

Direct and Indirect Effects of Strength-Based Parenting on Depression in Chinese High School Students: Mediation by Cognitive Reappraisal and Expression Suppression

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Purpose: A growing amount of research has been dedicated to the protective role of strength-based parenting in psychological distress. Strength-based parenting is a style of parenting in which parents are conscious of their children's strengths, and encourage them to develop and make use of those strengths. However, the mechanisms linking strength-based parenting to depression are not well known. Drawing on the social-emotional learning model, this study examined the association between strength-based parenting and depression and the indirect role of emotion regulation (ie, cognitive reappraisal and expression suppression).

Materials and Methods: A total of 750 Chinese middle school students from two middle schools completed questionnaires comprising the Strength-based Parenting Scale, the Emotion Regulation Scale, the Center for Epidemiologic Studies Depressive Scale, and sociodemographic characteristics. A total of 695 students provided accurate responses to the two validity check questions, and were thus retained in the final study sample. Of the final sample, 348 (50.1%) were girls, and the respondents overall had an average age of 16.22 years. The direct and indirect paths from strength-based parenting to depression were analyzed using structural equation modeling.

Results: The results showed that strength-based parenting negatively predicted depression and cognitive reappraisal, while strength-based parenting positively predicted depression. Strength-based parenting indirectly predicted depression through cognitive reappraisal and expression suppression.

Conclusion: These findings suggest an underlying process by which high strength-based parenting resists depression by increasing cognitive reappraisal and decreasing expression suppression. It is necessary to implement a comprehensive intervention strategy that focuses on strength-based parenting and emotion regulation (eg, cognitive reappraisal).

Keywords: strength-based parenting, depressive, cognitive reappraisal, expression suppression, Chinese

Introduction

In both the general and clinical populations, depression is one of the most frequent internalizing psychopathologies worldwide. The adolescent stage encompasses a high prevalence of depression due to the physiological and psychological changes that take place.¹ According to a recent meta-analysis, the prevalence of clinically diagnosed depression among Chinese children and adolescents was found to be 1.3%.² Moreover, the detection rate of depression in the Chinese adolescent population ranged from approximately 5.8% to 17.0%, with an increasing trend year on year.^{3,4} Based on a recent investigation, the detection rate of depression among Chinese adolescents has reached 24.6%.⁵ Depression, which contributes to decreased academic performance, family dysfunction, and decreased life expectancy, is frequently accompanied by a high suicide risk.^{6,7} Research which conducted on 331 Chinese adolescents aged 11–18 with depressive disorders, showed that the incidence of suicide attempts in adolescents with depressive disorder was

53.78%.⁸ Considering the negative effects of depression, it is crucial to develop and implement effective preventative measures and interventions for depression in adolescents. On 11 September 2020, China's health authority unveiled an action plan titled "The Action Plan to Develop Specialized Services for the Prevention and Treatment of Depressive Disorders", particularly among vulnerable groups such as adolescents.⁹ Therefore, it is crucial to continue identifying the potential protective factors and processes for adolescent depression.

Recent studies have revealed that strength-based parenting acts as a protective buffer against depression in adolescents in the Western context.^{10,11} As strength-based parenting is a relatively new concept, very little is known regarding its applicability outside of this Western context (eg, in Chinese societies).¹² The social-emotional learning model proposes that educators should foster social and emotional competencies to help children and adolescents navigate school and life successfully.^{13,14} Emotion regulation is widely recognized as a crucial ability impacting adolescents' development.¹⁵ Cognitive reappraisal and expression suppression are considered two major emotion regulation strategies in the process model of emotion regulation.¹⁶ Research has demonstrated that cognitive reappraisal contributes to adolescents' mental health, whereas expression suppression is linked to internalizing and externalizing problems.^{17–20} Therefore, our research examined the indirect associations of strength-based parenting and depression via emotion regulation (ie, cognitive reappraisal and expression suppression), drawing on the social-emotional learning model.

