



# Child Maltreatment and Suicide Ideation in Rural China: The Roles of Self-compassion and School Belonging

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## Abstract

Child maltreatment as a significant risk factor for suicide behavior is one of major challenges faced by the child welfare system in China. However, few studies have focused on child maltreatment of rural Chinese children. Furthermore, research has not examined the protective factors between the linkage of child maltreatment and suicide ideation. This study aimed to fill the research gap by investigating the mediating role of self-compassion and the moderating role of school belonging in the association between child maltreatment and suicidal ideation. We used convenience sampling strategy to collect data from four schools and 31 classes in rural area in Hunan, China in 2018. Participants included 1167 students in grades seven through nine. SPSS macro PROCESS was used to examine the mediating effect of self-compassion and moderating effect of school belonging in the association between child maltreatment and suicide ideation. The findings indicated that rural children reported a higher level of child maltreatment history than their urban counterparts. Emotional abuse, emotional and physical neglect were all positively associated with suicide ideation through decreased self-compassion. In addition, school belonging could moderate the direct relations between emotional abuse and suicide ideation. The findings suggested that it is of great importance to include self-compassion and school belonging into mental health intervention programs for rural adolescents with child maltreatment experiences. Programs that teach students self-compassion and resources that help adolescents develop a sense of school belonging and inclusion should be provided in schools in rural China.

**Keywords** Child maltreatment · Suicide ideation · Rural Chinese children · Self-compassion · School belonging

Child maltreatment has been one of the major challenges faced by the child welfare system in China. It is estimated that 26.6% of children under 18 years old have suffered physical abuse, and the rates for emotional abuse (19.6%), sexual abuse (8.7%), and emotional and physical neglect (26%) were substantial as well (Fang et al., 2015). Child maltreatment has led to great psychological distress, risk behaviors and economic burden (Fang, Brown, Florence, & Mercy, 2012; Fry, McCoy, & Swales, 2012; Shonkoff, Boyce, & McEwen, 2009). Specifically, childhood maltreatment has serious adverse effect on adolescent mental health and behavioral problems (Mills et al., 2012), such as depression (Klumparendt, Nelson, Barenbrügge, & Ehring,

2019), substance use (Appleyard, Berlin, Rosanbalm, & Dodge, 2011), and suicide ideation and attempts (Brodsky & Stanley, 2008; Currier & Mann, 2008; Miller, Esposito-Smythers, Weismore, & Renshaw, 2013). Among these, the association between childhood maltreatment and adolescent suicidal behavior is of particular concern (Cicchetti, Rogosch, Sturge-Apple, & Toth, 2010). Research has found that child maltreatment is a risk factor for suicidal behavior not only in general population but also in clinical practice (Burke, Hellman, Scott, Weems, & Carrion, 2011; Khan et al., 2015).

Considering the robust association between child maltreatment and adolescent suicide behavior, accumulative studies have explored the process of this linkage. Research has examined negative emotion regulation, depression, and post-traumatic stress disorder as pathways from childhood maltreatment to suicidal behavior (Lloyd-Richardson, Perrine, Dierker, & Kelley, 2007; Shenk, Noll, & Cassarly, 2010). For example, cognitive processes including self-criticism, self-blame and impulsivity have been found to be

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associated with childhood maltreatment and later suicidal behaviors (Glassman, Weierich, Hooley, Deliberto, & Nock, 2007; Miller & Esposito-Smythers, 2013; Swannell et al., 2012). Kaplow, Gipson, Horwitz, Burch and King (2014) identified that emotional suppression mediated the relation between adversity and both suicidal thoughts and suicide attempts. Miller, Adams, Esposito-Smythers, Thompson and Proctor (2014) examined parental relationship quality, friendship quality, and depression as mediators of the association between child maltreatment and adolescent suicide ideation and found that depression mediated the above association. Auslander, Sterzing, Threlfall, Gerke and Edmond (2016) studied relationship between histories of childhood abuse and aggressive behaviors among adolescent girls involved in child welfare and found post-traumatic stress and depression fully mediated the relationship between emotional abuse and aggression, controlling for race, service use, and living situation. Fuller-Thomason et al. (2016) examined adverse childhood experiences and suicidal behavior and found depression, anxiety, substance abuse and chronic pain partially mediated the associations. However, many of the mechanisms explored have been focusing on negative factors that bridge the relation between child maltreatment and suicide behavior. Few studies have examined positive factors that alleviate the influence of adverse child maltreatment experiences on suicidal behavior (Wu, Chi, Lin, & Du, 2018; Xavier, Gouveia, & Cunha, 2016).

