⁹ From the key resource theory (KRT), self-compassion is a person’s inner strength and resources, which is a significant factor in determining their level of subjective happiness.³⁰ According to Positive Psychology 2.0 (PP 2.0),³¹ Instead of positive minus negative, happiness is the algebra of positive plus negative. In other words, the ability to rise above and alter unfavorable circumstances constitutes an additional source of happiness. Numerous studies have also demonstrated that self-compassion is significantly and positively correlated with individuals’ happiness.^{23,32–34} Most importantly, results from the intervention studies show that self-compassion significantly improves college students’ well-being.³⁵ Individuals with self-compassion can better evaluate the situation where they belong. They are inclined to reevaluate their bad scenario and to cope with it by employing emotion regulation strategies,³⁶ and they are better equipped to deal with the threats posed by COVID-19. This can also alleviate the damage to individuals’ authentic-durable happiness. Also, self-compassion mitigates the negative psychological health effects of COVID-19-related threats.³⁷ Therefore, based on previous studies, we hypothesized that self-compassion was positively related to authentic-durable happiness in college students during the COVID-19 pandemic.

Meaning of Life as a Mediator

Meaning of life is defined as a perception of the meaning of their existence and their value,³⁸ which refers to people’s notions that their lives are meaningful, coherent, and imbued with an overarching sense of purpose.^{39,40} It is a contributor

to mental health⁴¹ and characterized as a balanced conception of the good life that incorporates the dynamic interaction between the positive and negative.^{31,42} It incorporates both cognitive and motivational dimensions, corresponding to the presence of meaning and the search of meaning. The presence of meaning represents people's understanding of the meaning of life and the individual's ability to recognize the purpose or mission of life while searching for meaning mainly refers to people's motivation and direction to find meaning in life.³⁸ College students suffer from a variety of psychological (ie, nervous, anxiety)^{43,44} and physical challenges (ie, headache, obesity)^{45,46} during the COVID-19 epidemic, but meaning in life mitigates the negative effects of painful events people encounter.⁴⁷ Meaning in life is a positive trait that serves as an indicator of well-being.^{48,49} Numerous studies have found a connection between meaning in life and optimism, positive affect, psychological well-being, self-efficacy, and life satisfaction.^{50–54} Individuals who perceived a lack of meaning in life judge that their lives were frustrating, futile, and empty.⁵⁵ Meaning in life is a fundamental component of well-being.⁵⁶ During the pandemic period, the importance of the effect of positive psychology concepts on happiness has increased.⁵⁷ Numerous empirical research demonstrated that one experienced higher happiness with greater meaning of life.^{56,58} The meaning of life was a strong indicator of happiness over time.⁵⁹

During the COVID-19 epidemic, individuals experience emptiness and depression due to the loss of their normal lifestyles, which may result in a loss of life's meaning.⁶⁰ Similarly, pandemic-related stress can have a profound impact on the core aspects of meaning in life.⁶¹ However, in the current situation, self-compassion might facilitate the experience of a sense of meaning in life. The transactional model of stress (TMS)⁶² holds the belief that personality characteristics (eg, self-compassion) are related to the preference for coping style.^{63,64} Also, Neff et al⁶⁵ found that self-compassion is negatively associated with avoidance strategy. As a positive character, self-compassion helps individuals yield positive coping strategies, which help obtain a high level of meaning of life.^{66,67} Consistent with the aforementioned theoretical perspectives, several empirical studies support the notion that self-compassion is associated with life meaning.^{68–70}

Prior research has demonstrated a correlation between meaning of life, diverse happiness, and self-compassion; however, no studies have directly examined the mediating role of meaning of life in the relationship between self-compassion and authentic-durable happiness among college students, particularly in the midst of the recent COVID-19 pandemic. This study thus hypothesized that meaning of life mediates the relationship between self-compassion and authentic-durable happiness.

COVID-19 Burnout as a Moderator

Self-compassion may increase college students' authentic-durable happiness through the mediating role of meaning of life, but not all people with a high level of self-compassion could effectively improve their meaning of life.⁷¹ Consequently, it is vital to investigate the factors that may diminish the relationship between self-compassion and meaning of life, particularly during the COVID-19 epidemic. Considering that burnout syndrome becomes more severe after a pandemic,⁷² COVID-19 burnout may be a crucial attenuating process. In other words, COVID-19 burnout may diminish the favorable relationship between self-compassion and meaning of life. Burnout is a state of physical or mental collapse,⁷³ which is a triad of emotional exhaustion, depersonalization, and reduced personal accomplishment.⁷⁴ It is described as a prolonged state of emotional, physical, and mental tiredness.⁷⁵ According to this definition, COVID-19 burnout can be described as a chronic state of emotional, physical, and mental exhaustion resulting from the COVID-19 pandemic.⁷⁶ Students were more exhausted and cynical, and their social connections, motivation, and healthy behaviors were impacted by the implementation of distance education.⁷⁷ College students are more prone to experience burnout because they are subjected to several stressors.⁷⁸ This is more evident in the context of the COVID-19 pandemic.^{79,80} According to Barnard and Curry,⁸¹ clergy with poor self-compassion who are at risk for burnout are more inclined to lose themselves in their vocation and disregard their value outside of it. Self-compassion could counter the tendencies towards downward social comparison,²² but burnout negatively impacted the ability to use comparison information beneficially, namely to extract good effects from upward comparison and to avoid negative consequences from downward comparison,⁸² and individuals suffering from burnout are unable to apply a positive self-evaluation.⁸² This biased approach to evaluation can render self-compassionate individual efforts futile and hinder the acquisition of meaning in life. Frankl⁸³ coined the phrase "existential vacuum" in his existential perspective on burnout with his psychology of meaning, to describe a state of existence devoid of meaning and purpose, susceptible to neuroticism, characterized by

boredom, and accompanied by attempts to escape boredom through diversion. Contradicting with the foundations of the meaning of life (ie, purpose, self-efficacy, self-worth, and legitimacy),⁸⁴ burnout results in the individual becoming fatigued, despondent, and apathetic towards personal aspirations and life events,⁸⁵ which corresponds with poor self-compassion signs (aka self-coldness). This suggests that COVID-19 burnout may lead to a state of “existential vacuum” with a sense of meaninglessness in life. Thus, there is reason to believe that COVID-19 burnout can diminish the positive impact of self-compassion on meaning in life. However, in a low COVID-19 burnout situation, the positive effects of self-compassion will be fully utilized. Because individuals may be more likely to utilize their inner potential and ascribe more meaning to their lives.⁸⁵ Thus, for individuals with low COVID-19 burnout, their meaning of life may raise dramatically as self-compassion increases. However, for individuals with high COVID-19 burnout, their meaning of life may not raise dramatically as self-compassion increases. To date, no prior research has evaluated whether COVID-19 burnout is a risk factor that reduces the beneficial effect of self-compassion on meaning of life and a moderator in the indirect relationship between self-compassion and authentic-durable happiness via the meaning of life.