Strength-Based Parenting and Depression in Adolescents

Strength-based parenting refers to a type of parenting that is characterized by an intention to consciously recognize and cultivate the child's positive states, processes, and attributes.²¹ Strength-based parenting, which adheres to the process model rather than the content model of strengths, concentrates on how parents can assist their children in developing and enhancing their strengths, regardless of the kind of strength.²² Waters defined strength-based parenting as including two components: strengths knowledge and strengths use.^{21,23} Strength knowledge refers to parents' understanding and identification of their children's strengths, whereas strengths use involves the degree to which parents support their children to develop and make use of their strengths in a range of contexts. In this regard, strengths-oriented parents are conscious of their child's strengths, and encourage them to develop and make use of those strengths.²²

Moreover, strength-based parenting, a relatively new idea, has been claimed to build on the impacts of authoritative parenting, in which parents are encouraging, caring, and emotionally accessible but also establish clear limits and guidelines for their children, by motivating them to explore the world via their strengths and to utilize their strengths.^{21,24} Research has also demonstrated that strength-based parenting is a distinct parenting construct compared to other parenting styles (ie, autonomy-granting, responsiveness, and authoritative parenting).^{23,25} For instance, research has found that strength-based parenting remained associated with teenagers' life satisfaction after controlling for authoritative parenting, as it generates a "positive filter" that modifies how teenagers interact with their environment.²³

Furthermore, strength-based parenting is beneficial to foster a more trustworthy and respectful relationship between parents and children.^{10,22} In such a supportive atmosphere, parents act as a positive filter, allowing their offspring to focus on and develop their strengths.²³ Therefore, according to the stress-buffering theory of social support, strength-based parenting influences depression by functioning as a stress buffer.^{26,27} Evidence has suggested that strength-based parenting not only protects against the deleterious effects of stress, depression, anxiety, and negative emotions, but also buffers psychological distress through mental toughness and self-efficacy.^{10,11} In order to develop effective prevention and treatment strategies, the mechanisms underpinning strength-based parenting and depression in adolescents is needed to further delineate.

Emotion Regulation and Depression in Adolescents

Emotion regulation is a multidimensional, heterogeneous, and complicated set of processes through which an individual modulates the intensity, frequency, and duration of their emotional responses.^{16,28} The stress appraisal pattern states that an individual's interpretation of stressors and their available coping mechanisms determine the effects of stressful events on psychological distress.²⁹ Therefore, the emotion regulation strategy is considered an important factor in the stress-appraising process.

The empirical work in Gross's process model of emotion regulation focuses on cognitive reappraisal and expression suppression.¹⁶ Cognitive reappraisal is an antecedent-oriented coping strategy, which refers to reframing one's experience and altering negative cognitive biases to manage and modify emotional distress.^{30,31} Meanwhile, expression suppression is a response-focused approach, which involves the inhibition of external expression of emotion. Past research has demonstrated that cognitive reappraisal is a positive emotion regulation mechanism, which is relevant to decreasing depressive symptoms.^{32,33} By contrast, expression suppression has been established as a predictor and maintainer of depression.^{33,34} Moreover, the results of a meta-analysis, which included 106 empirical studies from China, demonstrated that cognitive reappraisal in children and adolescents is negatively and significantly linked to negative indicators (ie, subjective well-being and life satisfaction), while expression suppression is positively and significantly linked to negative indicators (ie, anxiety and depression).³⁵ However, there is little evidence regarding the relationship between strength-based parenting and emotion regulation.

Strength-Based Parenting, Emotion Regulation, and Depression in Adolescents

Strength-based parenting may promote the development of adaptive emotion regulation skills and reduce the usage of maladaptive emotion regulation skills. Based on the tripartite model of familial influence, parenting style and parent–child interactions influence the development of emotion regulation skills.^{36,37} During adolescence, the best way for parents to increase their offspring's development of adaptive emotion regulation is promoting autonomous emotion regulation and creating a safe atmosphere, in which adolescents may accept and deal with negative feelings.³⁶ Moreover, adolescents who perceive more emotionally warm understanding and autonomous support utilize positive emotion regulation approaches more frequently and non-adaptive emotion regulation approaches less frequently.³⁸ If strength-based parenting provides a supportive environment, this parenting style could be associated with high levels of adaptive emotion regulation and low levels of maladaptive emotion regulation. Past investigations have shown that strength-based parenting is positively connected with strength-based coping, mental toughness, and persistence.^{11,21,25} Moreover, strength-based parenting has been shown to be positively associated with positive reappraisal and emotion processing.³⁹ Hence, we suspect that strength-based parenting is not only positively linked to cognitive reappraisal, but also negatively related to expression suppression.