Although empirical research has consistently linked childhood maltreatment and adolescent suicide ideation, not all maltreated children have suicide ideations and behavior. This suggests that there may be possible moderators in this relationship (Frazier, Tix, & Barron, 2004). Since school context accounts for as much variance in students' experience of emotional distress as the family context, one possible moderator is school belonging, particularly at the middle school level. Strong sense of school belonging could enhance confidence and positive emotion and therefore moderate the relationship between child maltreatment and suicidal ideation. Conversely, sense of rejection in the school could increase adolescents' emotional distress including loneliness, violence and suicide (Kidger, Araya, Donovan, & Gunnell, 2012; Whitlock, Wyman, & Moore, 2014).

## Potential Roles of Self-compassion and School Belonging

Self-compassion is an important self-regulatory strategy to cope with personal pain, failure, inadequacies, or difficult life circumstances through acknowledging uncomfortable feelings (Neff, 2003). It includes three components: (a) the ability to be kind, caring, and understanding toward oneself in face of pain or failure, instead of being harshly

self-critical; (b) the ability to realize that mistakes, failure, or hardships are part of common human experience; and (c) the ability to keep a mindful and balanced approach of painful thoughts and feelings. Previous studies have indicated that self-compassion can promote the individual's mental health and general well-being (Barnard & Curry, 2011; Gilbert & Procter, 2006; Neff & McGehee, 2010). Individuals who are able to show compassion toward themselves can neutralize the harmful effects of self-critical thinking on/during depressive moods and give individuals alternatives to prevent from suicidal behavior (Luoma & Villatte, 2012; Neff & McGehee, 2010; Raes, 2011).

On the other hand, studies have found child maltreatment as an adverse early experience was negatively associated with self-compassion (Tanaka, Wekerle, Schmuck, Paglia-Boak, & MAP Research Team, 2011; Vettese, Dyer, Li, & Wekerle, 2011; Xavier et al., 2016). Previous research suggested that children with maltreatment experiences tended to view themselves as a potential source of the problem and believed that these events are expressions of their own intrinsic "badness" (Cloitre, Cohen, & Koenen, 2006). For example, Neff and McGehee (2010) found that children who were raised in aggressive parenting families demonstrated less self-compassion. Tanaka et al. (2011) also found emotional abuse, neglect and physical abuse could negatively predict self-compassion. However, self-compassion has been found to be a protective factor in reducing depression and suicidal ideation (MacBeth & Gumley, 2012).

School belonging reflects the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment (Hernández, Robins, Widaman, & Conger, 2017). Emerging evidence has shown that teacher support, happiness with school, school connectedness, and additional components of school environment (feeling safe at school, feeling close to people at school) had an inverse relationship with suicidal behavior and other problems (Eisenberg & Rensnick, 2006; Gallihier, Rostosky, & Hughes, 2004; Homma & Saewyc 2007; Kidger, Araya, Donovan, & Gunnell, 2012; Zhang, Mulhall, Flowers, & Lee, 2019). For example, Hill (2009) found that students with sense of belonging were less likely to report suicidal ideation because sense of belonging could buffer the development of depressive symptoms. In other words, sense of belonging in school may provide a safe environment to mitigate the negative consequences of children with abusive experiences in their family. The protective role of school belonging against suicidal ideation has also been revealed across more vulnerable groups, including students with risk factors, such as experiencing physical or sexual abuse (e.g., Eisenberg, Ackard, & Resnick, 2007), have been investigating by child welfare (He, Fulginiti, & Finno-Velasquez, 2015) and underscored the critical

importance of enhancing school belonging to protect against suicidal thoughts and behaviors.

