



# Mindful parenting inhibits adolescents from being greedy: The mediating role of adolescent core self-evaluations

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## Abstract

Greed, which is detrimental, is suggested to be a disposition developed at an early stage of life. Since parenting practices have profound impacts on youth development, the current study aimed to explore whether mindful parenting could prevent adolescents from being greedy and examine the mediating role of adolescent core self-evaluations. Study 1 ( $N = 272$ ) used self-reported data from adolescents to test the hypotheses. Study 2 ( $N = 525$ ) provided further evidence with multisource data from both adolescents and their primary caregivers (mainly mothers). The results indicated that both mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers had significant impacts on adolescent dispositional greed, and the mediating effect of adolescent core self-evaluations was significant. Mindful parenting could inhibit adolescent greed partially by contributing positively to children's core self-evaluations. The theoretical and practical implications of the current study results as well as future research directions are discussed.

**Keywords** Dispositional greed · Mindful parenting · Core self-evaluations · Mediating effect

## Introduction

Greed is the experience of dissatisfaction with what one currently has and a desire to have more (Seuntjens et al. 2015a). Greedy individuals are more egocentric and self-entitled and less likely to feel empathetic and engage in perspective taking than individuals who are less greedy (Krekels and Pandelaere 2015; Seuntjens et al. 2015b). They also tend to be impulsive (Seuntjens et al. 2015b) and to engage in risky

(Mussel et al. 2015) and even unethical behavior (Seuntjens et al. 2019). Thus, unsurprisingly, greed has been found to be negatively correlated with life satisfaction and positively correlated with depression and psychopathy (Krekels and Pandelaere 2015; Mussel and Hewig 2016; Seuntjens et al. 2015b). Based on a large-scale adolescent sample, Seuntjens et al. (2016) found that adolescents who have higher levels of dispositional greed tend to spend more, save less, and have more debt.

Greed is a disposition developed at an early stage of life (Krekels 2015). Research has suggested that parenting practices have profound impacts on children's development of psychological functions. For example, negative parenting approaches are associated with children's narcissism (Huxley and Bizumic 2017), materialism (Chaplin and John 2010) and antisocial personality (Reti et al. 2002). In the same vein, how parents interact with their children may also foster or restrain the development of children's dispositional greed. Mindful parenting, which is characterized as a nonjudgmental, nonoverreactive, and compassionate approach to the interpersonal process of parenting (Duncan et al. 2009), has many demonstrated benefits for youth (e.g., Geurtzen et al. 2015). The current study aimed to explore whether mindful parenting could inhibit adolescent greed and examine the underlying mechanism of the effect.

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## Mindful Parenting and Adolescent Dispositional Greed: The Mediating Role of Adolescent Core Self-Evaluations

Mindful parenting extends intrapersonal mindfulness to interpersonal parent-child interactions (Duncan 2007; Duncan et al. 2009; Kabat-Zinn and Kabat-Zinn 1997). Mindful parenting occurs when parents integrate mindfulness into their thoughts, feelings, and behaviors regarding parenting (Duncan et al. 2009). It is reflected in the way that parents are fully present during the interactions with their children and that parents bring an attitude of compassion, acceptance and kindness to the parent-child relationship (Bogels et al. 2014; Duncan et al. 2009). Mindful parenting has been conceptualized as a multidimensional construct. Duncan et al. (2009) proposed a theoretical model of mindful parenting that encompassed five dimensions: (1) *listening with full attention*, reflecting parents' ability to combine listening with focused attention and perceiving what is being said beyond words; (2) *nonjudgmental acceptance of self and child*, indicating parents' awareness of their expectations and beliefs and their nonjudgmental acceptance of the traits, attributes, and behaviors of themselves and their children; (3) *emotional awareness of self and child*, reflecting parents' ability to be aware of both their own emotions and their children's emotions; (4) *self-regulation in the parenting relationship*, involving parents' ability to slow their reactions to their children's behavior and calmly select appropriate parenting behaviors; and (5) *compassion for self and child*, reflecting parents' genuine sense of concern for their children.