We also speculate about whether strength-based parenting could indirectly connect with depression through emotion regulation. The social–emotional learning model can serve as a theoretical basis to support our hypothesis. Social–emotional learning is a positive development paradigm and involves the process of helping individuals to gain the ability and skill to comprehend, control, and express social and emotional aspects in their lives.^{13,14,40} According to the social–emotional learning model, effective parenting can directly cultivate adolescents' social–emotional competences, leading to sufficient adequate development and social functioning (eg, decreased depression).^{13,14} Based on the aforementioned rationale, prior investigations among adolescents have examined the mediating effect of self-efficacy and mental toughness in the relationship between strength-based parenting and psychological distress (ie, depression, anxiety, and stress).^{10,11} Similarly, the linkage between strength-based parenting and stress-related growth has been showcased to be mediated by school belonging, emotional processing, and positive reappraisal.³⁹

The Chinese Context

Exploring the function of strength-based parenting in the emotion regulation and depression of adolescents in Chinese society is crucial for two reasons. First, Chinese parenting styles are evolving with time as a result of fast sociological and economic development.^{41,42} Traditional Chinese parenting is often labeled as being of strict discipline, with limited displays of affection, and a high level of restraint under the influence of Confucianism and collectivist philosophy.^{43,44} However, Chinese parenting approaches have been shifting from traditional Chinese parenting to child-centered parenting as a result of globalization and modernization.^{45,46} In 2021, the Chinese government adopted a new law on family education promotion to enhance Chinese parents' cultivation, guidance, and influence in their offspring's moral character, physical health, living skills, cultural attainment, and behavioral habits.⁴⁷ In this regard, Chinese parents may benefit greatly from strength-based parenting, which focuses on identifying, fostering, and making use of their children's

strengths. However, little is known about the developmental consequences (ie, emotion regulation and depression) of strength-based parenting among Chinese adolescents.

Second, Chinese cultures value social harmony and emotional control.^{48–50} In Chinese cultures, expressing “ego-focused” emotions such as wrath, pride, or disgust is viewed as destructive to social interactions.⁵¹ As such, due to the possible benefits of social communication, the practice of expression suppression is likely less detrimental to mental health in the context of Asian cultures than it is in the context of Western cultures which encourage free and open emotional expression.⁵² Expression suppression has been shown to be linked to increased depressive symptoms and decreased well-being in European Americans, whereas no association with depressive symptoms and well-being has been seen in Chinese college students.⁵² Similarly, suppression of negative emotions has been shown to be negatively associated with life satisfaction and eudemonic well-being for Mexican Americans, but unrelated to those same positive outcomes in Chinese Americans.⁵³ In contrast, expression suppression has been found to have a positive link to depressive symptoms among Chinese adolescents.^{20,54} Expressive suppression also appears to have different associations with depression in Chinese college students than it does in Chinese adolescents. This could be because Chinese adolescents are less adept at managing their emotions via expressive suppression, while Chinese college students may, through more practice, have grown to be more able to efficiently regulate emotion via expressive suppression.⁵⁴ Indeed, there is a need for additional research into how expression suppression is associated with depression in a Chinese context, as Chinese people have begun to place a higher emphasis than previously on the expression of their thoughts and feelings.^{55,56} In addition, the effect of age should be controlled for while investigating the relationships between expressive suppression and depression.

This study primarily explored the direct and indirect pathways of strength-based parenting on depression via intermediate variables—namely, emotion regulation (ie, cognitive reappraisal and expression suppression) among selected high school students in mainland China. Based on stress appraisal patterns, the social–emotional learning model, and the abovementioned literature review, four hypotheses were established. First, strength-based parenting will negatively predict depression (Hypothesis 1, H1). Second, cognitive reappraisal will negatively predict depression, while expression suppression will positively predict depression (Hypothesis 2, H2). Third, strength-based parenting will positively predict cognitive reappraisal, while strength-based parenting will negatively predict expression suppression (Hypothesis 3, H3). Fourth, strength-based parenting will have indirect paths to depression through cognitive reappraisal and expression suppression (Hypothesis 4, H4). The hypothetical model is illustrated in [Figure 1](#). Moreover, we took into