## Present Study

Child maltreatment and associated mental health problems in Chinese context have been increasingly receiving academic attention over the past two decades (Fang et al., 2015; Lin, Li, Fan, & Fang, 2011). Child maltreatment was found to be positively associated with suicide ideations not only in cross-sectional but also in longitudinal studies (Cicchetti et al., 2010; Enns et al., 2006; Gibb et al., 2001). However, there is an increasing interest in understanding the pathway that bridge the linkage between child maltreatment and mental health consequences, and factors that may prevent or attenuate such a linkage (Alink, Cicchetti, Kim, & Rogosch, 2009).

Previous studies have mainly focused on the negative process through which adverse experiences in childhood trauma influenced suicidality (Wu, Chi, Lin, & Du, 2018). Not all children who had experienced child maltreatment developed emotional and behavioral problems (Luthar, Cicchetti, & Becker, 2000). Little research has examined if there are factors positively mediate or moderate the relationship between child maltreatment and suicide ideation.

The present study aimed to address the above research gaps by investigating the relationship between childhood maltreatment and suicide ideation in greater depth. First, we explored the mediating role of self-compassion through which childhood maltreatment experiences influence adolescent suicide ideation. Second, we examined the moderating role of school belonging in the association between childhood maltreatment and adolescent suicidal ideation. We evaluated the following three hypotheses:

**Hypothesis 1:** Child maltreatment is positively associated with the adolescents' suicide ideation;

**Hypothesis 2:** Child maltreatment is negatively associated with self-compassion, which in turn is negatively associated with suicide ideation;

**Hypothesis 3:** The influence of child maltreatment on suicide ideation is higher for adolescents with a lower level of school belonging than those with a higher level of school belonging.

## Method

### Participants and Procedure

The data for this study was based on a convenience sample from a survey conducted in December 2018 among rural

adolescents in Hunan Province, China. Rural adolescents in grades seven to nine were selected as eligible participants as they can understand the questions and fill in the questionnaires independently without any interventions from their teachers and parents. There were four rural schools and 31 classes involved in this survey. We firstly used a pilot survey with 15 adolescents from grades seven to nine in Hunan Province to identify problems with the questionnaire that might lead to biased answers and practical issues with implementation. After that, we administrated the questionnaire in classrooms in selected schools. Informed consents were obtained from students and their caregivers prior to the start of the survey, and students were informed they could quit the survey at any time and skip any question if they feel uncomfortable. The survey typically took about 30 min for students to complete. This research protocol was approved by the research ethics committee at the first author's university.

There were 1232 adolescents completed the questionnaire. We restricted the sample to students who had rural household registrations. We then excluded cases that had missing values on the dependent and independent variables using stepwise deletion. This resulted in a final sample size of 1167.

## Measures

### Childhood Maltreatment

Childhood maltreatment was measured using the Childhood Trauma Questionnaire-Short Form (CTQ-SF) developed by Bernstein and his colleagues (Bernstein et al., 2003). This scale included five dimensions: physical abuse (e.g., "people in my family hit me so hard that it left me with bruises or marks"), emotional abuse (e.g., "I thought that my parents wished I had never been born"), sexual abuse (e.g., "Someone tried to touch me in a sexual way, or tried to make me touch them"), physical neglect (e.g., "My parents were too drunk or high to take care of the family") and emotional neglect (e.g., "People in my family felt close to each other"). The responses ranged from 1 (never) to 5 (always), with higher scores indicating the participants experienced a higher level of maltreatment in their childhood. The Cronbach alpha coefficient of the total score of the Chinese CTQ-SF was 0.85 in our sample, and the internal consistency coefficients for five subscales were 0.80, 0.70, 0.79, 0.74 and 0.55, respectively. Tietjen et al. (2010) proposed that the cut-off scores of CTQ-SF scores to identify participants with a history of child maltreatment were emotional abuse  $\geq 9$ , emotional neglect  $\geq 10$ , physical abuse  $\geq 8$ , physical neglect  $\geq 8$ , and sexual abuse  $\geq 6$  respectively in the western societies, which have shown good sensitivity (89%) and specificity (97%). These cut-off scores have also been adopted to estimate the prevalence of child maltreatment