Mindful parenting has been regarded as a meta-parenting construct (Duncan 2007; Duncan et al. 2009; Cohen and Semple 2010). By allowing parents to focus on their present-moment parenting experience, mindful parenting helps them to better distinguish the cognitive, affective, and behavioral experiences of their children and their own and consciously take their children's needs, wants, and feelings into consideration when interacting with them. Mindful parenting can prevent parents from acting automatically, shift their orientation from a self-focus to a child or relationship focus, and help them choose parenting behaviors wisely (Duncan et al. 2009). As a result, mindful parenting can promote effective parenting practices and decrease the likelihood of engaging in maladaptive interactions with children (Coatsworth et al. 2018; Duncan et al. 2015; Duncan et al. 2009; Parent et al. 2016a). For example, Duncan et al. (2015) found that mothers with high levels of mindful parenting exhibit greater warmth and greater consistency in discipline (and less harsh discipline). Parent et al. 2016a found that mindful parenting was positively associated with autonomy support, clear instructions and positive reinforcement. At the same time, mindful parenting was negatively associated with intrusive parenting, ineffective and coercive discipline, and parental hostility

(Parent et al. (2016a). Mindful parenting is also associated with adaptive parenting styles, such as higher levels of authoritative and autonomy-encouraging parenting styles and lower levels of authoritarian, permissive, overprotective and rejecting parenting styles (Gouveia et al. 2016; Bogels et al. 2014).

As expected, empirical research has suggested that mindful parenting is generally associated with better psychological function in adolescents (Bogels et al. 2014; Wang et al. 2018; Parent et al. 2016b). For example, the nonjudgmental acceptance dimension of mindful parenting was significantly and negatively associated with adolescents' internalizing problems, such as depressive and anxiety symptoms (Geurtzen et al. 2015). In addition, mindful parenting was found to inhibit adolescents' externalizing problems, such as aggression (Coatsworth et al. 2018) and disruptive behavior (Parent et al. 2016b). Moreover, higher levels of mindful parenting predicted higher levels of well-being in adolescents (e.g., Moreira et al. 2018).

The current study proposed that mindful parenting may also create a family context supporting the development of positive youth self-evaluations. Core self-evaluations, comprising self-esteem, generalized self-efficacy, emotional stability and locus of control, represent individuals' fundamental appraisals of their self-worth and capabilities (C. H. Chang et al. 2012; Judge et al. 1997). DeHart et al. (2006) found that college students reporting that their parents engaged in more caring behaviors had higher self-esteem, while those who reported having more overprotective parents scored lower on self-esteem. D. Liu et al. (2018) also found that adolescents with supportive parents usually had high levels of self-esteem. As mentioned before, mindful parenting is a present-centered, nonjudgmental and compassionate approach to interactions with children (Duncan et al. 2009). Nonjudgmental acceptance and compassion may in turn enhance adolescents' self-acceptance and self-compassion (Gouveia et al. 2016; Moreira et al. 2018), which contribute to the development of positive self-evaluations. Based on the key characteristics of mindful parenting, it is reasonable to hypothesize that mindful parenting could lead to positive adolescent core self-evaluations.

Positive core self-evaluations could serve as important personal resources to prevent adolescents from being greedy. From the life history theoretical perspective, greed is the result of environmental unpredictability during childhood (Chen 2018). However, Judge et al. (2004, p. 326–327) noted that "individuals with positive core self-evaluations appraise themselves in a consistently positive manner across situations; such individuals see themselves as capable, worthy, and in control of their lives". Individuals with such positive self-evaluation should have enough grit to face unpredictability in their lives and choose more constructive strategies than greed to deal with challenges. In other words, higher self-evaluations should be associated with lower adolescent greed, while lower

self-evaluations should be linked with higher adolescent greed. Some studies in the extant literature support this argumentation. For example, individuals with feelings of low self-worth choose to acquire material wealth because material possessions have symbolic meanings for prestige, which can be used to communicate a positive self-concept to others (e.g., L. C. Chang and Arkin 2002; Chaplin and John 2007; Jiang et al. 2015; Li et al. 2018; Noguti and Bokeyar 2014; Park and John 2011). Greed is regarded as aiming for both material and non-material possession (Krekels and Pandelaere 2015; Seuntjens et al. 2015b). Deficient core self-evaluations may lead to greed because the act of acquisition itself might serve as a way to compensate for low self-worth and feelings of incompetence. Therefore, the current study proposed that adolescent core self-evaluations negatively predict adolescent greed.

In sum, the current study proposed *hypothesis 1*, that mindful parenting is negatively related to adolescent greed, and *hypothesis 2*, that adolescent core self-evaluations mediate the relationship between mindful parenting and adolescent greed, with higher levels of mindful parenting fostering more positive adolescent core self-evaluations, which in turn prevent adolescents from being greedy.