Present Study

This study had two objectives: (a) to determine whether meaning of life mediates the relationship between self-compassion and authentic-durable happiness in college students and (b) to determine whether COVID-19 burnout moderates the first path of the indirect relationship between self-compassion and authentic-durable happiness via meaning of life. Figure 1 illustrates the proposed model. Following an examination of several types of literature, we propose the following hypotheses:

Hypothesis 1: Meaning of life mediates the relation between self-compassion and authentic-durable happiness (confidence interval for $a*b$ is significant).

Hypothesis 2: COVID-19 burnout moderates the first path of the indirect relations (confidence interval for $z1$ is significant) between self-compassion and authentic-durable happiness via meaning of life.

Method

Procedure and Participants

The ethics committee of Jiangxi Normal University accepted this study. This cross-sectional, multicenter online study was undertaken in China. From February 1 through February 14, 2021, a total of 1165 college students ($Mage = 19.68$, $SD = 1.37$, range = 17–26, 69.5% female) were invited to participate in the survey. Students were recruited from more than 30 universities in 26 regions of China, including Jiangxi, Jilin, and Shandong provinces, etc. To comply with local government regulations, all participants were recruited online without face-to-face interaction. The anonymous study questionnaire was distributed via a survey link on WeChat utilizing an electronic survey platform (Wenjuanxing, Changsha Ranxing Information Technology Co. Ltd, China), a widely used online survey instrument in China.⁸⁶ Participants provided informed consent and were free to withdraw from the investigation at any time. There were no

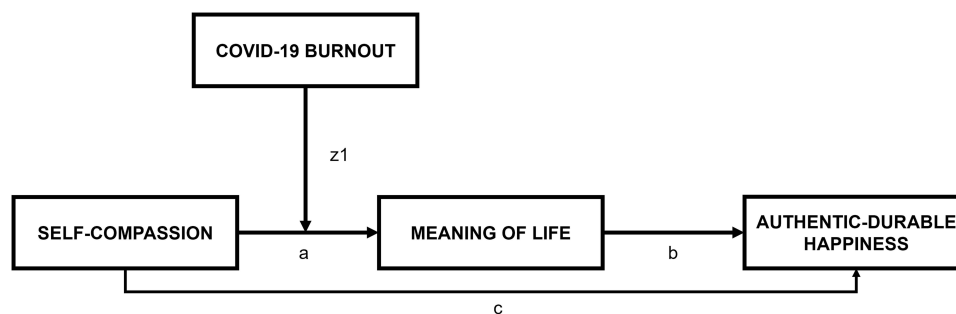


Figure 1 The proposed moderated mediation model.

Note: Each line or path in the model is represented by a lowercase letter, which represents the path coefficient.

missing data because the survey was programmed to record replies only after all variables were addressed. Participation was voluntary, and there was no additional pay.

Measures

Self-Compassion

Self-compassion was assessed using the Self-Compassion Scale Short Form (SCS-SF).⁸⁷ The reliability and validity of this scale have been demonstrated in research involving Chinese college students.^{88–90} The scale consisted of 12 items (eg, “Impatient towards aspects I don’t like”) and included six dimensions: (1) self-kindness, (2) self-judgment, (3) common humanity, (4) isolation, (5) mindfulness, and (6) over-identification. Participants rated each item on a 5-point scale ranging from 1 (never) to 5 (always), with higher total scores indicate greater self-compassion. Cronbach’s α was 0.77 in the study.

COVID-19 Burnout

The COVID-19 Burnout Scale (COVID-19-BS)⁹¹ was administered to measure participants’ levels of COVID-19 burnout. The scale consisted of 10 items (eg, “When you think about COVID-19 overall, how often do you feel tired?”). Participants assigned each statement a score between 1 (never) and 5 (always) on a 5-point scale, with higher total scores indicating a higher level of COVID-19 burnout. Cronbach’s α was 0.95 in the study.

Meaning of Life

Meaning of life was measured by the Chinese Version⁹² of the Meaning in Life Questionnaire (MLQ).⁹³ The scale consisted of 10 items (eg, “I understand the meaning of my life”) and included two dimensions: (1) the presence of meaning (MLQ-P) and (2) the search of meaning (MLQ-S). On a seven-point scale ranging from 1 (strongly disagree) to 7 (strongly agree), participants scored each item, with higher total scores signifying greater levels of meaning in life. This scale has been used in the Chinese population, and its reliability and validity have been confirmed.^{94–96} Cronbach’s α was 0.89 in the study.

Authentic-Durable Happiness

The Chinese Version⁹⁷ of the subjective authentic-durable happiness scale (SA-DHS)⁹⁸ was administered to measure participants’ level of authentic-durable happiness. The scale consisted of 16 items (eg, “Overall well-being?”) and included two dimensions: (1) the contentment component, (2) the inner peace. Three negative items were excluded from the scoring as control items. Scoring higher on the accompanying seven-point scale from 1 (very low) to 6 (very high) indicated higher levels of authentic-durable happiness. Cronbach’s α was 0.88 in the study.

Data Analysis

This study aimed to determine if meaning of life acted as a mediator between self-compassion and authentic-durable happiness among college students, and if COVID-19 burnout moderated the indirect path between self-compassion and authentic-durable happiness via meaning of life. These research questions were examined from three perspectives. Initial calculations included descriptive statistics and bivariate Pearson correlations. Second, the mediating effect of meaning of life was investigated using the PROCESS macro for SPSS (Model 4).⁹⁹ Third, the moderating effect of COVID-19 burnout on the indirect relationship between self-compassion and authentic-durable happiness via meaning of life was analyzed using the PROCESS macro (Model 7). All study continuous variables were standardized, and the models utilized 5000 bootstrapping resamples to test whether the effects in Models 4 and 7 were statistically significant.⁹⁹

Result

Characteristics of Participants

The mean age of the 1165 college students was 19.68 ± 1.37 years old, predominantly female (69.5%). About 45.5% of these participants were 1st year-standing, 23.1% were 2nd year-standing, and 31.4% were 3rd and 4th year-standing. About 53.3% reported their place of residence as urban, and 47.6% reported residency in rural settings. Participants’ responses to self-compassion ranged from 1.33 to 5. Participants rated the meaning of life ranging from 1.60 to 7.

Participants' responses to authentic-durable happiness and COVID-19 burnout ranged from 1 to 6 and 1 to 5, respectively.