in Chinese context in both clinical samples and the general population (Li et al., 2014, 2015, 2017; Wu et al., 2018).

### Self-compassion

Self-compassion was measured using the 26-item Self-Compassion Scale developed by Neff (2003). It has been validated in Chinese adolescents and adults (Chen, Yan, & Zhou, 2011; Wu et al., 2018). It includes six subscales with responses ranging from 1 “totally false” to 5 (totally true), with three capturing the positive aspects of self-compassion, including: self-kindness (e.g., “when I am going through a very hard time, I give myself the caring and tenderness I need”); common humanity (e.g., “when I am down and out, I remind myself that there are lots of other people in the world feeling like I am”); mindfulness (e.g., “when something painful happens, I try to take a balanced view of the situation”); while the other three capture the negative aspects: self-judgment (e.g., “I am disapproving and judgmental my own flaws and inadequacies”); isolation (e.g., “when I think about my inadequacies, it tends to make me feel more separate and cut off from the rest of the world”); and over-identification (e.g., “when something upsets toward self I get carried away with my feelings”). Among these items, self-judgment, isolation, and over-identification were negatively worded questions. We reversely coded these items before computing the total score of self-compassion. The Cronbach alpha coefficient of self-compassion in our sample was 0.76.

### Suicide Ideation

Suicide ideation was measured by Adult Suicidal Ideation Questionnaire (ASIQ, Reynolds, 1991). It was revised and developed into a short Chinese version (Cheng & Fan, 2007) in accordance with social and culture context, which consists of ten items, e.g., “I thought how to end my life”. The respondents were asked to indicate the frequency of ten statements in the past one month from “1 = never” to “7 = always”. The original Chinese version of ASIQ has been demonstrated with excellent internal reliability and concurrent validity among Chinese adolescents in Hong Kong (Zhang et al., 2019). The Cronbach’s alpha of suicide ideation in this study was 0.94.

### School Belonging

The participants’ perception of school belonging was measured by the question “Do you feel happy at your school?” Respondents could answer yes or no to this question.

Family economic status was measured in terms of their subjective evaluations compared with their neighbors and relatives, and the responses ranged from “1 = very rich”, to

“5 = very poor”. Information on students’ age and gender were also collected.

### Data Analysis

The analyses were performed in two parts via IBM SPSS Statistics, version 22. First, descriptive statistics (including mean, standard deviation, Cronbach’s alpha of each variable, and zero-order correlation) were conducted. Second, SPSS macro PROCESS (Model 5) was adopted to examine the mediating effect of self-compassion and moderating effect of school belonging in the association between child maltreatment and suicide ideation. In addition, 5000 times bootstrapping method was used to estimate the indirect effects with 95% confidence intervals (CIs). Direct and indirect effects of child maltreatment on suicide ideation were shown with parameter estimates and bias-corrected 95% CIs. If the CI does not include zero, it suggests the direct and indirect effect is significant. We controlled for age, gender and family economic status when examining above direct and indirect effects. Once a significant moderating effect was identified, simple slope tests were performed to further interpret the interaction effects. Following the procedures outlined by Aiken, West, & Reno (1991), separate regression lines were computed, plotted and tested for individuals who were one standard deviation below the mean on the moderator, and one standard deviation above the mean of the moderator.