The current study aimed to explore the relationship between mindful parenting and adolescent greed and the mediating role of adolescent core self-evaluations. Study 1 used self-reported data from adolescents to test the hypotheses. Study 2 provided further evidence through the collection of multisource data from both adolescents and their primary caregivers (mainly mothers). Before being conducted, the current study was reviewed and approved by the Academic Ethics Committee at the first author's institute. The datasets generated during and/or analyzed during the current study are available in the Mendeley Data repository [<https://data.mendeley.com/datasets/nc9rpnjr4k/draft?a=d3bde368-6f9d-42ed-bb87-ad88048e574f>].

## Study 1

### Participants and Procedure

A total of 273 middle school students from Shaanxi Province in China participated in the current study. One outlier ( $Z \geq 3$   $SD$ ) for core self-evaluations was excluded from the final analyses. Among the remaining 272 participants, 106 (39.0%) were females, 142 (52.2%) were males, and 24 (8.8%) were of unknown gender. The participants' ages ranged from 12 to 19 years old ( $M_{age} = 15.24$ ,  $SD = 1.58$ , with 1 missing value).

Group administration of the measures occurred in classroom settings. Each classroom teacher administered the surveys with the assistance of a psychology graduate student. All questionnaire sets were completed anonymously. All

adolescents signed the consent form before their participation, and after completing the study, each participant received a printed copy of the debriefing information according to the established committee guidelines and a small gift for participation.

### Measures

**Perceived Mindful Parenting** Adolescent perceptions of mindful parenting were measured by a scale adapted from the Interpersonal Mindfulness in Parenting Scale (IEM-P; Duncan 2007). As the first scale developed to measure mindful parenting, the IEM-P includes 8 items reflecting four aspects of mindful parenting: *present-centered attention* (e.g., "I rush through activities with my child without being really attentive to him/her" (reverse-coded)); *emotional awareness* (e.g., "I am aware of how my moods affect the way I treat my child"); *nonjudgment receptivity* (e.g., "I listen carefully to my child's ideas, even when I disagree with them"); and *nonreactivity* (e.g., "When I am upset with my child, I calmly tell him/her how I am feeling"). Previous studies have demonstrated that the IEM-P is sufficient in assessing mindful parenting (Parent et al. 2016a).

The IEM-P was originally designed to measure mindful parenting through parent self-reports. The current study adapted the items by changing the perspective of the items from that of parents to that of children to assess adolescents' perceptions of mindful parenting. For example, the IEM-P item "I find myself listening to my child with one ear because I am busy doing or thinking about something else at the same time" was rewritten to "I find my mother listening to me with one ear because she is busy doing or thinking about something else at the same time".

All items were rated using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). The second item (i.e., "When my mother is upset with me, she notices how she is feeling before she takes action") was deleted from the final analysis because of a negative item-total correlation. The internal consistency of the remaining 7-item scale was good ( $\alpha = .73$ ). The item scores were averaged, and higher scores indicated higher levels of mindful parenting perceived by children.

**Adolescent Greed** Adolescent greed was measured by the Dispositional Greed Scale (DGS), which contains seven items (e.g., "I always want more") (Seuntjens et al. 2015b). Previous research has demonstrated that the DGS is a useful instrument to assess greed with satisfactory reliability and validity (Mussel et al. 2018; Seuntjens et al. 2015b). In addition, evidence suggests that the Chinese version of this scale has good psychometric properties (Z. Liu et al. 2019). The DGS has been found to be sufficient in assessing adolescent greed in previous research (e.g., Chen 2018; Seuntjens et al. 2016). In the current study, the items ( $\alpha = .79$ ) were rated using a 5-

point scale from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating higher levels of greed.

**Core Self-Evaluations** Adolescent core self-evaluations were measured by the Core Self-evaluations Scale (CSES; Judge et al. 2003), which is widely used to assess an individual's essential evaluations of self-worth, competencies and capabilities (e.g., "I am capable of coping with most of my problems"). In the current study, two of the original items were revised to refer to adolescents' academic lives (e.g., "Sometimes, I do not feel in control of my work" was rewritten as "Sometimes, I do not feel in control of my studies"). The CSES has been found to be sufficient in assessing adolescent core self-evaluations in previous research (e.g., Koumoundourou et al. 2010). All items ( $\alpha = .75$ ) were rated using a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The item scores were averaged, and higher scores indicated higher core self-evaluations.

