

Original Paper

Harsh Parenting Reduces Self-Esteem of Adolescents via the Mediation of Interpersonal Sensitivity: The Modulating Role of Dispositional Mindfulness

Liwen Tian¹, Shui Ai², & Changming Chen^{1*}

¹ Chongqing Normal University, Chongqing, China

² Dazhou Vocational and Technical College, Dazhou, China

* Changming Chen, Chongqing Normal University, Chongqing, China

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Abstract

Adolescence is a critical period for the development of self-esteem, but for many adolescents, self-esteem is compromised by harsh parenting disciplines which are still heavily used. Research into the mechanisms underlying adolescent self-esteem and the strategies that boost self-esteem thus has become very important. Based on the sociometric theory of self-esteem and the attachment theory, the current study explores the role of interpersonal sensitivity and dispositional mindfulness in the effect of harsh parenting on adolescents' self-esteem. Questionnaire survey on 1320 Chinese adolescents showed that the detrimental effect of harsh parenting could be mediated by interpersonal sensitivity, and this mediation effect was moderated by dispositional mindfulness, participants with higher dispositional mindfulness showed stronger mediation effect than those with lower dispositional mindfulness. Our findings highlight the impact of harsh parenting and the role of interpersonal sensitivity in shaping adolescents' self-esteem, and suggest the feasibility of mindful intervention programs that take interpersonal sensitivity into account when building the self-worth of adolescents.

Keywords

harsh parenting, adolescents, interpersonal sensitivity, self-esteem, dispositional mindfulness

1. Introduction

“The notion that we will go to great lengths to protect our ego or preserve our self-esteem is an old, respected and when all is said and done, probably one of the great psychological truths” (Markus, 1980). Self-esteem, “a person’s evaluation of their worth as a person” (Rosenberg, 1965; Trzesniewski

et al., 2013), constitutes the evaluative aspect of self-concepts and a protective factor linked to psychological functioning. The successful development of self-esteem helps people live a happy and healthy life (Reitz, 2022). It helps people feel more at ease with trying new things, overcoming challenges, advocating for themselves (Zimmerman et al., 1997), contributing to success in school and at work (Holopainen et al., 2020; Reitz, 2022), better physical and mental health (Holopainen et al., 2020; Sowislo & Orth, 2013). In contrast, low self-esteem has been associated with a sphere of external and internal problems in adults and adolescents such as poorer academic outcomes (Holopainen et al., 2020), substance use (Alavi, 2011), theft and prostitution (Alavi, 2011), depression (Sowislo & Orth, 2013) and suicide (Reid-Russell et al., 2022).

Adolescence is one of the most critical periods for self-esteem development. Self-esteem decreases in early adolescence and increases in later adolescence to adulthood (Orth & Robins, 2014; Robins et al., 2002), which results into the lowest level of self-esteem in adolescence compared to other age-groups except the late adulthood (Robins et al., 2002; Zimmerman et al., 1997). Self-esteem is also capricious during this period (Reitz, 2022) as change in self-esteem seems more likely in adolescence than in other time-points such as middle adulthood (Robins et al., 2002; Steinberg & Morris, 2001). Moreover, the negative sequelae of underdeveloped self-esteem are persistent because those who have lower levels of self-esteem during adolescence are likely to have lower self-esteem decades later (Kuster & Orth, 2013; Orth & Robins, 2014). In this context, research into the mechanisms underlying adolescent self-esteem and the strategies that boost self-esteem has become very important.

1.1 The Effect of Harsh Parenting on Self-esteem

The attachment theory proposes that people are born with a need to forge bonds with caregivers as children, and these early bonds may continue to have an influence on attachments throughout life (Bowlby, 1988; Snyder et al., 2012). Family constitutes the first major social system that reshapes adolescents' self-esteem (Mattanah et al., 2011). First child-parent interactions constitute the basis for development of an early sense of self-esteem (Boer & Tranent, 2013). Parental warmth makes children feel accepted, loved, trusted, and helps them build positive representations of the self (Mattanah et al., 2011). Empirical surveys have established that positive parenting is linked to higher self-esteem compared to more punitive and intrusive parenting (Szkody et al., 2021). For instances, adolescents raised by authoritative and permissive parents have higher self-esteem than those raised by authoritarian parents (Pinquart, 2021). In contrast, those who were usually rejected by parents tend to evaluate themselves negatively and develop lower self-esteem, self-worth, and self-efficacy (Pinquart, 2021).