## Results

### Sample Characteristics

Table 1 presents the descriptive statistics of the sample. On average, the respondents were 13.34 ( $SD=0.95$ ) years of age, ranging from 11 to 15 years. About half of the participants were male (52.2%). The proportions of students in grades seven to nine were 38.6%, 41.4% and 20.1% respectively. A total of 28.0% students reported that their family was poor or very poor.

Of particular interest was the high prevalence rates of child maltreatment in this population. Students with emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect accounted for 43.2%, 33.6%, 33.4%, 87%, and 81.1% of the sample respectively, based on the cut-offs of previous studies (Tietjen et al., 2010). About 87.8% of the participants reported at least two forms of child maltreatment; among them, 29.3% reported two forms of child maltreatment, 23.4% reported three types of maltreatment, 19.9% reported four forms of child maltreatment, and 15.2% reported five types of maltreatment. In addition, compared with girls, boys were more likely to experience physical neglect ( $F=9.78, p < .01$ ) and abuse

**Table 1** Sample characteristics

	Total	Boys	Girls	F/ $\chi^2$
	M (SD)/%	M (SD)/%	M (SD)/%	
	N = 1167	n = 609	n = 558	
Age (11–15)	13.34 (0.95)	13.41 (0.93)	13.27 (0.96)	5.84*
Gender				
Female	52.2%			
Male	47.8%			
Grade level				0.89
Grade 7	38.6%	37.8%	39.4%	
Grade 8	41.4%	42.7%	40.0%	
Grade 9	20.1%	19.5%	20.6%	
Family economic status				1.94
Very rich	0.5%	0.7%	0.4%	
Rich	2.2%	2.6%	1.8%	
Fair	69.2%	69.3%	69.2%	
Poor	22.3%	22.2%	22.4%	
Very poor	5.7%	5.3%	6.3%	
Emotional abuse	8.73 (3.46)	8.74 (3.54)	8.73 (3.38)	.002
Physical abuse	7.27 (2.99)	7.88 (3.23)	6.61 (2.55)	54.60***
Sexual abuse	6.74 (2.96)	7.42 (3.42)	6.00 (2.12)	71.17***
Emotional neglect	13.92 (3.06)	13.79 (3.05)	14.06 (3.06)	2.37
Physical neglect	10.37 (3.14)	10.65 (3.08)	10.07 (3.18)	9.78**
Multiple types of maltreatment	87.8%	90.4%	84.9%	51.86***
Two types of maltreatment	29.3%	25.5%	33.5%	
Three types of maltreatment	23.4%	21.0%	26.0%	
Four types of maltreatment	19.9%	22.7%	16.8%	
Five types of maltreatment	15.2%	21.2%	8.6%	
Self-compassion	80.07 (11.89)	81.20 (11.36)	78.84 (12.35)	11.50**
School belonging	0.60 (0.49)	0.58 (0.49)	0.62 (0.48)	2.33
Suicide ideation	16.29 (8.36)	15.28 (7.83)	17.28 (8.80)	15.25***

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

( $F = 54.60$ ,  $p < .001$ ) as well as sexual abuse ( $F = 71.17$ ,  $p < .001$ ). However, boys also reported a higher level of self-compassion ( $F = 11.50$ ,  $p < .01$ ) and a lower level of suicide ideation ( $F = 15.25$ ,  $p < .01$ ).

Table 2 presents the zero-order correlations between child abuse (emotional abuse, physical abuse and sexual abuse) and neglect (emotional neglect and physical neglect), self-compassion, school belonging and suicidal ideation. Five types of child maltreatment were all positively associated with suicide ideation. The correlations between emotional abuse, physical abuse, sexual abuse, emotional neglect and physical neglect with suicide ideation were 0.50, 0.28, 0.23, 0.23 and 0.33 respectively at the  $p < .01$  level of significance. Self-compassion was positively associated with school belonging ( $r = .22$ ,  $p < .01$ ). In addition, both self-compassion and school belonging were negatively associated with suicide ideation ( $r = -.37$ ,  $p < .01$ ;  $r = -.25$ ,  $p < .01$ ).