Preliminary Analyses

Table 1 lists the means, standard deviations, and bi-variate correlations. Self-compassion was positively correlated with meaning of life ($r=0.41, p<0.001$) and authentic-durable happiness ($r=0.45, p<0.001$), but negatively correlated with COVID-19 burnout ($r=-0.44, p<0.001$). Meaning of life was positively correlated with authentic-durable happiness ($r=0.39, p<0.001$) but negatively correlated with COVID-19 burnout ($r=-0.31, p<0.001$).

Testing for Mediation Effect

We hypothesized that meaning of life would serve as a mediator between self-compassion and authentic-durable happiness. To test this hypothesis, we utilized Model 4 of the SPSS macro PROCESS compiled by Hayes.⁹⁹ Table 2 details the regression results for mediation testing. Results suggested that self-compassion was positively associated with meaning of life ($\beta=0.41, t=15.44, p<0.001$), which was, in turn, positively associated with authentic-durable happiness ($\beta=0.25, t=8.97, p<0.001$). The residual direct effect of self-compassion on authentic-durable happiness remained positive ($\beta=0.35, t=12.48, p<0.001$). These results showed that meaning of life partially mediated the association between self-compassion and authentic-durable happiness (indirect effect = 0.103, $SE=0.016$, 95% $CI=[0.073, 0.135]$), accounting for 22.89% of the total effect of self-compassion on authentic-durable happiness. Accordingly, hypothesis 1 is supported.

Moderated Mediation Effect Analysis

The second hypothesis stated that COVID-19 burnout would moderate the first path of the indirect links between self-compassion and authentic-durable happiness via meaning of life. We utilized Hayes's Model 7 of the PROCESS macro to

Table 1 Descriptive Statistics and Bivariate Correlations of Study Variables

Variable	M	SD	1	2	3	4
1. SC	3.39	0.49				
2. CB	1.87	0.72	-0.44***			
3. MOL	4.65	0.86	0.41***	-0.31***		
4. ADH	3.82	0.66	0.45***	-0.30***	0.39***	

Note: N = 1165. *** $p < 0.001$.

Abbreviations: SC, self compassion; CB, COVID-19 burnout; MOL, meaning of life; ADH, Authentic-durable happiness.

Table 2 Regression Analyses for Each Path of the Conceptual Model

Predictors	Criterion Variable MOL (a)		Criterion Variable ADH (b/c)		Criterion Variable MOL (z1)	
	β	t	β	t	β	t
SC	0.41	15.44***	0.35	12.48***	0.33	11.30***
MOL			0.25	8.97***		
CB					-0.18	-5.92***
SC \times CB					-0.05	-2.14*
R ²	0.17		0.25		0.19	
F	238.30***		197.88***		93.53***	

Note: N = 1165. Each column is a regression model that predicts the criterion at the top of the column. The beta values are standardized coefficients; thus, they can be compared to determine the relative strength of different variables in the model. * $p < 0.05$. *** $p < 0.001$.

Abbreviations: SC, self compassion; MOL, meaning of life; ADH, authentic-durable happiness; CB, COVID-19 burnout.

investigate this moderated mediation model.⁹⁹ Figure 2 demonstrates that the product (interaction term) of self-compassion and COVID-19 burnout was significantly negatively related to meaning of life ($\beta = -0.05$, $t = -2.14$, $p < 0.033$; Figure 2).

Following the same procedure as prior studies, we plotted the predicted meaning of life against self-compassion, separately for those with low and high levels of COVID-19 burnout (one *SD* below the mean and one *SD* above the mean, respectively) (Figure 3). Simple slope test demonstrated that for college students with high levels of COVID-19 burnout, self-compassion was positively associated with meaning of life, $b_{simple} = 0.28$, $p < 0.001$. For college students with low COVID-19 burnout, self-compassion yielded a stronger positive association with meaning of life, $b_{simple} = 0.38$, $p < 0.001$. Simple slope tests demonstrated that the lower the level of COVID-19 burnout, the stronger the association between self-compassion and meaning of life.

The bias-corrected percentile bootstrap analysis also revealed that COVID-19 burnout moderated the first path of the indirect effect of self-compassion on authentic-durable happiness via meaning in life. Significant was the indirect effect of self-compassion on authentic-durable happiness via meaning of life for students with low COVID-19 burnout, $\beta = 0.10$, $SE = 0.02$, 95% $CI_{boot} = [0.07, 0.13]$. The indirect effect was also significant for college students with high COVID-19 burnout, but weaker, $\beta = 0.07$, $SE = 0.02$, 95% $CI_{boot} = [0.04, 0.10]$. Results indicated that meaning of life mediated the effect of self-compassion on authentic-durable happiness, but COVID-19 burnout weakened the mediating effect of meaning of life. Thus, Hypothesis 2 is supported.

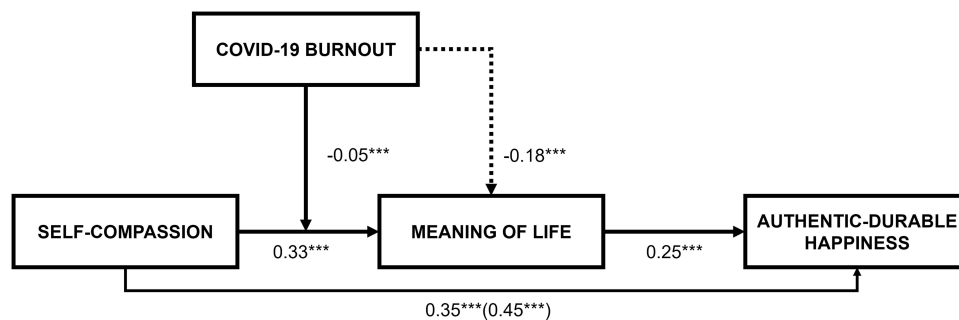


Figure 2 Moderated mediation model.

Notes: Dotted lines represent direct paths from the moderators to the mediator and outcome variables. Standardized beta coefficients are presented; total effect is presented in the parentheses. *** $p < 0.001$.

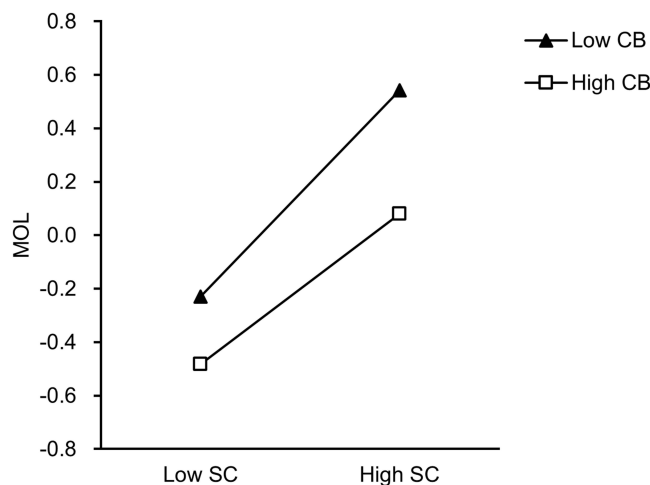


Figure 3 Interaction between SC and CB on MOL.