As a special form of parenting, harsh parenting involves a wide range of aversive parenting behaviors, include physical aggression (e.g., spanking, slapping, and hitting), verbal aggression (e.g., shouting and cursing), and psychological aggression (e.g., emotional abuse, emotional neglect, and intimidation, Chang et al., 2003; Simons et al., 1991; Wang, 2019). Harsh parenting compromises the ability in

emotion regulation, leads to adolescent depression, anger, and anxiety, adverse behavioral responses (Chang et al., 2003), and leaves personal relationships in a state of tension (Barrett & Turner, 2005). It reduces sense of meaning in life (Wang et al., 2023), increases academic procrastination (Yue et al., 2021) and internet addiction (Wei et al., 2021). In terms of self-esteem, adolescents who are frequently suffered from harsh parenting are more likely to feel emotionally rejected and formulate negative evaluations about themselves (Pinquart, 2021; Tang et al., 2018), and have lower levels of self-esteem (Pinquart, 2021; Tang et al., 2018; Zhao & Wang, 2023). This detrimental effect can persist in later stages, as parental harsh psychological control predicts lower self-esteem in college students (Rudy et al., 2014).

Despite mounting evidence for the detrimental effects and being condemned, harsh parenting is still widely used around the world. According to the update of the United Nations Children's Fund, 'in a majority of countries, more than 2 in 3 children are subjected to violent discipline by caregivers' (UNICEF, 2023). Harsh parenting is still not banned in eastern cultures such as China, Japan, South Korea (Baniamin, 2022; Wang & Liu, 2018; Yang et al., 2024). In countries such as Brazil and Tunisia where harsh parenting is banned, the support for corporal punishment remains high (Baniamin, 2022). Even in developed countries, harsh parenting is also heavily used by parents from lower social classes, with more children, no partners, less education or under stressful circumstances (Baniamin, 2022). For instances, during COVID-19, parents in the Netherlands used more harsh discipline compared to pre-pandemic levels (Sari et al., 2021), and more than half of caregivers (59.0%) in Northeastern US reported using harsh discipline, with psychological aggression occurring more frequently than physical discipline (57.2% and 26.9%, respectively) (Connell & Strambler, 2021).

1.2 The Mediation of Interpersonal Sensitivity in the Effect of Harsh Parenting on Self-esteem

Given the prevalence of harsh parenting and its long-term negative consequences for self-esteem, it is necessary to investigate the cognitive mechanism underlying how adolescent esteem is influenced by harsh parenting, as well as the protective factors that helps mitigate the adverse impact. The sociometer theory of self-esteem proposes that self-esteem is a psychological gauge of the degree to which people perceive that they are relationally valued and socially accepted by other people (Leary & Baumeister, 2000). At its core, this theory regards self-esteem as one's subjective appraisal of how one is perceived to being a valuable, viable, and sought-after member of the groups, and the relationships to which one belongs and aspires to belong (Leary & Baumeister, 2000). Interpersonal sensitivity is such a closely-related construct which refers to the undue and excessive awareness of, and sensitivity to, the behavior and feelings of others (Boyce & Parker, 1989; Marin & Miller, 2013). Previous studies have found that experimentally manipulated social inclusion increases ratings of self-esteem, whereas exclusion decreases it (Leary et al., 1995), and high interpersonal sensitivity can cause low self-esteem and feelings of insecurity (Mushtaq et al., 2017). These findings suggest that interpersonal sensitivity would be one of the bases of self-esteem, and individuals derive their self-esteem from the perceived

feedback that they receive from significant others (Gorrese & Ruggieri, 2013).

The attachment theory (Bowlby, 1977) also argues that, children who grow up with a caring, nurturing caregiver acquire an optimistic, trusting model of relationships and tend to engage in warm, cooperative interactions with other people. Those exposed to rejecting parenting, on the other hand, are at risk for developing some form of a hostile, distrusting model of relationships, and are overly sensitive to any threat to their relationships. For instances, negative parenting style (including sternness, punishment, indulgence, excessive interference, contradictory, and neglect of protection) impacts an individual's interpersonal relationships during adolescence (Chang et al., 2023). Parental rejection reported by students positively predicted their interpersonal personality (Fan et al., 2021; Rowe et al., 2015). Parental neglect and lack of parental care lead to problems in personality traits and excessive interpersonal sensitivity in children (Otani et al., 2009). Therefore, it is reasonable to speculate that interpersonal sensitivity may mediate the impact of harsh parenting on self-esteem of adolescents.