**Demographic Variables** Data on participants' gender (0 = female, 1 = male) and ages as well as their mothers' education levels were collected. Mothers' education levels were coded into seven categories: 1 = "uneducated", 2 = "primary school", 3 = "middle school", 4 = "high school", 5 = "junior college", 6 = "college or university" and 7 = "postgraduate education".

## Results

**Test of Common Method Bias** Harman's single-factor test was used to test whether the results were affected by common method bias (Podsakoff et al. 2003). All items were subjected to an exploratory factor analysis. The results showed that the variance explained by the first factor was below the critical 40% threshold (unrotated factor solution: 17.44%; rotated factor solution: 15.61%), which suggested that the common method bias effect was not significant in the current study.

**Preliminary Analysis** The descriptive statistics and correlations among the variables are shown in Table 1.

As expected, perceived mindful parenting was negatively correlated with adolescent greed ( $r = -.16, p = 0.01$ ) and positively correlated with adolescent core self-evaluations ( $r = .29, p < 0.001$ ). Core self-evaluations were negatively related to adolescent greed ( $r = -.16, p = 0.007$ ).

**Mediation Analysis** Meditation analyses were conducted by PROCESS v3.3 (Model 4) to test the direct and indirect effects of mindful parenting on adolescent dispositional greed. Five thousand bootstrap samples were extracted with repeated random sampling. Bias-corrected 95% bootstrap confidence intervals (95% CIs) were used to determine the significance of the effects. In the current study, adolescents' gender and ages

and their mothers' education levels were treated as control variables.

The path coefficients are shown in Fig. 1. The total effect ( $\beta = -0.15, 95\% \text{ CI} = [-0.27, -0.02]$ ) of mindful parenting on adolescent dispositional greed was significant, supporting hypothesis 1. In addition, the mediating effect of adolescent core self-evaluations was significant ( $\beta = -0.03, 95\% \text{ CI} = [-0.08, -0.001]$ ), supporting hypothesis 2.

## Study 2

### Participants and Procedure

A total of 597 adolescent-mother (or primary caregiver) dyads from Shaanxi Province in China were recruited for study 2. Data from 64 dyads were eliminated from the final analysis based on an attention check (i.e., data from participants who responded "no" or failed to respond to the following question were treated as invalid: "Will you complete this questionnaire seriously based on your true opinion?"). Eight outliers ( $Z \geq 3 \text{ SD}$ ) for the key variables (perceived and self-reported mindful parenting, core self-evaluation, and dispositional greed) were excluded from the final analyses. Finally, the data from 525 dyads were entered into the final analysis. Among the 525 middle school students, 191 (36.4%) were male, 325 (61.9%) were female, and 9 (1.7%) were of unknown gender. Moreover, 76 were in the tenth grade, 441 were in the eleventh grade, 1 was in the twelfth grade, and the grades of 7 students were unknown. In China, students in the same grade generally have limited variance in their age (i.e., students in tenth grade are usually 15–16 years old, those in eleventh grade are 16–17 years old, and those in twelfth grade are 17–18 years old). Among the primary caregivers, 467 were mothers, 45 were other caregivers (e.g., fathers, grandparents), and the caregiver role was unknown for 13 caregivers. The mean age of the primary caregivers was 42.82 years ( $SD = 3.30$ , with 95 missing values).

The questionnaire included two sections. The first section was completed by students when they were at school, and the second section was completed by the primary caregivers of the students. The student section had measures of perceived mindful parenting, core self-evaluations, and dispositional greed and some demographic questions. The students were invited to complete the questionnaire in their classes, and their teachers administered the survey with the assistance of a psychology graduate student. The caregiver section was provided to the students upon their completion of the first section. The students were required to take the second section of the questionnaire home for their mothers (or their primary caregivers) to complete and return to school the next day. All questionnaire sets were completed anonymously. All participants signed the consent forms before participating and received a



**Table 1** Descriptive statistics and correlations among the variables in study 1

	<i>N</i>	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Gender	248	–	–	–					
2. Age	271	15.24	1.58	–.01	–				
3. Edu_M	271	3.77	1.21	.001	–.17*	–			
4. MP_A	271	3.42	0.81	–.02	–.10	.14*	(0.73)		
5. Greed	271	3.21	0.83	.05	.08	.02	–.16*	(0.79)	
6. CSE	271	4.42	0.80	.19**	–.10	.10	.29***	–.16**	(0.75)

gender (0 = female, 1 = male). Edu\_M: Mothers' education level, MP\_A: Mindful parenting perceived by adolescents, CSE: Adolescents' core self-evaluations

\*  $p < 0.05$  (two-tailed); \*\*  $p < 0.01$  (two-tailed); \*\*\*  $p < 0.001$  (two-tailed)

printed copy of the debriefing information according to the established committee guidelines. To encourage the participants to treat the questionnaire seriously, all dyads were promised that they would receive a family interaction report based on their survey responses. The reports were sent to the email address provided on the questionnaire one month later.