### Direct, Mediating and Moderating Effect of Self-compassion and School Belonging

Table 3 firstly presents the direct effects of each type of child maltreatment on suicidal ideation while controlling the participants' age, gender and family economic status. Hypothesis 1, that child maltreatment would be positively associated with adolescents' suicide ideation was supported by our findings. The direct effect of emotional abuse on suicide ideation was significant ( $\beta = 0.391$ ,  $p < .001$ , 95% CI [0.314, 0.468]). The direct effect of physical neglect on suicide ideation was also significant ( $\beta = 0.114$ ,  $p < .001$ , 95% CI [0.039, 0.189]).

Table 3 then presents the indirect effects of self-compassion and school belonging on the association between each type of child maltreatment and suicide ideation were examined while controlling for the other four types of child maltreatment as well as participants' age, gender and family

**Table 2** Effects of self-compassion and school belonging on child maltreatment and suicide ideation (N = 1167)

Variables	Emotional abuse	Physical abuse	Sexual abuse	Emotional neglect	Physical neglect	Self-compassion	School belonging	Suicide ideation
Emotional abuse	1.00							
Physical abuse	.52**	1.00						
Sexual abuse	.42**	.51**	1.00					
Emotional neglect	.34**	.18**	.08**	1.00				
Physical neglect	.42**	.35**	.33**	.38**	1.00			
Self-compassion	-.30**	-.14**	-.06*	-.18**	-.19**	1.00		
School belonging	-.18**	-.08	-.12**	-.10**	-.20**	.22**	1.00	
Suicide Ideation	.50**	.28**	.23**	.23**	.33**	-.37**	-.25**	1.00

\*\*p &lt; .01

**Table 3** Effects of self-compassion and school belonging on child maltreatment and suicide ideation

	Unstandardized parameter estimate	SE	Bias-corrected 95% CI	
			Lower	Upper
Emotional abuse				
Direct effect	.391***	.039	.314	.468
Moderating effect of school belonging	-.145**	.047	-.238	-.051
Mediating effect through self-compassion	.054***	.011	.035	.078
Physical abuse				
Direct effect	.077	.039	-.005	.155
Moderating effect of school belonging	-.068	.047	-.160	.024
Mediating effect through self-compassion	.003	.007	-.011	.016
Sexual abuse				
Direct effect	.065	.036	-.006	.136
Moderating effect of school belonging	-.040	.046	-.132	.050
Mediating effect through self-compassion	-.014	.007	-.028	.000
Emotional neglect				
Direct effect	.065	.037	-.006	.138
Moderating effect of school belonging	-.087	.045	-.177	.002
Mediating effect through self-compassion	.012***	.006	.004	.025
Physical neglect				
Direct effect	.114**	.038	.039	.189
Moderating effect of school belonging	-.024	.047	-.117	.069
Mediating effect through self-compassion	.015***	.007	.003	.031

\*\*p &lt; .01, \*\*\*p &lt; .001

economic status. Hypothesis 2, that child maltreatment was negatively associated with self-compassion, which in turn was negatively associated with suicide ideation, was partially confirmed. The results showed self-compassion had mediating effect on the relationship between emotional abuse and suicide ideation ( $\beta = 0.054$ ,  $p < .001$ , 95% CI [0.035, 0.078]);

the relationship between emotional neglect and suicide ideation ( $\beta = 0.012$ ,  $p < .001$ , 95% CI [0.004, 0.025]), and the relationship between physical neglect and suicide ideation ( $\beta = 0.015$ ,  $p < .001$ , 95% CI [0.003, 0.031]). Physical abuse and sexual abuse were both not associated with suicide ideation either in direct or indirect pathways. Hypothesis 3, that

the influence of child maltreatment on suicide ideation was much higher for adolescents with a lower level of school belonging than those with a higher level of school belonging, was also partially supported by the results. We found that school belonging had moderating effect on the relationship between emotional abuse and suicide ideation ( $\beta = -0.145$ ,  $p < 0.01$ , 95% CI  $[-0.238, -0.051]$ ). Specifically, when the adolescent possessed higher level of school belonging, the association between emotional abuse and suicide ideation was less significant (see Fig. 1). School belonging did not have moderating effect in the associations between the other four types of child maltreatment and suicide ideation.