1.3 The Effect of Mindfulness on Interpersonal Sensitivity

Accumulating research suggests that mindfulness-based interventions are particularly helpful for symptoms of avoidance and negative cognitions such as self-blame, shame, and guilt among individuals with a childhood maltreatment history (Joss et al., 2020). Mindfulness refers to a non-reactive, non-judgmental, and present-centered awareness that acknowledges and accepts any feeling, thinking, or sensations without evaluation (Kabat-Zinn, 2003). The nonjudgmental and present-moment awareness of mindfulness practices can serve as a protective factor against interpersonal sensitivity and its effects on affect (Joss et al., 2020). It improves empathy by increasing the capacity of perspective taking and empathic concern, as well as improving the skills for emotion identification and communication (Barnes et al., 2007; Peters et al., 2016). Mindfulness interventions, either offline (Peters et al., 2016) or online (Regev et al., 2023), are effective in reducing interpersonal distress (Peters et al., 2016), sensitivity to explicit (Xie et al., 2022) or implicit rejection (Hafner et al., 2019). The benefits could be observed both in (Peters et al., 2016). Meanwhile, dispositional mindfulness (or trait mindfulness), a person's predisposition or innate capacity to mediate daily (Brown & Ryan, 2003), is associated with skills in interpersonal interactions, self-control, accommodation within intimate relationships (Skoranski et al., 2019). It is related to interpersonal feelings and performance (Dekeyser et al., 2008), and can exert a positive impact on interpersonal sensitivity through interacting with negative emotions (Ding et al., 2021). Higher dispositional mindfulness predicted higher relationship satisfaction and better response to relationship stress (Barnes et al., 2007). It is negatively related to negative emotions, which in turn are positively related to interpersonal sensitivity (Ding et al., 2021). To summarize, mindfulness may lead to lower levels of interpersonal sensitivity of adolescents.

1.4 Harsh Parenting and Mindfulness

Though mindfulness may counteract the detrimental effects of maltreatment on individual development, an ensuing question is whether the benefits of mindfulness would be equal for adolescents with different levels of adversities such as harsh parenting. Previous studies have shown that early trauma could be a risk factor for difficulties during meditation. Specifically, maltreated patients are more difficult to engage in the treatment process and learn mindfulness skills (Joss & Teicher, 2021), and may perceive it as unnatural and challenging (Arslan et al., 2024). For instances, they often report heightened emotional reactions or more intrusion of traumatic memories (Lindahl et al., 2017), and have more difficulties in recognizing positive emotional states (English et al., 2018), emotion regulation (Dutcher et al., 2017), as well as a lack of understanding or familiarity with shared positive experiences (English et al., 2018). In line with this, previous studies have shown that trait mindfulness significantly moderates the relationship of childhood maltreatment and depression as childhood abuse may make individuals more reactive to, or slower to recover from, stress (Harkness et al., 2006). Individuals who report severe histories of maltreatment are especially vulnerable to recurrent depression if they are also reporting low levels of trait mindfulness (Beshai & Parmar, 2019). These findings suggest that the effect of mindfulness would vary as a function of the degree of adversities the adolescents suffered, and we would expect an interaction of the level of mindfulness and degree of harsh parenting in impacting interpersonal sensitivity and self-esteem. However, to our best knowledge, empirical evidence for these pathways remains elusive.

1.5 Purpose of the Current Study

The purpose of this study was therefore to explore the mediating role of interpersonal sensitivity underling the effect of harsh parenting and adolescents' self-esteem, as well as the moderating role of dispositional mindfulness underlying this mediation effect. Based on the afore-mentioned literature, we proposed the following three hypotheses: 1) harsh parenting is negatively associated with adolescents' self-esteem, 2) adolescents' interpersonal sensitivity may mediate the negative impact of harsh parenting according to the sociometer theory, 3) adolescents' dispositional mindfulness may moderate the impact of harsh parenting on interpersonal sensitivity, as well as its impact on self-esteem (Figure 1).

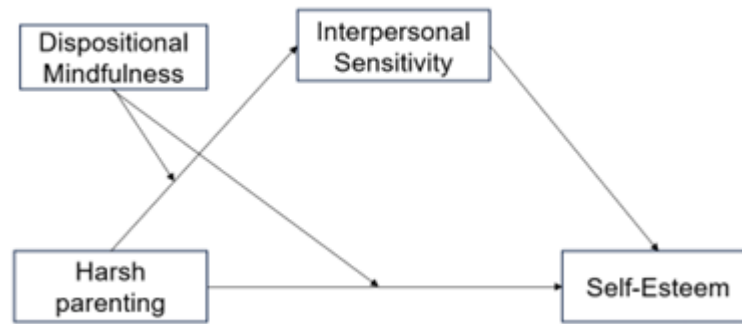


Figure 1. Conceptual Model

We tested these hypotheses by a questionnaire survey on students from five junior or senior middle schools in China. Findings on these questions could not only shed light on the mechanism how self-esteem is shaped by negative parenting practices, but also are practically implicative for targeted interventions, especially for those who grow up from adverse family environments.