## Measures

**Perceived Mindful Parenting: Reported by Adolescents** The same scale as study 1 was used to measure adolescents' perceptions of mindful parenting (the second item was deleted for the same reason as in study 1). The Cronbach's alpha of the scale was .76 in this study.

**Mindful Parenting: Reported by Primary Caregivers** Mindful parenting was measured by the IEM-P (Duncan 2007) as described in study 1. In the current study, all eight items ( $\alpha = .75$ ) were rated using a 5-point scale from 1 (strongly disagree) to 5 (strongly agree). The item scores were averaged, and higher scores indicated higher levels of mindful parenting.

**Adolescent Greed** Adolescent greed was measured by the brief version of the DGS, which was developed by Seuntjens et al. (2016). The researchers selected three items (i.e., "I always want more", "Actually, I'm kind of greedy", and "It doesn't matter how much I have. I'm never completely satisfied") from the original DGS based on theoretical considerations and statistical analyses (Seuntjens et al. 2016). Evidence has suggested that the psychometric properties of the brief version of the DGS are as good as those of the original DGS, and the brief version of the DGS has been used to assess adolescent greed in previous research (Seuntjens et al. 2016). In the current study, the scale ( $\alpha = .78$ ) was rated using a 7-point scale from 1 (strongly disagree) to 7 (strongly agree), with higher scores indicating higher levels of greed.

**Core Self-Evaluations** The same scale as in study 1 was used to measure adolescent core self-evaluations. The twelve items

( $\alpha = .73$ ) were rated on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree).

**Demographic Variables** Adolescents reported their gender (female coded as 0 and male coded as 1) and grade (tenth, eleventh, and twelfth grades were coded as 1, 2 and 3, respectively). Primary caregivers reported their own age and education levels (1 = "primary school or below", 2 = "middle school", 3 = "high school", 4 = "junior college", 5 = "college or university" and 6 = "postgraduate education").

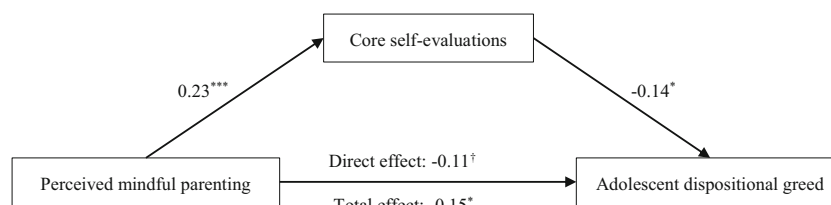
## Results

**Preliminary Analyses** The descriptive statistics and correlations among the variables are shown in Table 2. Both mindful parenting perceived by adolescents and that reported by primary caregivers were negatively associated with adolescent dispositional greed ( $r = -.15$ ,  $p < 0.001$ ;  $r = -.08$ ,  $p = 0.06$ ) and positively correlated with adolescent core self-evaluations ( $r = .25$ ,  $p < 0.001$ ;  $r = .21$ ,  $p < 0.001$ ). In addition, core self-evaluations were negatively related to adolescent dispositional greed ( $r = -.18$ ,  $p < 0.001$ ).

The correlation between mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers was moderate to high ( $r = .51$ ,  $p < 0.001$ ). We conducted a pair-sample  $t$  test to examine whether significant differences exist between mindful parenting from two sources. The results indicated that mindful parenting perceived by adolescents ( $M = 3.39$ ,  $SD = 0.72$ ) was marginally lower than that reported by primary caregivers ( $M = 3.46$ ,  $SD = 0.64$ ),  $t(491) = -1.89$ ,  $p = 0.06$ .

**Mediation Analyses** The current study conducted two mediation analyses with mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers, both treated as independent variables. The mediation analyses were performed using PROCESS version 3.3 (Model 4).