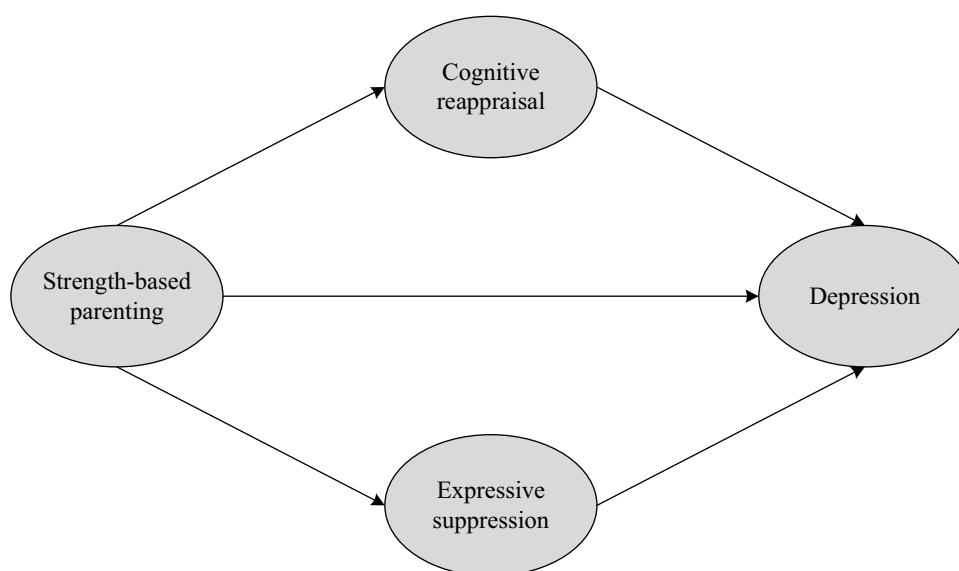


Figure 1 Conceptual Model of the Relationships among Strength-Based Parenting, Cognitive Reappraisal, Expressive Suppression, and Depression.

account the effects of gender and subjective social status to decrease endogeneity bias,⁵⁷ as several research works have demonstrated substantial connections between gender, subjective social status, and depression.^{20,58}

Materials and Methods

Participants

Between October and November 2020, 750 Chinese adolescents from two Chinese high schools were recruited via a convenience sampling strategy. In the mental health education course, the high school students voluntarily completed the paper-and-pencil questionnaires and reported their demographic characteristics (ie, gender, age, registered permanent residence, subjective social status, and highest educational attainment of their parents), while senior psychology undergraduates read the research instructions aloud. Before handing in their completed surveys, the participants were reminded by their instructors to double-check their responses for any missing data. The surveys contained two validity check questions (eg, “Please indicate ‘6 = agree’ for this item”) to reduce the impact of random replies and inattention. Only those students who provided accurate responses to the validity check questions were retained in the final sample. Finally, 695 students (92.67%) provided eligible responses. The ages of the participants varied from 14 to 18 years ($M_{age} = 16.22$, $SD = 0.74$), and half of the respondents were girls (50.1%, $n = 348$), with the majority coming from urban regions (54.2%, $n = 377$). The majority (97.3%, $n = 676$) were of Han ethnicity and had at least one sibling (84.9%, $n = 590$). Regarding their parents’ highest levels of education, the majority had finished secondary school (78.8%, $n = 548$), while the remaining had completed either university education (12.8%, $n = 89$) or primary school education (8.3%, $n = 58$).

Measures

Strength-Based Parenting

The Strength-Based Parenting (SBP) Scale was used to measure strength-based parenting.⁵⁹ This measure consists of two subscales: SBP-knowledge and SBP-use. The SBP-knowledge subscale, which includes seven items (eg, “My parents see the things I do best”), assesses adolescents’ perception of their parents realizing their strengths. Meanwhile, the SBP-use subscale, which also comprises seven items, evaluates how often adolescents perceive their parents to encourage them to make use of their strengths. Respondents rate the statements from 1 (strongly disagree) to 7 (strongly agree) on a seven-point Likert scale. A higher score indicates that more strength-based parenting has been received. A Chinese version of the SBP Scale was developed via a translation and a back-translation process. As shown in this study, the two-factor model revealed an adequate degree of fit to the data: $\chi^2 = 424.95$, $df = 76$, the comparative fit index (CFI) = 0.95, Tucker–Lewis index (TLI) = 0.94, and root mean square error of approximation (RMSEA) = 0.08. SBP-knowledge, SBP-use, and overall scores had Cronbach’s alpha values of 0.91, 0.93, and 0.95, respectively.