2. Method

2.1 Participants

The participants were 1,320 students from five junior or senior middle schools in two central provinces of China. Thirty-eight of them were excluded because they did not respond or rated outside of the legal range in the trap questions, which left 567 valid males and 715 valid females between 11 and 18 years old. The basic information of the subjects is shown below (Table 1). The survey was conducted in accordance with the Declaration of Helsinki, and informed consents were obtained in written form from all the participants and their caregivers. It was approved by the ethic committee of the first author.

Table 2. Demographics of the Participants

Demographic Categories	N	Harsh parenting	Interpersonal sensitivity	Mindfulness	Self-esteem
Gender					
Female	691	1.59±0.68	2.52±0.71	3.70±0.87	1.84±0.60
male	591	1.82±0.81	2.57±0.77	3.64±0.89	1.81±0.58
		$t = -5.557^{***}$	$t = -1.380$	$t = 1.333$	$t = 1.030$
Place of residence					
rural	615	1.68±0.68	2.56±0.71	3.65±0.85	1.75±0.56
urban	595	1.71±0.81	2.53±0.77	3.69±0.91	1.88±0.62
		$t = -0.712$	$t = 0.474$	$t = -1.128$	$t = -3.368^{**}$

Board at school					
Not boarding	465	1.75±0.84	2.53±0.79	3.64±0.97	1.81±0.61
Boarding	759	1.66±0.68	2.54±0.69	3.70±0.81	1.83±0.58
		$t = 2.095^*$	$t = -0.159$	$t = -1.163$	$t = -0.976$
Left-behind or not					
Not left-behind	831	1.66±0.72	2.52±0.72	3.68±0.88	1.87±0.59
Left-behind	363	1.72±0.75	2.55±0.77	3.67±0.88	1.73±0.59
		$t = -1.143$	$t = -0.781$	$t = 0.248$	$t = 3.813^{***}$
Family economic status					
Very poor	43	2.15±1.28	2.70±0.96	3.42±1.16	2.57±0.70
Relatively poor	112	1.75±0.82	2.64±0.78	3.50±0.83	2.51±0.46
Fair	1013	1.67±0.70	2.50±0.71	3.71±0.86	2.63±0.49
Relatively well off	92	1.57±0.69	2.61±0.82	3.67±0.89	2.62±0.59
Very rich	12	1.90±0.92	2.90±1.08	3.43±1.10	2.56±0.50
		$F=5.388^{***}$	$F=2.545^*$	$F=2.654^*$	$F=4.230^{**}$

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$, the same as below

3. Measurements

3.1 The Harsh Parenting Scale

The levels of harsh parenting the adolescents experienced was assessed by the Chinese version of the Harsh Parenting Scale, which was translated by Wang and Qi (2017) from Simons and colleagues (1991). The scale contains 8 questions. Participants were asked to rate along a 5-point Likert scale from 1 (never like that) to 5 (always like that) about harsh parenting from their father and mother. One sample question reads: “my mother lost her temper or even shouted at me”. The higher the score is, the higher the level of harsh parenting is. The scale had good reliability in previous studies (Wang & Qi, 2017), and its Cronbach’s alpha of the scale was 0.889 in the current study.

3.2 The Rosenberg Self-Esteem Scale

Participants’ self-esteem (SES) was assessed by the widely-used Rosenberg Self-Esteem Scale (Rosenberg, 1965). The scale includes 10 items of description and participants are asked to rate how each description matches their perceived self-value from 0 (“Never”) to 3 (“This is exactly the case”). One sample item reads: “I am positive about myself”. The higher the score is, the higher self-esteem is. Its Cronbach’s alpha was 0.861 in this study.

3.3 The Interpersonal Sensitivity Subscale

Participants' interpersonal sensitivity was assessed by the interpersonal sensitivity subscale of the SCL-90 (Derogatis, 1994). The subscale has 9 questions with rating score from 1 ("never") to 5 ("always"). One sample item reads: "I feel that people are unfriendly to themselves and don't like themselves". The higher the score is, the higher the interpersonal sensitivity is. It has a Cronbach's alpha of 0.825 in our study.