For mindful parenting perceived by adolescents, the path coefficients are shown in Fig. 2. The total effect ( $\beta = -0.19$ , 95% CI =  $[-0.28, -0.09]$ ) of perceived mindful parenting on



**Fig. 1** Effect of perceived mindful parenting on adolescent dispositional greed.  $N = 245$  (listwise). Control variables were adolescents' gender and age as well as their mothers' education levels. Values were standardized coefficients. †  $p < 0.10$ , \*  $p < 0.05$ , \*\*\*  $p < 0.001$

adolescent dispositional greed was significant, supporting hypothesis 1. The mediating effect of adolescent core self-evaluations was significant ( $\beta = -0.04$ , 95% CI =  $[-0.07, -0.01]$ ), supporting hypothesis 2.

For mindful parenting reported by caregivers, the path coefficients are shown in Fig. 3. The total effect of mindful parenting on adolescent dispositional greed was significant ( $\beta = -0.11$ , 95% CI =  $[-0.20, -0.01]$ ), supporting hypothesis 1. The mediating effect of adolescent core self-evaluations was significant ( $\beta = -0.04$ , 95% CI =  $[-0.07, -0.01]$ ), supporting hypothesis 2.

The current study further compared the effects of mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers on adolescent greed by including both of them in the same mediation test model using Mplus 7.0. The model fit indices showed an acceptable fit,  $\chi^2(8) = 14.85$ ,  $p = 0.06$ , CFI = 0.91, RMSEA = 0.05, SRMR = 0.03. The path coefficients are shown in Fig. 4. The indirect effect of mindful parenting perceived by adolescents on adolescent greed via core self-evaluations was still significant ( $\beta = -0.03$ ,  $p = 0.01$ ), while the indirect effect of mindful parenting reported by primary caregivers was marginally significant ( $\beta = -0.02$ ,  $p = 0.09$ ). A further comparison test of the two indirect effects indicated a nonsignificant difference between them (Wald test value = 0.71,  $df = 1$ ,  $p = 0.40$ ). Moreover, the direct effect of mindful parenting perceived by adolescents on adolescent greed was significant, while the direct effect of mindful parenting reported by primary caregivers was nonsignificant.

## Discussion

Adolescent dispositional greed is detrimental. The current study examined the relationship between mindful parenting and adolescent dispositional greed as well as the mediating role of adolescent core self-evaluations. To our knowledge, the current study is the first to empirically test how parenting practices impact adolescent greed. Based on self-reported data from adolescents ( $N = 272$ ) in study 1 and from adolescent-primary caregiver (mainly mother) dyads ( $N = 525$ ) in study 2, the current study suggested that mindful parenting has a significant impact on adolescent dispositional greed (supporting

hypothesis 1) and that the relationship is mediated by adolescent core self-evaluations (supporting hypothesis 2).

Mindful parenting has been demonstrated to be beneficial to the psychological functioning of both parents and children, as well as parent-child relationships (Coatsworth et al. 2018; Duncan et al. 2009; Lippold et al. 2015). Regarding the positive effects of mindful parenting on children, previous studies have mainly focused on the alleviation of internalizing problems (e.g., anxiety and depression) and externalizing problems (e.g., aggression) (Bogels et al. 2014; Coatsworth et al. 2018; Geurtzen et al. 2015; Singh et al. 2007; Wang et al. 2018). The current study extended the extant literature by suggesting that mindful parenting could also be an effective approach to prevent adolescent greed. In addition, rather than relying on only one source of data, the current study made great efforts to collect data not only on mindful parenting perceived by adolescents but also on mindful parenting reported by their mothers or primary caregivers, which provided strong evidence of the robustness of the results.

In accordance with our expectations, mindful parenting prevents adolescents from being greedy partially by contributing positively to children's core self-evaluations. That is, adolescents raised by parents practicing mindful parenting tend to view themselves more positively, which serves as a valuable personal resource preventing them from being greedy. This positive effect of core self-evaluation on psychological functioning is consistent with previous studies. For example, Kong et al. (2014) found that higher levels of mindfulness enhance one's core self-evaluations, thereby increasing life satisfaction. The current study results are encouraging because they suggest that positive fundamental evaluations could be cultivated in a mindful family context and inhibit negative developmental consequences such as adolescent greed.