## Discussion

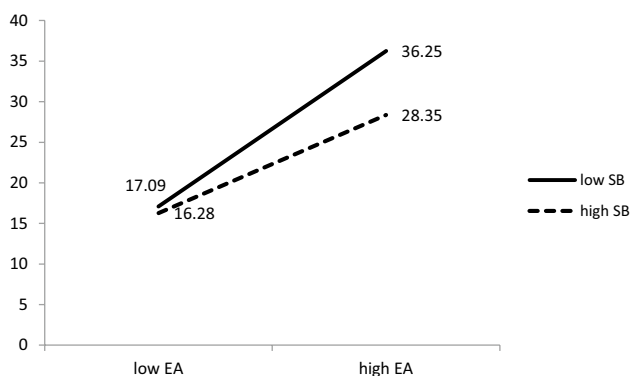
Based on our survey of rural adolescents in rural Hunan Province, this study explored the prevalence of child maltreatment, the association between maltreatment and suicide ideation, as well as the positive mediating effect of self-compassion and moderating effect of school belonging on the relationship between child maltreatment and suicide ideation. The prevalence rates of child maltreatment reported in our sample were much higher than those indicated in a previous study with Chinese adolescents in urban areas using the same child maltreatment measurement, in which the emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect were 43.2%, 33.6%, 33.4%, 87%, and 81.1% respectively (Li et al., 2014). The prevalence rates of child maltreatment reported in our sample were also higher than the national average found in a previous meta-analysis (Fang et al., 2015). This might be due to the extended absence of parents resulting from China's massive rural-to-urban migration in the recent years, as well as the lack of child protection awareness in rural China (Ma, Chen, Xiao, Wang, & Zhang, 2011; Wang et al., 2019). Consistent with previous studies (Han & Shao, 2019; Liu &

Tein, 2005; Taliaferro & Muehlenkamp, 2014), boys were more likely to experience physical neglect and abuse and less likely to report suicide ideation than girls. Gender difference in sexual abuse remained inconclusive, which deserves further attention. The results also showed that five types of child maltreatment were all negatively associated with self-compassion and positively associated with suicide ideation, which echo previous findings (Barlow, Turow, & Gerhart, 2017; Dunn, McLaughlin, Slopen, Rosand, & Smoller, 2013). People with a childhood maltreatment history were less likely to be compassionate with themselves (Cohen, Menon, Shorey, Le, & Temple, 2017; Coleman, Zawadzki, Heron, Vartanian, & Smyth, 2016).

The study also found that emotional abuse, emotional neglect, and physical neglect were associated with suicide ideation directly or indirectly through self-compassion, which is also consistent with previous findings (Huh, Kim, Lee, & Chae, 2017; Wu et al., 2018). However, physical abuse and sexual abuse were not associated with suicide ideation either directly or indirectly after controlling for other types of child maltreatment. One plausible explanation is self-compassion is more concerned with the emotional aspects of self in confronting personal pains or trauma (Neff & McGehee, 2010), therefore it might be more sensitive to emotional abuse and neglect. Another explanation is that adolescents tend to accept their parent's physical abuse in Chinese culture, and it has been normalized as a form of discipline in the name of love (Zhu, 2013). Meanwhile, sexual abuse may be subject to under-reporting influenced by Chinese traditional cultural values on female virginity (Viola et al., 2016), which may also result in the nonsignificant findings after controlling four other types of child maltreatment.