Note: SC and CB were graphed as one standardized deviation below the sample mean (ie, low) and one standardized deviation above the sample mean (ie, high).

Discussion

This study found that self-compassion was positively associated with authentic-durable happiness. In addition, the study investigated the moderating role of COVID-19 burnout and the mediation effect of meaning of life in the relationship between self-compassion and authentic-durable happiness. The findings may expand our knowledge of the association between self-compassion and authentic-durable happiness during the COVID-19 pandemic and provide empirical evidence for increasing college students' authentic-durable happiness during the COVID-19 pandemic.

The Relationship Between Self-Compassion and Authentic Durable Happiness

Results validated the hypothesis that self-compassion is associated with authentic-durable happiness. Consistent with the key resource theory (KRT)²² found that self-compassion was positively associated with positive psychological qualities like intelligence, optimism, extroversion, and responsibility, which means that self-compassion can influence individuals' attitudes toward life and thus help them experience more authentic-durable happiness. Self-compassion is also characterized by low levels of self-focus and self-centeredness, which are basic to well-being in a variety of spiritual and religious traditions.¹⁰⁰ Such selfless psychological functioning is associated with authentic durable happiness.¹⁸ As a positive disposition, self-compassion can provide psychological resources for people in adversity,¹⁰¹ especially during the COVID-19 epidemic, allowing individuals to embrace the pleasure and pain of the moment,¹⁸ and high self-compassionate people are more inclined to see the pandemic as a universal event rather than a unique affliction.¹⁰¹ Thus, college students with a higher level of self-compassion were more likely to possess higher authentic-durable happiness.

The Mediating Role of Meaning of Life

The present study found that during COVID-19 meaning of life played a mediating role in the relationship between self-compassion and authentic-durable happiness. Previous research has shown that self-compassion plays an important role in individuals' sense of meaning in life.^{102,103} Faced with the challenges posed by the COVID-19 pandemic, some found meaning in the suffering, while others did not. Self-compassion nurtures a positive self-attitude,²² which is crucial for the establishment of meaningful life.¹⁰⁴ Individuals with high self-compassionate affirm their value, tend to face COVID-19 with a positive and tolerant attitude, universalize and rationalize their pain, treat their suffering as inevitable in life, and thus are more loving and enthusiastic, better able to appreciate the joy of life and experience a higher value of life. When suffering COVID-19, individuals with high self-compassionate mobilize their own ego state and at the same time adopt reasonable ways of coping, and their sense of life meaning will be at a higher level, and they will be brave enough to pursue the meaning of life and also experience the meaning of life deeply. Obtaining meaning in life is the foundation and prerequisite for individuals to experience happiness.^{36,56} A purposeful and meaningful life brings a sense of hope and direction, especially during the COVID-19 pandemic. And when one suffers from pain and frustration, clear goals and strong beliefs help one to persevere, motivate one to develop in a positive direction, and ultimately experience a sense of happiness.¹⁰⁵ Conversely, research has shown that meaninglessness is a stressor in itself and that after experiencing meaninglessness, an individual's ability to use meaning as a resource for coping with other stressors decreases.¹⁰⁶ In summary, conducting higher meaning of life during the COVID-19 pandemic also helps combat stress and improves college students' sense of happiness.

The Moderating Role of COVID-19 Burnout

The current study demonstrated that COVID-19 burnout moderates the prediction effect of self-compassion on college students' meaning of life. This confirmed that risk factors weakened the beneficial effects of resource factor¹⁰⁷ and showed that the positive effect of self-compassion on life meaning was smaller among college students with high COVID-19 burnout compared to those with low COVID-19 burnout. COVID-19 burnout may function as a risk factor that impairs the positive effect of self-compassion on meaning of life. The present study surpasses previous research in that it examines not only the increasing effect of self-compassion on meaning of life but also individual variations in this relationship during COVID-19. Specifically, for college students with high levels of COVID-19 burnout, self-compassion was positively associated with

meaning of life. For college students with low COVID-19 burnout, the positive association between self-compassion and meaning of life was stronger. From the research perspective, COVID-19 burnout is associated with feelings of powerlessness and difficulties in dealing with work, school, or life during the pandemic. These negative feelings reflect the feeling that your efforts make no sense.¹⁰⁸ Faced with COVID-19, this sense of powerlessness may affect the experience of the meaning of life and hinder college students benefit from self-compassion. Furthermore, burnout, a form of an existential vacuum manifests itself as apathy, boredom, and a loss of interest in relationships.¹⁰⁹ Individuals with burnout neglect to appreciate their unique value and intrinsic meaning.¹¹⁰ Steger et al⁹³ argue that the sense of meaning in life is the individual's sense of meaningfulness of existence and perception of self-importance, that is, the collection of having meaning and pursuing meaning. Individuals with high COVID-19 burnout do not see the meaning of the moment and also lose the motivation to pursue meaning. Based on these results, it is crucial to reduce burnout and cultivate a high sense of meaning in life to improve authentic durable happiness during the COVID-19 pandemic.

Limitations and Future Directions

Several limitations should be taken into account when evaluating the results of this study. To corroborate our findings, future research should collect data from implicit measures or behavioral indicators in addition to self-report questionnaires from many informants (eg, classmates, parents, and teachers). Second, because this study was cross-sectional, correlational evidence can only be drawn from the data. In the future, researchers could use either experimental or longitudinal designs to test the current study's causal hypothesis. Thirdly, because the present research was performed among college students, these findings cannot be generalized to other samples. Future research may collect data from multiple informants (eg, teachers, doctors, or parents) from a variety of cultures in order to better assess the validity of our findings. Fourth, in our study, we solely examined meaning of life as a mediator between self-compassion and authentic-durable happiness. However, there may be additional potential mediators between self-compassion and authentic-durable happiness. This can be another option for future research. Fifth, the self-compassion scale has received some criticisms, and future research could choose other measurement tools as needed (ie, The Quiet Ego Scale, QES).¹¹¹

Conclusion

Despite the need for more replication and expansion, this study was a vital step in elucidating the relationship between self-compassion and authentic-durable happiness among Chinese college students during the COVID-19 epidemic. Meaning of life functioned as one potential mediator via which self-compassion was related to authentic-durable happiness. The connection between self-compassion and meaning of life is weaker for college students with higher levels of COVID-19 burnout, according to assessments of moderation. However, even among college students with high COVID-19 burnout, self-compassion remained strongly correlated with meaning of life. Our findings provide a potential step forward in studying how non-clinical interventions may assist to sustain and perhaps amplify the positive effects of self-compassion during these extraordinary circumstances, such as using mindfulness-based cognitive therapy (MBCT), acceptance and commitment therapy (ACT), compassion-focused therapy (CFT) and cognitive behavioral therapy (CBT),^{112,113} etc. Practically, colleges have a unique opportunity to reach a huge number of adolescents during a pivotal time in their lives. Numerous colleges offer psychological counseling and support services. Self-compassion interventions have been established, and their results have been encouraging.^{114,115} Colleges could consider introducing the mindful self-compassion (MSC) program¹¹⁴ and compassionate mind training (CMT)¹¹⁶ for their student populations. Such programs and interventions aid in the development of a healthy self-perception and the acquisition of more adaptive coping mechanisms during times of hardship.^{114,116} Thus, the incorporation of these programs and interventions in college settings may have positive short- and long-term advantages for distressing students.¹¹⁷

Data Sharing Statement

The datasets used in this study are available upon request to the corresponding author.