3.4 The Mindful Attention Awareness Scale (MAAS)

The Chinese version of MAAS is a measurement for dispositional mindfulness, adapted by Chen and Cui (2012) from Brown et al (Brown & Ryan, 2003). It includes 15 items to which participants rated from 1 ("almost always") to 6 ("almost never"). One item reads: "I find it hard to focus my attention continuously". Higher score indicates higher level of mindfulness. The scale has a satisfactory Cronbach's alpha of 0.889 in our study.

3.5 Covariates

Covariates in the current study included sex (1 = female, 0 = male), age, place of residence (1 = urban, 0 = rural), being left behind (cared for by a single parent or grandparents, 1 = yes, 0 = no), studying in boarding school (1 = yes, 0 = no).

4. Data Analysis

We first conducted a Harman's single-factor test to evaluate the common method bias in these measurements and computed descriptive statistics and correlational matrix using the SPSS package 26.0. These were followed by an analysis on the mediation of interpersonal sensitivity underlying the harsh parenting effect on self-esteem. Next, we explored if dispositional mindfulness moderated the mediation effect. The mediation analysis (model 4) and the moderated mediation analysis (model 8) were analyzed using the PROCESS macro (Hayes, 2012). Continuous data were centralized when computing the interaction terms. Significance of the effects was concluded via a bootstrapping procedure with 5000 samples if the 95% interval of confidence did not contain 0 (Hayes, 2012).

5. Results

5.1 Harman's Single-factor Test

Harman single factor analysis identified eight principal components with eigenvalue bigger than 1. The first component accounted for 22.453% of the total variance, below the critical value of 40% recommended by (Podsakoff et al., 2003). After varimax rotation, the first, seventh, eighth principal components covered all the items for the harsh parenting scale, the second and sixth components covered all the items for the MAAS scale, the third and fifth components covered all the items for the self-esteem scale, the fourth component consisted of all the items for interpersonal sensitivity. These results suggest no significant common method bias in the data.

5.2 Correlation among Variables

As shown in Table 2, the self-esteem of adolescents correlated negatively with harsh parenting ($r = -0.238, p < 0.001$) and interpersonal sensitivity ($r = -0.338, p < 0.001$), but positively with dispositional mindfulness ($r = 0.409, p < 0.001$). Interpersonal sensitivity is associated positively with harsh parenting ($r = 0.256, p < 0.001$), but negatively with dispositional mindfulness ($r = -0.276, p < 0.001$).

Table 2. Correlation Analysis among the Variables

	M \pm SD	1	2	3	4	5	6	7	8
1 Sex	0.558 \pm 0.497	1							
2 Age	15.156 \pm 1.386	0.011	1						
3 Urban	0.503 \pm 0.500	-0.013	-0.021	1					
4 Boarding	0.615 \pm 0.487	0.056	.326***	.207***	1				
5 Left-behind	0.694 \pm 0.461	0.047	.100***	-.240***	-0.025	1			
6 HP	1.693 \pm 0.748	-.155***	-.132***	-0.020	-.060*	-0.042	1		
7 Esteem	1.820 \pm 0.588	0.029	.133***	-.095***	0.028	.109** *	-.238***	1	
8 DM	3.674 \pm 0.883	0.038	.070*	-0.032	0.033	0.007	-.207***	.409***	1
9 IS	2.535 \pm 0.737	-0.039	-0.002	0.013	0.004	-0.022	.256***	-.338***	-.276***

Note: IS: Interpersonal sensitivity, HP: Harsh Parenting, DM: dispositional mindfulness, Esteem: Self-esteem. * $p < 0.05$, *** $p < 0.001$

5.3 The Mediation of Interpersonal Sensitivity in the Harsh Parenting Effect on Self-esteem

After controlling covariates including sex, age, place of residence, family income, being left behind and in boarding school, harsh parenting negatively predicted the self-esteem of the adolescents ($\beta = -0.179, p < 0.001$). It also positively predicted interpersonal sensitivity ($\beta = 0.281, p < 0.001, 95\% \text{ CI} = [0.221, 0.341]$) and interpersonal sensitivity in turn predicted self-esteem negatively ($\beta = -0.247, p < 0.001, \text{ CI} = [-0.294, -0.201]$). This resulted into significant indirect effect of harsh parenting on self-esteem through the mediation of interpersonal sensitivity (effect size = $-0.069, p < 0.001, \text{ CI} = [-0.093, -0.048]$). The direct effect of harsh parenting on self-esteem was also significant (effect size = $-0.11, p < 0.001, \text{ CI} = [-0.158, -0.062]$).