Exploring the origin of greed from the perspective of the physical environment, Chen (2018) found that an unpredictable family environment during childhood creates a context in which insecure attachment is likely to develop, which then leads to greed. The current study explored the precursor of adolescent greed from the perspective of the psychological environment and found that incorporating mindfulness into parenting practices can create a family context that enriches adolescents' self-evaluations, which then prevent them from becoming greedy. Both Chen's (2018) research and the

**Table 2** Descriptive statistics and correlations among the variables in study 2

	N	M	SD	1	2	3	4	5	6	7	8
1. Gender	516	–	–	–							
2. Grade	518	–	–	–.01	–						
3. Edu_P	494	3.04	1.11	.09*	.16***	–					
4. Age_P	430	42.82	3.30	–.02	.05	–.04	–				
5. MP_A	524	3.39	0.72	–.07	–.09*	.06	.06	(0.76)			
6. MP_P	493	3.45	0.64	–.05	–.12**	.16***	.00	.51***	(0.75)		
7. Greed	525	4.38	1.34	.16***	.02	–.02	–.03	–.15***	–.08†	(0.78)	
8. CSE	517	4.45	0.70	.12**	–.10*	.13**	–.04	.25***	.21***	–.18***	(0.73)

gender (0 = female, 1 = male). Edu\_P: Primary caregivers’ education level, Age\_P: Primary caregivers’ age, MP\_A: Mindful parenting perceived by adolescents, MP\_P: Mindful parenting reported by primary caregivers, CSE: Adolescents’ core self-evaluations. †  $p < 0.10$  (two-tailed), \*  $p < 0.05$  (two-tailed); \*\*  $p < 0.01$  (two-tailed); \*\*\*  $p < 0.001$  (two-tailed)

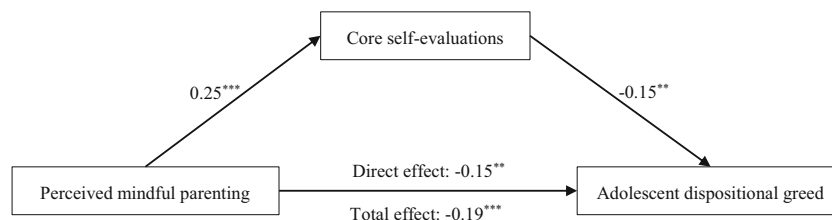
current research agree that family plays an influential role in shaping the psychological function of adolescents.

The current study results not only supported the hypotheses proposed but also provided deeper insight into parent-child interaction. First, although perceived mindful parenting reported by adolescents was moderately to highly correlated with mindful parenting as reported by primary caregivers, a pair-sample *t* test showed that the former was slightly lower than the latter. This finding suggested that what parents thought they had done may not have always been noticed by their children. The slight inconsistency between perceived and reported levels of mindful parenting suggested that adolescents may not always recognize their parents’ parenting efforts. In other words, some of the love shown by parents may inevitably be lost during parent-child interactions. Second, the indirect effect of mindful parenting perceived by adolescents on adolescent greed via adolescent core self-evaluations was slightly greater than that of mindful parenting reported by primary caregivers, although the difference was statistically nonsignificant. This finding suggests that what children actually perceived was more important than what parents believed they had done for their children. Both of these results suggest that child-centered parenting is of great importance, in accordance with the underlining philosophy of mindful parenting practice (Duncan et al. 2009).

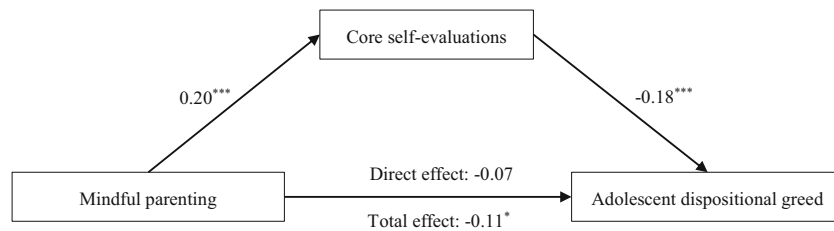
**Limitations and Future Directions**

The current study has several limitations that should be considered when interpreting these findings. First, the cross-sectional design of the current study limits causal interpretation. Given that all data were collected concurrently, it is premature to draw the conclusion that mindful parenting in the early stages could significantly influence adolescent greed. Further longitudinal designs would be beneficial for understanding the causal relationship between mindful parenting and adolescent greed. Second, although the main findings of the current study were consistent across two independent samples, the participants were all from China. Because research has suggested that parenting practices are different in many aspects in different cultures (Holden et al. 2017; Wong and Kam 2019), further research is needed before generalizing the results to other cultures.