Ethics Statement

This study was conducted in accordance with the Declaration of Helsinki, and the study protocol was reviewed and approved by the Jiangxi Normal University's Ethical Review Board (IRB protocol IDs: IRB-JXNU-PSY-2020030). We declare that participants in our research study allow us to use their data for academic research and publication. All the participants were anonymous, and their data was protected. All participants reviewed the consent form before they participated in the study.

Acknowledgments

Thanks to all the participants and volunteers who provided support for this study.

Funding

This study was supported by the National Natural Science Foundation of China (72164018), Jiangxi Social Science Foundation Project (21JY13), Jiangxi Key Research Base Project of Humanities and Social Sciences (JD20068), Science and Technology Research Project of Jiangxi Department of Education (GJJ200306), Key Subject of the 13th Five-Year Plan of Jiangxi Education Science (20ZD096) and Jiangxi Educational Scientific Planning (22ZD009).

Disclosure

The authors declare that they have no competing interests.

References

1. Team EE. Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. *Eur Surveill.* 2020;25(5):200131e. doi:10.2807/1560-7917.ES.2020.25.5.200131e
2. Wang C, Tee M, Roy AE, et al. The impact of COVID-19 pandemic on physical and mental health of Asians: a study of seven middle-income countries in Asia. *PLoS One.* 2021;16(2):e0246824. doi:10.1371/journal.pone.0246824
3. Tee M, Wang C, Tee C, et al. Impact of the COVID-19 pandemic on physical and mental health in lower and upper middle-income Asian countries: a comparison between the Philippines and China. original research. *Front Psychiatry.* 2021;11. doi:10.3389/fpsyg.2020.568929
4. Mirhosseini S, Grimwood S, Dadgari A, Basirinezhad MH, Montazeri R, Ebrahimi H. One-year changes in the prevalence and positive psychological correlates of depressive symptoms during the COVID-19 pandemic among medical science students in northeast of Iran. *Health Sci Rep.* 2022;5(1):e490. doi:10.1002/hsr.2.490
5. Huang Y, Zhao N. Chinese mental health burden during the COVID-19 pandemic. *Asian J Psychiatr.* 2020;51:102052. doi:10.1016/j.ajp.2020.102052
6. Peng D, Wang Z, Xu Y. Challenges and opportunities in mental health services during the COVID-19 pandemic. *Gen Psychiatry.* 2020;33(5):e100275. doi:10.1136/gpsych-2020-100275
7. Kontoangelos K, Economou M, Papageorgiou C. Mental health effects of COVID-19 pandemic: a review of clinical and psychological traits. *Psychiatry Investig.* 2020;17(6):491–505. doi:10.30773/pi.2020.0161
8. Scorsolini-Comin F, Fontaine AMG, Koller SH, Santos MAD. From authentic happiness to well-being: the flourishing of positive psychology. *Psicologia.* 2013;26:663–670. doi:10.1590/S0102-79722013000400006
9. Raibley JR. Happiness is not well-being. *J Happiness Stud.* 2012;13(6):1105–1129. doi:10.1007/s10902-011-9309-z
10. Clark A, Flèche S, Layard R, Powdthavee N, Ward G. *The Origins of Happiness.* Princeton University Press; 2018.
11. Wolf M. The case for making wellbeing the goal of public policy. *Financial Times.* 2019;30:1.
12. Greyling T, Rossouw S, Adhikari T. Happiness-lost: did governments make the right decisions to combat Covid-19? *S Afr J Econ.* 2020;89(1):25–43.
13. Yıldırım M, Güler A. Positivity explains how COVID-19 perceived risk increases death distress and reduces happiness. *Pers Individ Dif.* 2021;168:110347. doi:10.1016/j.paid.2020.110347
14. Anik L, Aknin LB, Norton MI, Dunn EW. *Feeling Good About Giving: The Benefits (and Costs) of Self-Interested Charitable Behavior.* Harvard Business School Marketing Unit Working Paper; 2009.
15. Lyubomirsky S, Sheldon KM, Schkade D. Pursuing happiness: the architecture of sustainable change. *Rev Gen Psychol.* 2005;9(2):111–131. doi:10.1037/1089-2680.9.2.111
16. Ryan RM, Huta V, Deci EL. Living well: a self-determination theory perspective on eudaimonia. *J Happiness Stud.* 2008;9(1):139–170. doi:10.1007/s10902-006-9023-4
17. Greyling T, Rossouw S, Adhikari T. A tale of three countries: how did Covid-19 lockdown impact happiness? *S Afr J Econ.* 2020;89(1):25–43.
18. Damburn M, Ricard M. Self-centeredness and selflessness: a theory of self-based psychological functioning and its consequences for happiness. *Rev Gen Psychol.* 2011;15(2):138–157. doi:10.1037/a0023059
19. Compton WC. *Introduction to Positive Psychology.* Thomson Wadsworth; 2005.
20. Yu Y, Yu Y, Li B. Effects of mindfulness and meaning in life on psychological distress in Chinese university students during the COVID-19 epidemic: a chained mediation model. *Asian J Psychiatr.* 2020;53:102211. doi:10.1016/j.ajp.2020.102211
21. Syropoulos S, Wu DJ, Burrows B, Mercado E. Psychology doctoral program experiences and student well-being, mental health, and optimism during the COVID-19 pandemic. *Front Psychol.* 2021;12:629205. doi:10.3389/fpsyg.2021.629205