5.4 The Moderation of Dispositional Mindfulness

Analysis by the Model 8 in the Macro process (Table 3) showed that adolescents' interpersonal sensitivity was predicted positively by harsh parenting ($\beta = 0.265$, $p < 0.001$, $CI = [0.205, 0.325]$) but negatively by dispositional mindfulness ($\beta = -0.185$, $p < 0.001$, $CI = [-0.233, -0.137]$). Importantly, it is positively predicted by the product of harsh parenting and dispositional mindfulness ($\beta = 0.137$, $p < 0.001$, $CI = [0.079, 0.195]$). In terms of self-esteem, it was positively predicted by dispositional mindfulness ($\beta = 0.210$, $p < 0.001$, $CI = [0.180, 0.255]$) but negatively by harsh parenting ($\beta = -0.068$, $p < 0.005$, $CI = [-0.115, -0.021]$) and interpersonal sensitivity ($\beta = -0.191$, $p < 0.001$, $CI = [-0.237, -0.146]$). However, we did not observe significant prediction of the product of harsh parenting and dispositional mindfulness for self-esteem ($\beta = 0.038$, $p = 0.09$, $CI = [-0.006, 0.083]$). This resulted into significant moderating effect of dispositional mindfulness on the mediation of interpersonal personal sensitivity (effect size = -0.026 , $p = 0.009$, $CI = [-0.044, -0.008]$). Further analysis showed that the indirect effect of interpersonal sensitivity is -0.028 in participants with lower dispositional mindfulness ($M - 1 \text{ SD}$, $CI = [-0.049, -0.001]$), -0.051 in participants with average dispositional mindfulness ($CI = [-0.070, -0.033]$), and -0.096 in participants with higher dispositional mindfulness ($M + 1 \text{ SD}$, $CI = [-0.102, -0.047]$). Pairwise contrasts revealed the indirect effect was significantly more negative in the average dispositional mindfulness condition than the lower dispositional mindfulness condition (contrast = -0.023 , $CI = [-0.038, -0.007]$), significantly more negative in the higher mindfulness condition than the average mindfulness condition (contrast = -0.023 , $CI = [-0.038, -0.007]$). It is significantly more negative in the higher mindfulness condition than the lower mindfulness condition (contrast = -0.05 , $CI = [-0.076, -0.014]$).

Table 3. Results of the Moderated Mediation Analysis

	Model 1: IS		Model 2: Esteem	
	beta	t	beta	t
sex (0 = male)	-0.022	-0.510	0.021	0.649
Age	0.016	0.964	0.037	2.940**
urban (0 =rural)	-0.002	-0.033	0.069	2.049*
boarding (0 =no)	-0.058	-1.243	0.006	0.160
left-behind (0 =no)	0.014	0.291	-0.069	-1.933
income	0.056	1.458	0.082	2.806**
HP	0.265	8.689***	-0.068	-2.842**
DM	-0.185	-7.561***	0.218	11.442***
HP * DM	0.137	4.631***	0.038	1.697
IS			-0.191	-8.237***

Note: * $P < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Note: *IS*: Interpersonal sensitivity, *HP*: Harsh Parenting, *DM*: dispositional mindfulness, *Esteem*: Self-esteem

We then conducted a simple slope test to visualize the moderation effect of dispositional mindfulness on interpersonal sensitivity. As shown in Fig. 2A, interpersonal sensitivity is generally higher in adolescents who are exposed to higher harsh parenting. It is also higher in the adolescents with lower dispositional mindfulness. However, though harsh parenting is positively associated with interpersonal sensitivity in all levels of dispositional mindfulness, the effect size varies to dispositional mindfulness. The conditional effect of harsh parenting was smallest (effect size = 0.145, $p < 0.001$) for adolescents with lower dispositional mindfulness, 0.2649 for those with middle level of dispositional mindfulness ($p < 0.001$), and highest (effect size = 0.385, $p < 0.001$) for those with higher dispositional mindfulness. Importantly, the lowest interpersonal sensitivity was observed in those with higher mindfulness and low level of harsh parenting. As for self-esteem (Fig. 2B), it was generally positively associated with mindfulness, and the highest in adolescents with high level of dispositional mindfulness and the lowest in adolescents with lower dispositional mindfulness. It was also negatively associated with harsh parenting, higher in those with low level of harsh parenting but lower in those with high level of harsh parenting.