Emotion Regulation

The Chinese version of the Emotion Regulation Scale was used to measured emotion regulation strategies.⁶⁰ It consists of two subscales: cognitive reappraisal (six items, eg, “When I want to feel less negative emotion, I change the way I’m thinking about the situation”) and expressive suppression (four items, eg, “I control my emotions by not expressing them”). Each item is rated using a seven-point scale, from 1 (strongly disagree) to 7 (extremely agree). Higher scores indicate greater habitual use. In our study, the Cronbach’s α value for the subscales of cognitive reappraisal and expressive suppression were 0.80 and 0.79, respectively.

Depression

The Chinese version of the Center for Epidemiologic Studies Depression Scale (CES–D) was used to evaluate the severity of depressive symptomatology, which consists of 4 items using positive words (ie, “I was happy”) and 16 items using negative words (ie, “I feel depressed”).^{61,62} Participants rate each item using a four-point scale, from 0 (rarely; less than 1 day) to 3 (most or all of the time; 5–7 days) during the previous week. The four positive affect items were reversed and all items were added together to generate a depression score. Higher scores indicate greater degrees of depression. In this investigation, the Cronbach’s α value for the total score was 0.91.

Subjective Social Status

The MacArthur Scale of Subjective Social Status is a measure to test how individuals feel about their own social status by showing them a photograph of a “social ladder” with 10 rungs. Individuals are invited to choose the step that most accurately defines their involvement in their community. A higher position on the ladder indicates a greater social status. According to previous studies, subjective social status has a positive correlation with one’s income, occupation, and level of education.^{63,64}

Data Analyses

First, we conducted Harman’s single-factor test to determine the extent of common method bias through SPSS 25.0, as our data came from a single source (ie, student self-reports).^{65,66} Second, using SPSS 25.0, we also supplied bivariate Pearson’s correlation coefficients between the key variables in our study. Third, we performed structural equation modeling (SEM) through the maximum likelihood estimator to investigate our four hypotheses (see Figure 1).⁶⁷ Strength-based parenting (two parcels), cognitive reappraisal (three parcels), expressive suppression (four items), and depression (three parcels) were modeled as latent variables. To prevent exaggerated measurement errors owing to many items of the latent variables, a domain-representative technique was employed to combine measures of parenting strengths into two and depression into three parcels.⁶⁸ As such, cognitive reappraisal aggregated three indicators using internally consistent unidimensional parcels.⁶⁹ Moreover, we included age, gender (ie, boy = 1) and subjective social status as covariates in the SEM models. To evaluate the fitness of the models, CFI, TLI, and RMSEA were utilized. CFI and TLI values of more than 0.95 and an RMSEA of less than 0.06 suggest good model fit, whereas CFI and TLI values above 0.90 and RMSEA below 0.08 indicate appropriate model fit.^{70,71} Finally, we employed bootstrap procedures with 5000 samples and a 95% confidence interval to investigate multiple mediation effects (95% CI).⁷²

Results

Common Method Deviation Test

The findings of Harman’s single-factor test through exploratory factor analysis with principal component analysis indicated that the first factor explained 27.43% of the variance of all measurement items, less than 40% of the variance. Moreover, when all items from the strength-based parenting (ie, knowledge and use), cognitive reappraisal, expressive suppression, and depression (ie, somatic, affective, and positive) were loaded into one factor, the results revealed that the one-factor CFA model had an inadequate fit to the data ($\chi^2 = 9372.69$, $df = 902$, $CFI = 0.48$, $TLI = 0.46$, and $RMSEA = 0.12$). Compared to the multifactor model ($\chi^2 = 2362.40$, $df = 880$, $CFI = 0.91$, $TLI = 0.90$, and $RMSEA = 0.05$), the goodness-of-fit index of the one-factor CFA model was worse. Thus, common method bias was not a serious issue in our study.

Associations Among Strength-Based Parenting, Cognitive Reappraisal, Expressive Suppression, and Depression

Both strength-based parenting and cognitive reappraisal were positively and significantly related to depression, whereas expressive suppression was negatively and significantly linked to depression. Similarly, strength-based parenting was positively and significantly connected with cognitive reappraisal, but negatively and significantly related to expressive suppression (see Table 1).