22. Neff K. Self-compassion: an alternative conceptualization of a healthy attitude toward oneself. *Self Identity*. 2003;2(2):85–101. doi:10.1080/15298860390129863
23. Campos D, Cebolla A, Quero S, et al. Meditation and happiness: mindfulness and self-compassion may mediate the meditation–happiness relationship. *Pers Individ Dif*. 2016;93:80–85. doi:10.1016/j.paid.2015.08.040
24. Hollis-Walker L, Colosimo K. Mindfulness, self-compassion, and happiness in non-meditators: a theoretical and empirical examination. *Pers Individ Dif*. 2011;50(2):222–227. doi:10.1016/j.paid.2010.09.033
25. Neff KD, Bluth K, Tóth-Király I, et al. Development and validation of the self-compassion scale for youth. *J Pers Assess*. 2021;103(1):92–105. doi:10.1080/00223891.2020.1729774
26. Shapira LB, Mongrain M. The benefits of self-compassion and optimism exercises for individuals vulnerable to depression. *J Posit Psychol*. 2010;5(5):377–389. doi:10.1080/17439760.2010.516763
27. Neff KD. The development and validation of a scale to measure self-compassion. *Self Identity*. 2003;2(3):223–250. doi:10.1080/15298860309027
28. Neff KD, Beretvas SN. The role of self-compassion in romantic relationships. *Self Identity*. 2013;12(1):78–98. doi:10.1080/15298868.2011.639548
29. Neff KD, Vonk R. Self-compassion versus global self-esteem: two different ways of relating to oneself. *J Pers*. 2009;77(1):23–50. doi:10.1111/j.1467-6494.2008.00537.x
30. Seligman ME. *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*. Simon and Schuster; 2002.
31. Wong PT. Positive psychology 2.0: towards a balanced interactive model of the good life. *Can Psychol*. 2011;52(2):69. doi:10.1037/a0022511
32. Latipun L, Latipun L. Correlation self-compassion and happiness among university students in timor-leste: gratitude as moderation variable. *Int J Psychol Stud*. 2019;11(2):1–8. doi:10.5539/ijps.v11n2p1
33. Mantelou A, Karakasidou E. The role of compassion for self and others, compassion fatigue and subjective happiness on levels of well-being of mental health professionals. *Psychol*. 2019;10(3):285–304. doi:10.4236/psych.2019.103021
34. McKay T, Walker BR. Mindfulness, self-compassion and wellbeing. *Pers Individ Dif*. 2021;168:110412. doi:10.1016/j.paid.2020.110412
35. Smeets E, Neff K, Alberts H, Peters M. Meeting suffering with kindness: effects of a brief self-compassion intervention for female college students. *J Clin Psychol*. 2014;70(9):794–807. doi:10.1002/jclp.22076
36. Diedrich A, Grant M, Hofmann SG, Hiller W, Berking M. Self-compassion as an emotion regulation strategy in major depressive disorder. *Behav Res Ther*. 2014;58:43–51. doi:10.1016/j.brat.2014.05.006
37. Lau BH-P, Chan CL-W, Ng S-M. Self-compassion buffers the adverse mental health impacts of COVID-19-related threats: results from a cross-sectional survey at the first peak of Hong Kong’s outbreak. *Front Psychiatry*. 2020;1203. doi:10.3389/fpsy.2020.585270
38. Steger MF. Meaning in life. In: Lopez SJ, Snyder CR, editors. *Oxford Handbook of Positive Psychology*. Oxford University Press; 2009:679–687.
39. Reker GT, Peacock EJ, Wong PT. Meaning and purpose in life and well-being: a life-span perspective. *J Gerontol*. 1987;42(1):44–49. doi:10.1093/geronj/42.1.44
40. Steger MF, Kashdan TB, Sullivan BA, Lorentz D. Understanding the search for meaning in life: personality, cognitive style, and the dynamic between seeking and experiencing meaning. *J Pers*. 2008;76(2):199–228. doi:10.1111/j.1467-6494.2007.00484.x
41. Brassai L, Piko BF, Steger MF. Meaning in life: is it a protective factor for adolescents’ psychological health? *Int J Behav Med*. 2011;18(1):44–51. doi:10.1007/s12529-010-9089-6
42. Wong PT. Second wave positive psychology’s (PP 2.0) contribution to counselling psychology. *Couns Psychol Q*. 2019;32(3–4):275–284. doi:10.1080/09515070.2019.1671320
43. Salari N, Hosseinian-Far A, Jalali R, et al. Prevalence of stress, anxiety, depression among the general population during the COVID-19 pandemic: a systematic review and meta-analysis. *Global Health*. 2020;16(1):57. doi:10.1186/s12992-020-00589-w
44. Browning MA-O, Larson LA-O, Sharaievska I, et al. Psychological impacts from COVID-19 among university students: risk factors across seven states in the United States. *PLoS One*. 2012;16(1):e0245327. doi:10.1371/journal.pone.0245327
45. Ye B, Wu D, Im H, Liu M, Wang X, Yang Q. Stressors of COVID-19 and stress consequences: the mediating role of rumination and the moderating role of psychological support. *Child Youth Serv Rev*. 2020;118:105466. doi:10.1016/j.childyouth.2020.105466
46. Clemmensen C, Petersen MB, Sørensen TIA. Will the COVID-19 pandemic worsen the obesity epidemic? *Nat Rev Endocrinol*. 2020;16(9):469–470. doi:10.1038/s41574-020-0387-z
47. Frankl E. *İnsanın Anlam Arayışı [Man’s Search for Meaning]*. Budak S, Eds. İstanbul, Turkey: Okyanus Yayıncılık; 2014.
48. Kashdan TB, Steger MF. Curiosity and pathways to well-being and meaning in life: traits, states, and everyday behaviors. *Motiv Emot*. 2007;31(3):159–173. doi:10.1007/s11031-007-9068-7
49. Ryff CD. Happiness is everything, or is it? explorations on the meaning of psychological well-being?. *J Pers Soc Psychol*. 1989;4:99–104.
50. Ho MY, Cheung FM, Cheung SF. The role of meaning in life and optimism in promoting well-being. *Pers Individ Dif*. 2010;48(5):658–663. doi:10.1016/j.paid.2010.01.008
51. King LA, Hicks JA, Krull JL, Del Gaiso AK. Positive affect and the experience of meaning in life. *J Pers Soc Psychol*. 2006;90(1):179. doi:10.1037/0022-3514.90.1.179
52. Krok D, Gerymski R. Self-efficacy as a mediator of the relationship between meaning in life and subjective well-being in cardiac patients. *Curr Issues Pers Psychol*. 2019;7(3):242–251. doi:10.5114/cipp.2019.89168
53. Rathi N, Rastogi R. Meaning in life and psychological well-being in pre-adolescents and adolescents. *JIAAP*. 2007;33(1):31–38.
54. Steger MF, Kashdan TB. Stability and specificity of meaning in life and life satisfaction over one year. *J Happiness Stud*. 2007;8(2):161–179. doi:10.1007/s10902-006-9011-8
55. Schnell T. The sources of meaning and meaning in life questionnaire (SoMe): relations to demographics and well-being. *J Posit Psychol*. 2009;4(6):483–499. doi:10.1080/17439760903271074
56. Elizabeth AY, Chang EC. Relational meaning in life as a predictor of interpersonal well-being: a prospective analysis. *Pers Individ Dif*. 2021;168:110377. doi:10.1016/j.paid.2020.110377
57. Karataş Z, Uzun K, Tagay Ö. Relationships between the life satisfaction, meaning in life, hope and COVID-19 fear for Turkish adults during the COVID-19 outbreak. *Front Psychol*. 2021;12:778. doi:10.3389/fpsyg.2021.633384