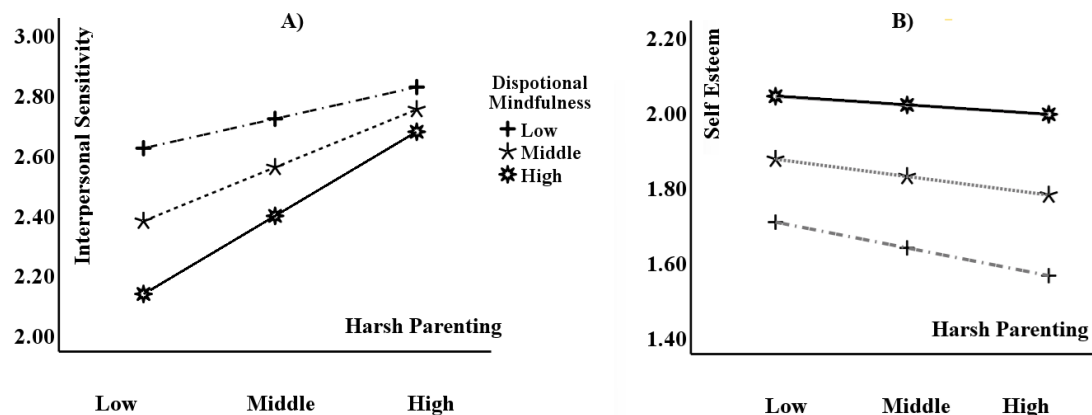


Figure 2. Moderation Effect

6. Discussion

6.1 Results Summary

Our findings are of both theoretical and practical implications for child mental health and child raising. The successful resolution of tasks at each developmental stage constitutes the basis for a healthier psychological system better prepared for the demands of the next stage. For adolescents, one of their

missions is to develop positive self-concepts and self-identities. However, for many adolescents, this process is undermined by unfavorable behaviors from their parents such as harsh parenting, which have been heavily criticized but are still widely used in practice. Our study found that harsh parenting associates negatively with adolescents' self-esteem and positively with interpersonal sensitivity, as deteriorated self-esteem but higher interpersonal sensitivity was observed in adolescents who reported higher level of corporal or psychological punishment from their parents. This suggested that even in countries like China where harsh parenting is not abandoned, the children are not immune to the negative effects of harsh parenting. This replicated previous findings (Joss et al., 2020; Pinquart, 2021; Rudy et al., 2014; Szkody et al., 2021; Tang et al., 2018; Zhao & Wang, 2023) and supports the attachment theory (Bowlby, 1988; Snyder et al., 2012).

6.2 The Mediation of Interpersonal Sensitivity

Our results revealed that the harsh parenting might impact self-esteem through the partial mediation of interpersonal sensitivity: the more intense harsh parenting the adolescents perceived, the more sensitivity that adolescents are experiencing during interpersonal interaction, the heightened interpersonal sensitivity in turn deteriorates adolescents' feeling of self-worth. This finding provides support for the sociometer theory of self-esteem which argues self-esteem as an internal, psychological monitor of the degree to which one is valued as a relationship partner (Leary et al., 1995). The sense of discomfort and inferiority in interpersonal interactions, especially when compared to others, provide information that children many internalize, and lays the foundation for self-perceived incompetence and low self-worth (Leary et al., 1995). In line with this, previous studies have shown that peer support serves as an important environmental factor for adolescents' self-esteem (Hoffman et al., 1988), whereas interpersonal sensitivity affects how an individual thinks, understands, interprets, and evaluates events (Aydın & Hiçdurmaz, 2017). Interpersonal sensitivity indirectly predicts loneliness through the mediators of self-esteem (McCabe et al., 1999), and causes low self-esteem and feelings of insecurity (Mushtaq et al., 2017). This suggests that the elevated sensitivity in interpersonal interaction may constitute a pathway for harsh parenting to reshape adolescents' self-esteem, and enriches the understanding about the cognitive mechanism about how unfavorable behaviors from parents hurts adolescents' feelings of self-worth.

6.3 The Modulation of Mindfulness

Previous studies suggest that dispositional mindfulness plays an important role in self-esteem (Brown & Ryan, 2003), interpersonal relationships (Ding et al., 2021) and increases interpersonal intimacy (Carson et al., 2004). Consistent with this, our study reveals that dispositional mindfulness reduces interpersonal sensitivity and elevates self-esteem of the adolescents. However, in terms of interpersonal sensitivity, it does not bring about benefits equally for the adolescents, instead, its effect hinges largely on the intensity of harsh parenting the adolescents are exposed to: among those who are exposed to lower harsh parenting, those who possess higher dispositional mindfulness show significantly lower

interpersonal sensitivity than their counterparts whose dispositional mindfulness is lower. In contrast, among these who are raised by high level of harsh parenting, the benefit of dispositional mindfulness is smaller. This concurs previous findings that children from adversities, maltreatment or trauma are more difficult to learn mindfulness skills and more likely to experience relapse of intrusive unwanted memories (Arslan et al., 2024; Joss & Teicher, 2021). This suggest that participants with higher exposure to harsh parenting may be more likely to resist to mindfulness, demonstrating less benefit of mindfulness.