Table 1 Mean (M), Standard Deviations (SD), and Correlations Between the Variables (N = 695)

Variables	M	SD	1	2	3
1. Strength-based parenting	4.18	1.19	-		
2. Cognitive reappraisal	5.05	0.93	0.25 ***	-	
3. Expressive suppression	4.21	1.31	-0.23 ***	-0.04	-
4. Depression	17.85	10.75	-0.36 ***	-0.46 ***	0.34 ***

Notes: *** $p < 0.001$.

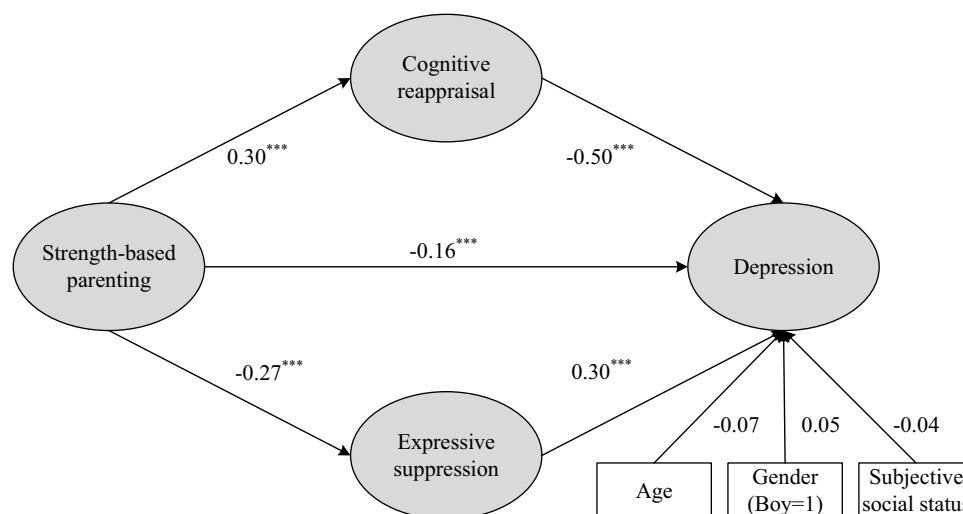


Figure 2 Structural Equation Model with Standardized Coefficients.

Note: Error terms are omitted for simplicity; *** $p < 0.001$.

Analyses of Direct and Indirect Effects

The results of the hypothetical model demonstrated an adequate fit to the data, ($\chi^2 = 300.88$, $df = 82$, $CFI = 0.94$, $TLI = 0.92$, and $RMSEA = 0.06$), and all of the latent variables' factor loadings were significant and above 0.45. The results of the mediation analysis are presented in Figure 2. In line with H1, strength-based parenting negatively predicted depression. H2 was also supported, as cognitive reappraisal negatively predicted depression, whereas expressive suppression positively predicted depression. H3 was supported because strength-based parenting positively predicted cognitive reappraisal, but negatively predicted expressive suppression. The results of the bias-corrected bootstrapping analyses also supported H4. The results showed that the indirect effect of strength-based parenting on depression through cognitive reappraisal were significant, because the lower and upper limits of their respective confidence intervals were devoid of zero. The indirect effect of strength-based parenting on depression through expressive suppression was also significant, as zero did not fall within the lower and upper limits of its confidence intervals (see Table 2).

Discussion

The protective role of strength-based parenting in psychological distress has garnered empirical support.^{10,11} However, we know comparatively little about the processes involved in emotion regulation as a connecting function, especially in non-Western or collectivist contexts. Based on stress appraisal patterns and the social-emotional learning model, the current research examined the association between strength-based parenting and depression and the mediating effects of cognitive reappraisal and expressive suppression among Chinese middle school students. Our results expand our knowledge of how strength-based parenting is associated with depression among Chinese adolescents. Our research indicated that strength-based

Table 2 Results of the Direct and Indirect Effects of Strength-Based Parenting on Depression (N = 695)

Pathways	Standardized Effect	BCa 95% CI
Strength-based parenting → depression	-0.16 ***	[-0.24, -0.07]
Strength-based parenting → cognitive reappraisal	0.30 ***	[0.17, 0.41]
Strength-based parenting → expressive suppression	-0.27 ***	[-0.37, -0.18]
Strength-based parenting → cognitive reappraisal → depression	-0.15 ***	[-0.21, -0.09]
Strength-based parenting → expressive suppression → depression	-0.08 ***	[-0.12, -0.05]

Note: BCa 95% CI = bias-corrected and accelerated bootstrapped estimates at the 95% confidence interval; *** $p < 0.001$.

parenting could significantly predict decreased levels of depression. The findings also indicated that strength-based parenting indirectly predicted depression through cognitive reappraisal and expressive suppression.