58. Huang S, Yan X, Zhang J, Zhang X, Miao D, Wu S. Does meaning in life mediate the relationship between proactive personality and well-being? *SBP J.* 2020;48(12):1–9. doi:10.2224/sbp.9453
59. Vötter B, Schnell T. Cross-lagged analyses between life meaning, self-compassion, and subjective well-being among gifted adults. *Mindfulness.* 2019;10(7):1294–1303. doi:10.1007/s12671-018-1078-x
60. De Jong EM, Ziegler N, Schippers MC. From shattered goals to meaning in life: life crafting in times of the COVID-19 pandemic. *Front Psychol.* 2020;2648. doi:10.3389/fpsyg.2020.577708
61. George LS, Park CL. Meaning in life as comprehension, purpose, and mattering: toward integration and new research questions. *Rev Gen Psychol.* 2016;20(3):205–220. doi:10.1037/gpr0000077
62. Carver CS, Connor-Smith J. Personality and Coping. *Annu Rev Psychol.* 2010;61(1):679–704. doi:10.1146/annurev.psych.093008.100352
63. Bolger N. Coping as a personality process: a prospective study. *J Pers Soc Psychol.* 1990;59(3):525. doi:10.1037/0022-3514.59.3.525
64. Lazarus R, Folkman S. *Stress, Appraisal, And coping, SpringerPublishing&Company.* Springer Publishing & Company; 1984.
65. Neff KD, Hsieh Y-P, Dejitterat K. Self-compassion, achievement goals, and coping with academic failure. *Self Identity.* 2005;4(3):263–287. doi:10.1080/13576500444000317
66. Li Y, He W, Zhang X. The relationship between parenting style, coping style, index of well-being and life of meaning of undergraduates. *Chin J Health Psychol.* 2014. doi:10.13342/j.cnki.cjhp.2014.11.034
67. Zhao D, Wang Y, Li J, Wang L. Coping style as mediator on the relationship between meaning in life and life satisfaction in graduate students. *Chin J Health Psychol.* 2014;2014:1.
68. Homan KJ. Self-compassion and psychological well-being in older adults. *J Adult Dev.* 2016;23(2):111–119. doi:10.1007/s10804-016-9227-8
69. Marshall E-J, Brockman RN. The relationships between psychological flexibility, self-compassion, and emotional well-being. *J Cogn Psychother.* 2016;30(1):60–72. doi:10.1891/0889-8391.30.1.60
70. Yela JR, Crego A, Gómez-Martínez MÁ, Jiménez L. Self-compassion, meaning in life, and experiential avoidance explain the relationship between meditation and positive mental health outcomes. *J Clin Psychol.* 2020;76(9):1631–1652. doi:10.1002/jclp.22932
71. Suh H, Chong SS. What predicts meaning in life? The role of perfectionistic personality and self-compassion. *J Constr Psychol.* 2020;1–15. doi:10.1080/10720537.2020.1865854
72. Fessell D, Cherniss C. Coronavirus disease 2019 (COVID-19) and beyond: micropractices for burnout prevention and emotional wellness. *J Am Coll Radiol.* 2020;17(6):746–748. doi:10.1016/j.jacr.2020.03.013
73. Dimitriu MCT, Pantea-Stoian A, Smaranda AC, et al. Burnout syndrome in Romanian medical residents in time of the COVID-19 pandemic. *Med Hypotheses.* 2020;144:109972. doi:10.1016/j.mehy.2020.109972
74. Maslach C. *Burnout: A Multidimensional Perspective.* Vol. 68. Theories of organizational stress; 1998.
75. Malach-Pines A. The burnout measure, short version. *Int J Stress Manag.* 2005;12:78–88. doi:10.1037/1072-5245.12.1.78
76. Ye B, Chen X, Zhang Y, Yang Q. Psychological flexibility and COVID-19 burnout in Chinese college students: a moderated mediation model. *J Contextual Behav Sci.* 2022;24:126–133. doi:10.1016/j.jcbs.2022.04.003
77. Gonzalez-Ramirez J, Mulqueen K, Zealand R, Silverstein S, Mulqueen C, BuShell S. Emergency online learning: college students' perceptions during the COVID-19 pandemic. *Coll Stud J.* 2021;55(1):29–46.
78. Ribeiro ÍJS, Pereira R, Freire IV, de Oliveira BG, Casotti CA, Boery EN. Stress and quality of life among university students: a systematic literature review. *Health Prof Educ.* 2018;4(2):70–77. doi:10.1016/j.hpe.2017.03.002
79. Hakami Z, Khanagar SB, Vishwanathaiah S, et al. Psychological impact of the coronavirus disease 2019 (COVID-19) pandemic on dental students: a nationwide study. *J Dent Educ.* 2021;85(4):494–503. doi:10.1002/jdd.12470
80. Bana KF, Sarfraz S. Impact on mental health of undergraduates and the ways to cope stress during COVID-19 pandemic. *PAFMJ.* 2020;70(5):1453–1459.
81. Barnard LK, Curry JF. Self-compassion: conceptualizations, correlates, & interventions. *Rev Gen Psychol.* 2011;15(4):289–303. doi:10.1007/s11089-011-0377-0
82. Brenninkmeyer V. *A Drug Called Comparison: The Pains and Gains of Social Comparison Among Individuals Suffering from Burnout.* University of Groningen; 2002.
83. Frankl VE. Psychiatry and man's quest for meaning. *J Relig Health.* 1962;1:93–103. doi:10.1007/BF01532076
84. Baumeister RF. *Meanings of Life.* Guilford press; 1991.
85. Krok D. Can meaning buffer work pressure? An exploratory study on styles of meaning in life and burnout in firefighters. *Arch Psychiatry Psychother.* 2016;1:31–42. doi:10.12740/APP/62154
86. Shan YA-O, Ji MA-O, Xie WA-O, et al. Chinese version of the mobile health app usability questionnaire: translation, adaptation, and validation study. *JMIR Form Res.* 2022;6(7):e37933. doi:10.2196/37933
87. Raes F, Pommier E, Neff KD, Van Gucht D. Construction and factorial validation of a short form of the self-compassion scale. *Clin Psychol Psychother.* 2011;18(3):250–255. doi:10.1002/cpp.702
88. Wong CC, Mak WW. Differentiating the role of three self-compassion components in buffering cognitive-personality vulnerability to depression among Chinese in Hong Kong. *J Couns Psychol.* 2013;60(1):162. doi:10.1037/a0030451
89. Chen G, He J, Cai Z, Fan X. Perceived parenting styles and body appreciation among Chinese adolescents: exploring the mediating roles of dispositional mindfulness and self-compassion. *Child Youth Serv Rev.* 2020;119:105698. doi:10.1016/j.childev.2020.105698
90. Yang Y, Kong X, Guo Z, Kou Y. Can self-compassion promote gratitude and prosocial behavior in adolescents? A 3-year longitudinal study from China. *Mindfulness.* 2021;12(6):1377–1386. doi:10.1007/s12671-021-01605-9
91. Yıldırım M, Solmaz F. COVID-19 burnout, COVID-19 stress and resilience: initial psychometric properties of COVID-19 Burnout scale. *Death Stud.* 2020;1–9. doi:10.1080/07481187.2020.1818885
92. Liu S, Gan Y. Reliability and validity of the Chinese version of the meaning in life questionnaire. *Chin Ment Health J.* 2010;24:478–482. doi:10.3969/j.issn.1000-6729.2010.06.021
93. Steger MF, Frazier P, Oishi S, Kaler M. The meaning in life questionnaire: assessing the presence of and search for meaning in life. *J Couns Psychol.* 2006;53(1):80. doi:10.1037/0022-0167.53.1.80
94. Ma Q, Zhang Z. Meaning in life and parent-child attachment of high school students: the mediation of peer attachment and time perspective. *Psychol Devl Educ.* 2020;36(2):168–174. doi:10.16187/j.cnki.issn1001-4918.2020.02.05