It is also of interests to make a comparison of our results with two studies on law enforcement officers in USA by Chen and Grupe (Chen & Grupe, 2021; Kaplan et al., 2018), Kaplan and colleagues (Kaplan et al., 2018), which though also observed the moderation of dispositional mindfulness (but not resilience) on the association between stressor exposure and perceived stress, found that individuals with higher dispositional mindfulness showed a relatively attenuated relationship between exposure to routine daily stressors and resulting perceived stress (Chen & Grupe, 2021; Kaplan et al., 2018). One possible explanation for the discrepancies might lie in the characteristics of the participants. In those two studies, the participants were adult law enforcement officers who were much older than the adolescents in our study. Previous studies have well-established that core elements of mindfulness including present-moment attention, non-judgment, acceptance, nonattachment, and decentering increased with age during adulthood (Mahlo & Windsor, 2021; Shook et al., 2017). Meanwhile, the age-related increase in dispositional mindfulness contributes to age-difference in certain domains of psychological functioning, such as emotional well-beings (Shook et al., 2017). Therefore, it is possible that the adults, whose dispositional mindfulness are well-developed than adolescents, could cope with stressors or interpersonal problems more efficiently, thus get a stronger effect of mindfulness in adversities. It is also possible that adolescents would be more susceptible to negative behavior of their parents than adults, because on the one hand they are not financially independent and psychologically equipped but have to rely more on their parents. These are interesting questions and merit studies in the future.

6.4 Practical Implications

Aside from the already widely-discussed benefits of boosting mindfulness or mindfulness interventions, findings in our study are practically implicative for boosting self-esteem and psychological well-beings of adolescents in two meaningful ways. First, our study suggests that interpersonal feeling could be a target construct for tailored intervention to boost self-esteem, especially when mindfulness interventions were recruited. The mediation of interpersonal sensitivity suggests it is of clinical significance to develop, include treatment modules that reduce interpersonal sensitivity when implementing mindfulness interventions for self-esteem. For instances, interventions that encourage applying mindfulness to interpersonal interactions such as the Insight Dialogue program (Kramer et al., 2013) or the Interpersonal Mindfulness Program (Bartels-Velthuis et al., 2020) could serve for this

purpose. Second, the negative effect of harsh parenting suggests that it is imperative to reduce and avoid hurtful, destructive parenting behavior and build supportive, constructive parent-child relationship. Moreover, some parents may hold incorrect understandings, and have not realized the negative effect of corporal or psychological punishments. For instances they may use these punishments to show love, care and positive expectations to their children, or think harsh disciplines are ethically-lawful and effective ways to stimulate their children (Tang et al., 2018). Therefore, it is vital to change their attitudes and build family environments that discourage psychological or corporal punishments when interacting with the children. In intervention programs to boost adolescents' self-esteem, it would bring benefits to include their parents, either offline or online. Modules could be designed to let the parents realize the existence of such behaviors in their parenting practices, to improve their understanding in the detrimental effect of these behaviors, to share their feelings and strike time-table with their children which on the one-hand aims to reduce gradually parents' harsh behaviors and on the other hand improve their relationship. For those parents who are impulsive and cannot withhold their harsh behaviors, modules are also included to improve their executive control. Third, our study suggested reduced benefits of dispositional mindfulness in children with intense harsh parenting history, for instances, the effect of intervention is more likely to be compromised by the unconstructive behavior from the parents. So the practitioners must considered the individual difficulties, for instances, longer sessions, customized modules that are probably needed for adolescents in high-level of adversities (Tang & Braver, 2020).

6.5 Limitations and Future Directions

Our findings promote the understanding of the ways in which harsh parenting could be associated with adolescent self-esteem. However, there are several limitations. First, we adopted a cross-sectional design which is difficult to reveal the causality of the variables. Future research could use longitudinal designs to explore the causal relationships among harsh parenting, adolescents' interpersonal sensitivity and self-esteem. Second, we measured the intensity of harsh parent disciplines by the self-report of the adolescents. Although adolescents' perceptions of parental behaviors statistically agreed with the ratings of their parents, there were still noticeable discrepancies that varied to family structure, children's age and characteristics (Tein et al., 1994). Therefore, it is necessary to include parent-child dyads in future studies to investigate the factors that demine children's perceived harshness of their parents. Third, participants in the current study were only Chinese adolescents, it remains unknown how well our results could generalize to other cultures, so future studies are needed to consider cultural contexts across diverse populations.

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