Consistent with previous research, our results demonstrated that higher rates of strength-based parenting were linked to lower degrees of depression.^{10,11} These findings may be partially explained by the protective effect of strength-based parenting. A strength-oriented parent uncovers and nurtures teenager's positive states, processes, and attributes.²¹ Put differently, strength-oriented parents who encourage their children to recognize their underlying strengths and realize their full potential are better at cultivating adolescents' inner resources and strength (eg, self-efficacy, mental toughness, and resilience),^{21,23,25} as well as helping adolescents make use of their strengths.⁵⁹ According to the conservation of resource theory and the aware-explore-apply model of character strength, strength and strength use are conducive to boosting positive affect and buffering psychological distress such as depression.⁷³⁻⁷⁵ Moreover, strength-based parents who often observe, nurture, and celebrate their children's strengths are highly supportive.^{21,23} Supportive parenting may enhance the satisfaction of fundamental needs for competence and relatedness, which is associated with higher psychological well-being and low psychological distress.⁷⁶ Therefore, strength-based parenting can be considered a protective factor against depression.

As the highlight of our research, higher rates of strength-based parenting predicted greater use of cognitive reappraisal and less use of expressive suppression. These results are in line with previous findings that strength-based parenting predicts positive reappraisal and emotion process,³⁹ supporting the tripartite model on the impact of the family on adolescents' emotion regulation.^{36,37} According to this tripartite model, adolescent emotion regulation is influenced by observation of their parents' emotion management, emotion-related parenting activities, and the emotional environment of the family.^{36,37} On the one hand, strength-based parenting can provide a positive filter to build adolescents' positive identity through guidance of their awareness, exploration, and application of their strengths. Adolescents exposed to strength-based parenting may learn to be more optimistic, tough, and perseverant.^{11,21,25} They may be more likely to identify the bright side of emotional situation and reappraisal of negative stimulation. On the other hand, strength-based parenting can develop warm, reliable, and pleasant connections, as well as build positive parent-child interactions.¹⁰ Positive parent-child interactions may help adolescents feel supported and emotionally secure. An emotionally secure base in which adolescents experience closeness and warmth enable them to express their emotions more easily and in socially acceptable ways.³⁷

In agreement with previous research, our findings suggested that both higher use of cognitive reappraisal and lower use of expressive suppression predicted lower levels of depression.²⁵ It is noteworthy that the outcomes of expression suppression seem to be influenced by cultural values.^{77,78} While some prior studies have revealed either a non-significant or a positive relationship between suppression and depression in Chinese adolescents and college students,^{52,54} more recent research has suggested that expression suppression has harmful impacts on mental health among Chinese adolescents.^{25,79} China has undergone tremendous socioeconomic changes over the last several decades. Research has shown that the cultural values of individualism are on the rise, and Chinese people are growing more emotionally expressive in contemporary China.^{80,81} The high school students in the present study from Guangdong Province in China, the pioneer region and frontline of China's reform policies, are more susceptible to globalization and Western cultures. This might explain why higher expression suppression was linked to higher depression symptoms in our adolescent sample.

More importantly, our results showed that strength-based parenting had indirect effects on depression through cognitive reappraisal and expressive suppression. This result is also consistent with prior investigation about the indirect effect of strength-based parenting on stress-related growth in adolescents, with positive reappraisal and emotional processing.³⁹ According to our findings, emotion regulation is an experiential consequence influenced by strength-based parenting and an internal motive influencing psychological adaptability.⁸¹ Strength-based parenting is a positive parenting approach that enables positive emotion regulation and decreases the danger of negative emotion regulation, which in turn facilitates distress management. This research contributes to the body of knowledge on the psychological benefits of strength-based parenting by presenting preliminary evidence on the potential role of emotion regulation in the negative relationship between strength-based parenting and depression among adolescents in collectivist contexts.