The results showed that sense of belonging to school could positively moderate the relationship between emotional abuse and suicide ideation. To be specific, rural adolescents experienced emotional abuse were less likely to have suicide ideation when they have higher perception of school belonging. This finding confirmed the protective role of school belonging for adolescents with emotional abuse experiences (Osterman, 2000). However, we did not find school belonging have any moderating effect on other types of child maltreatment on suicide ideation. This might be because that the sense of school belonging only measures the psychological process (Allen, Kern, Vella-Brodrick, Hattie, & Waters, 2018), which may be a proximal protective factor for the emotional aspects of child maltreatment.

This study has several limitations that should be pointed out. First, we used convenience sampling strategy. Despite the large sample size, our findings could not be generalized to all rural adolescents. Second, this is a cross-sectional design. Future research using longitudinal designs would be valuable to evaluate how self-compassion mediates and



**Fig. 1** The moderating effect of school belonging (SB) on emotional abuse (EA) and suicide ideation

school-belonging moderates the association between child maltreatment and suicide ideation over time. Third, school belonging was measured using only one question “do you feel happy at your school”. As Barber and Schluterman (2008) suggested, school belonging is a multi-dimensional concept including feeling part of the school, feeling safe in the school, and feeling happy at the school. Future studies using measures that cover the multi-dimensional concepts of school belonging are needed to examine its direct effects on suicide ideation and its moderating effects in the association between child maltreatment and suicide ideation. Fourth, only one moderator and one mediator were examined in the linkage between childhood maltreatment and suicide ideation. How other protective factors, such as resilience and peer relationships, moderate the effects of child maltreatment’s on suicide ideation are needed.

Despite these limitations, the study has provided an in-depth understanding of the relationship between childhood maltreatment and suicide ideation among adolescents in rural China. The unbalanced economic growth in recent decades in China has also posed serious challenges for the well-being of Chinese children, especially those in rural areas (Chen et al., 2015). As a response, China is developing a more comprehensive, multisectoral child welfare and child protection system to address the new challenges and to help those who at risk of abuse and neglect (Bow, 2012). This study shows that programs that teach students the concept of self-compassion, cultivate self-compassion, and practice self-compassion techniques, designed specifically for adolescents with child maltreatment experiences, could be of significant value in preventing adolescent suicide ideation. Given the severe stigma in seeking mental health services in China in combination with the lack of manpower in the mental health care professionals (Deva & D’Souza, 2012), experimenting such programs is even more important. Previous studies on short-term and long-term self-compassion programs with college have been proved to be effective in increasing self-compassion, school connectedness, and decreasing depression and anxiety (Neff, Rude, & Kirkpatrick, 2007; Yang, Liu, Shao, Ma, & Tian, 2015). Mindful self-compassion, as well as informal practices for use in daily life (e.g., self-compassionate letter writing) can be taught to the adolescents’ ways in which they can be aware of situations that are challenging, and how they can offer themselves kindness in these situations to prevent suicide ideation.

The study also has provided the first-hand empirical evidence on the protective role of school belonging in buffering the impact of emotional abuse on suicide ideation among rural adolescents. It suggests that resources and social services that help adolescents develop sense of school belonging and inclusion should be provided in schools in rural China. School social workers should promote school

belonging not only as a method for intervention, but also as a way to lay the groundwork for suicide prevention efforts that rely on a culture of connectedness (Lieberman, Poland, & Kornfeld, 2014). For example, social workers can work closely with administrators and staff to promote activities supporting student and adult interpersonal interactions. Previous research has shown that the quality and accessibility of adult relationships are critical factors in preventing adolescent suicide (Seeley, Rohde, & Jones, 2010). Assigned mentor and school-based mentoring programs could have potential for improving student connections (Gordon, Downey, & Bangert, 2013). Efforts can be made towards building trusting relationships and ensure that adolescents feel connected to at least one adult in the school. Particular care should be taken to identify and support students most at risk to suicide, including those who experience abuse and neglect and who may less likely to engage in school activities. Extracurricular programs that encourage positive relationship with teachers and staff, as well as activities that create positive peer culture of belonging and enhance parents’ involvement in schools can also be experimented.

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