Furthermore, family system theory suggests that the family is an organized whole composed of interdependent subsystems, such as a parent-child subsystem, a co-parenting subsystem, and a marital subsystem. Each subsystem both affects and is affected by other subsystems (Bornstein and Sawyer 2006). Given that family plays an important role in adolescent development, future research could extend the research on adolescent greed in two ways. On the one hand, future

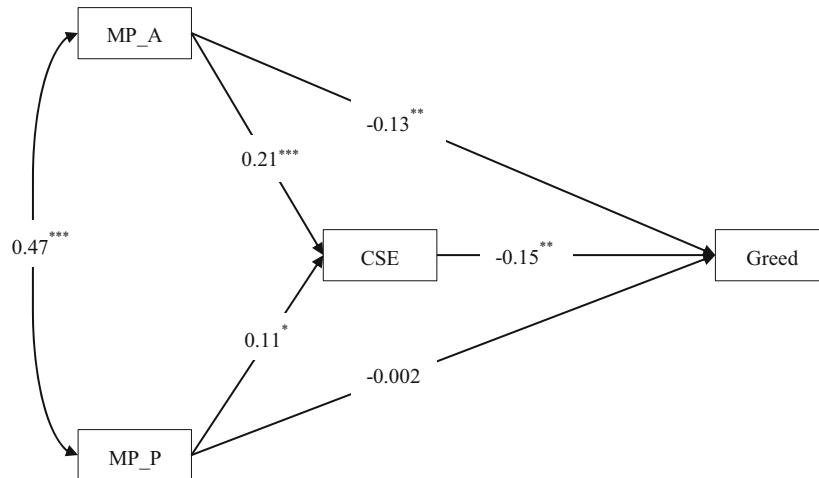


**Fig. 2** Effect of perceived mindful parenting on adolescent dispositional greed. *N* = 419 (listwise). Control variables were adolescents’ gender and grades as well as their primary caregivers’ education levels and age. Values are standardized coefficients. \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



**Fig. 3** Effect of mindful parenting reported by primary caregivers on adolescent dispositional greed. *N* = 406 (listwise). Control variables were the adolescents’ gender and grades as well as their primary

caregivers’ education levels and age. Values are standardized coefficients. \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001



**Fig. 4** Effects of mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers on adolescent dispositional greed. MP\_A: Mindful parenting perceived by adolescents, MP\_P: Mindful parenting reported by primary caregivers, CSE: Adolescents’

core self-evaluations. *N* = 425. Control variables were adolescents’ gender and grades as well as their primary caregivers’ education levels and age. Values are standardized coefficients. \* *p* < 0.05, \*\* *p* < 0.01, \*\*\* *p* < 0.001

research could assess both mothers’ and fathers’ mindful parenting because children develop within a family system in which fathers also play an indispensable role. In addition, considerable evidence has demonstrated that agreement and cooperation in parenting support healthy child outcomes (e.g., Baril et al. 2007; Riina and McHale 2014). Future studies could thus examine how maternal and paternal mindful parenting jointly affects the development of adolescent greed.

On the other hand, children are not passive receivers of parental influence in the family system. The “spillover hypothesis” (Erel and Burman 1995; Krishnakumar and Buehler 2000) suggests that functioning in one subsystem could affect that of another subsystem. Parents with high levels of mindful parenting usually demonstrate strong mindfulness skills (Duncan 2007), which they use to cope with daily stressors and interact with their children. Adolescents may learn these mindfulness skills through observation. Future studies could also explore the spillover effect of mindful parenting on

adolescent mindfulness, which may in turn inhibit adolescent greed.

### Conclusion

In summary, the current study was the first attempt to explore the relationship between mindful parenting and adolescent dispositional greed. In two studies, we found that both mindful parenting perceived by adolescents and mindful parenting reported by primary caregivers were significantly and negatively associated with adolescent greed. In addition, we found that adolescent core self-evaluation played a mediating role in the relationship between mindful parenting and adolescent greed. The current study results highlight the importance of mindful parenting training and intervention given that mindful parenting is potentially beneficial for adolescents to develop more positive core self-evaluations and prevent them from becoming greedy. In other words, mindful parenting could foster children’s healthy development.



**Author Contributions** Zhenzhen Liu participated the study design, performed the statistical analysis, drafted the manuscript and revised the manuscript; Xiaomin Sun led the study design, prepared the materials and revised the manuscript; Yarong Guo participated the study design and collected the data; Fang Luo helped to analyze the data and participated in the interpretation of the data. All authors read and approved the final manuscript.

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## Compliance with Ethical Standards

**Ethical Approval** All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed Consent** Informed consent was obtained from all individual participants included in the study.

**Conflict of Interest** The authors declare that they have no conflicts of interest.

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