95. Wang W, Wu X, Tian Y, Zhou X. Mediating roles of meaning in life in the relationship between posttraumatic stress disorder, posttraumatic growth and prosocial behavior among adolescents after the Wenchuan earthquake. *Psychol Devl Educ.* 2018;34(01):112–119. doi:10.16187/j.cnki.issn1001-4918.2018.01.14
96. Ying Y. The relationship between intercourse vexation and meaning of life: cross-lagged regression analysis among college freshmen. *Psychol Res.* 2020;13(3):275–281. doi:10.3969/j.issn.2095-1159.2020.03.012
97. Deng J, Lu X, Li Q, Wei X, Wang J. Reliability and validity test of Chinese version of the subjective authentic-durable happiness scale. *Chin J Clin Psychol.* 2020;28(2):335–338. doi:10.16128/j.cnki.1005-3611.2020.02.024
98. Dambrun M, Després G, Lac G. Measuring happiness: from fluctuating happiness to authentic–durable happiness. *Front Psychol.* 2012;3:16. doi:10.3389/fpsyg.2012.00016
99. Hayes AF. *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach.* Guilford publications; 2017.
100. Kesebir P. Scientific answers to the timeless philosophical question of happiness. In: *Handbook of Well-Being Salt Lake City.* UT: DEF Publishers DOI: nobascholar.com; 2018.
101. Li A, Wang S, Cai M, Sun R, Liu X. Self-compassion and life-satisfaction among Chinese self-quarantined residents during COVID-19 pandemic: a moderated mediation model of positive coping and gender. *Pers Individ Dif.* 2021;170:110457. doi:10.1016/j.paid.2020.110457
102. Bercovich A, Goldzweig G, Igra L, Lavi-Rotenberg A, Gumley A, Hasson-Ohayon I. The interactive effect of metacognition and self-compassion on predicting meaning in life among individuals with schizophrenia. *Psychiatr Rehabil J.* 2020;43(4):290. doi:10.1037/prj0000413
103. Phillips WJ, Ferguson SJ. Self-compassion: a resource for positive aging. *J Gerontol B Psychol Sci Soc Sci.* 2013;68(4):529–539. doi:10.1093/geronb/gbs091
104. Battista J, Almond R. The development of meaning in life. *Psychiatry.* 1973;36(4):409–427. doi:10.1080/00332747.1973.11023774
105. Yang Q, Cheng W, He W, Han B, Yang Z. Will searching for meaning bring well-being? *Adva Psychol Sci.* 2016;24(9):1496. doi:10.3724/SP.J.1042.2016.01496
106. Park J, Baumeister RF. Meaning in life and adjustment to daily stressors. *J Posit Psychol.* 2017;12(4):333–341. doi:10.1080/17439760.2016.1209542
107. Li D. *Multiple Ecological Risk Factors and Adolescents Social Adaptation: How Risks Should Be Modeled and What are Their Mechanisms.* China: South China Normal University, Guangzhou; 2012.
108. Chiu KA, Craig BG, Rabago NL. Sustainability of community engagement at institutions of higher education: a look at compassion fatigue and the college student mental health crisis. *VA Eng J.* 2021;9(1):1.
109. Tomic W, Tomic E. Existential fulfillment and burnout among principals and teachers. *J bel val.* 2008;29(1):11–27. doi:10.1080/13617670801928191
110. Längle A. The art of involving the person: fundamental existential motivations as the structure of the motivational process. *Eur Psychother.* 2003;4(1):25–36.
111. Wayment HA, Bauer JJ, Sylaska K. The quiet ego scale: measuring the compassionate self-identity. *J Happiness Stud.* 2015;16(4):999–1033. doi:10.1007/s10902-014-9546-z
112. Golden HL, Vosper J, Kingston J, Ellett L. The impact of mindfulness-based programmes on self-compassion in nonclinical populations: a systematic review and meta-analysis. *Mindfulness.* 2021;12(1):29–52. doi:10.1007/s12671-020-01501-8
113. Wilson AC, Mackintosh K, Power K, Chan SWY. Effectiveness of self-compassion related therapies: a systematic review and meta-analysis. *Mindfulness.* 2019;10(6):979–995. doi:10.1007/s12671-018-1037-6
114. Neff KD, Germer CK. A pilot study and randomized controlled trial of the mindful self-compassion program. *J Clin Psychol.* 2013;69(1):28–44. doi:10.1002/jclp.21923
115. Smeets E, Peters M, Alberts H, Peters M. Meeting suffering with kindness: effects of a brief self-compassion intervention for female college students. *J Clin Psychol.* 2014;70(9):794–807. doi:10.1002/jclp.22076
116. Gilbert P, Procter S. Compassionate mind training for people with high shame and self-criticism: overview and pilot study of a group therapy approach. *Clin Psychol Psychother.* 2006;13(6):353–379. doi:10.1002/cpp.507
117. Fong M, Loi NM. The mediating role of self-compassion in student psychological health. *Aust Psychol.* 2016;51(6):431–441. doi:10.1111/ap.12185

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