The social-emotional learning model can illustrate the mediating role of emotion regulation found in the association between strength-based parenting and depression in our research. According to the social-emotional learning framework, family partnerships are important for social-emotional learning development.^{13,14} When placed into strength-based parenting, adolescents are reminded of their strengths and are encouraged to develop and utilize their strengths, allowing them to create a positive self-identity and a positive view of other people and the world. Indeed, investigations have indicated that strength-based parenting is positively linked with strength-based coping, self-efficacy, and school belonging.^{10,21,39} Adolescents with positive thoughts are more likely to reframe an emotional situation as less emotional, thus helping them resist depression. Similarly, a close and warm climate in which strength-based parenting promotes youths' positive development, allows adolescents the freedom to express emotions while not inhibiting outward expression when emotionally aroused, thereby mitigating the influence of negative emotion (eg, depression).

The current research has important implications for depression prevention and intervention, as well as family education promotion. First, our investigation indicated that strength-based parenting can be helpful for parents to buffer depression in adolescents, as well as scaffold adolescents' emotion regulation. Thus, when interacting with adolescents, parents should be encouraged to adopt strength-based parenting. Strength-based parenting can be introduced and explained in parenting education programs by counselors and psychologists who work in community health centers, school counseling services, and family-school communication services. Indeed, a previous study demonstrated that strength-based parenting interventions can enhance parental self-efficacy and well-being.²² Considering the strong emphasis placed on hierarchy in parent-child interactions and humility in Confucian principles, Chinese parents who practice strength-based parenting may encounter difficulties and confrontations.^{12,82} Second, the investigation of the mediating mechanism found that cognitive reappraisal and expressive suppression are the closest influencing factors to depression. Thus, if these two factors are addressed, the risk of depression may be reduced more effectively. School administrators and teachers could take into account accurate evaluation of students who use negative emotion regulation skills frequently. When trying to avoid depression in students who are at risk and lack the capacity for cognitive reappraisal, school counselors may concentrate on strengthening adaptive emotion regulation.

There are still some limitations in this study that should be discussed. First, since the participants in this research were high school students from two mainland Chinese schools, the results cannot be generalized to high school students in other Chinese communities. To increase the generalizability of the results to more various and representative populations, more research is required. It would be particularly interesting to investigate the association between strength-based parenting and clinical depression above and beyond the parent-child interaction. Additional studies are also needed to help us better understand the mediating role of other emotion regulation strategies (eg, rumination, withdrawal, distraction) in the connection between strength-based parenting and depression. Second, the current study used a cross-sectional design, which was unable to shed light on how strength-based parenting links to cross-temporal variations of emotion regulation and depression. As such, we must be careful with our interpretations of the findings. The causal association between strength-based parenting, emotion control, and depression need further longitudinal research. Third, even though the back-translated version of the Strength-Based Parenting Scale has revealed satisfactory psychometric properties, it has not been validated among Chinese adolescents. Follow-up research is warranted to investigate the psychometric properties of the Strength-Based Parenting Scale among Chinese adolescents. Finally, our analyses relied solely on self-report data, increasing the risk of being affected by common method bias.⁶⁵ In future studies, efforts should be made to address this disadvantage by gathering data from a wide variety of sources (eg, parents).

Conclusion

In conclusion, our research demonstrated the relationships between strength-based parenting, emotion regulation and depression in Chinese high school students. Our results indicated that high strength-based parenting was not only directly linked to decreased depression symptoms, but also associated with decreased depression symptoms through increased cognitive reappraisal and decreased expression suppression among Chinese high school students. These findings provide knowledge for family education promotion as well as depression prevention and intervention. It is necessary to implement a comprehensive intervention strategy that focuses on strength-based parenting and emotion regulation (eg, cognitive reappraisal).

Acknowledgments

This research was conducted in accordance with the 1964 Declaration of Helsinki and was also approved by the Human Research Ethics Committee of Zhaoqing University. Informed Consent Participants were fully informed of the content and purpose of the survey before participating. Informed consent was obtained from all participants and their parents or legal guardians in this study.

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Disclosure

The authors report no conflicts of interest in this work.

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