

Full Research Report



Malicious and benign maternal envy in Chinese childrearing

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Abstract

Mothers utilize social comparisons to other parents to calibrate evaluations of themselves and their children, and these comparisons might prompt feelings of envy. Envy can either be malicious and destructive, or relatively more benign and constructive. This research examined distinctions between malicious and benign envy among Chinese mothers, differences from related emotions (i.e., resentment and admiration), and themes present in these experiences. An online sample of I 52 Mainland Chinese mothers ($M_{age} = 46.9$ I, SD =2.26) recalled malicious and benign envy, admiration, and resentment experiences toward other parents and reported associated appraisals, motivations, and action tendencies. Results showed distinctions between malicious and benign maternal envy. Malicious envy included lower perceived control, higher perceived unfairness, and more desire to degrade the other than benign envy. Benevolent feelings toward the envied target characterized benign envy. Both forms of envy were linked to self-improvement motivation. Personal characteristics and achievements of both other parents and other children were prominent themes in mothers' experiences of various emotions. This research provides insights into how and why Chinese mothers experience different forms of envy, and has implications for research on social comparisons made in parenting contexts.

Keywords

Admiration, benign maternal envy, Chinese childrearing, malicious maternal envy, resentment, social comparison

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Parenthood prompts a massive shift in an individual's social identity (Collett, 2005). Particularly in Chinese culture, mothers who act as primary caregivers often see their children as extensions of themselves, and incorporate children's achievements into their self-evaluations (Collett, 2005; Ng et al., 2014). When evaluating childrearing achievements, a mother may compare her own qualities with those of other parents in her neighborhood, friends circle, or child's school, or comparing her child's performance with another child's. Mothers might perceive some parents to be "better" parents, or some children to outperform their own child. These upward social comparisons likely prompt feelings of envy, in which mothers experience frustration and desires for other parents' advantages, as well as a motivation to maliciously "tear down" the envied other. Instead of being a universally "deadly sin," however, recent theories of envy suggest that this emotion might also be relatively benign, and motivate mothers toward selfimprovement. The current study examined malicious versus benign envy among mothers of adolescent children in Mainland China, and whether these emotions differ in their experiential content. We also aimed to distinguish these types of envy from two related emotions, admiration and resentment.

Mothers' social comparisons involve a focus on both their own qualities and those of their children, suggesting that these processes can extend to close others who comprise the individual's extended sense of self. Expanded-self social comparisons can occur frequently in mother-child relationships (Thai et al., 2019), and mothers have similar protective responses (i.e., minimizing importance of the comparison domain) toward self- and child-based social comparison threats. Studies conducted in various countries suggest that mothers often hinge their own self-worth upon children's performance, and this might also influence parenting practices. For example, when American mothers with higher levels of "child-based self-worth" were told that their child would be evaluated by other children, they spent more time helping their child with a socially-relevant selfpresentation task (Grolnick et al., 2007). Chinese and American mothers who base their self-worth on children's performance also exhibit more control and less warmth when their child experiences failure (Ng et al., 2014; Wuyts et al., 2015). Together, extant research suggests that mothers incorporate children into their self-concepts and social comparisons, and that children's achievements can factor significantly into mothers' feelings of self-worth and related responses.

Investigating social comparisons with other parents is useful for understanding social threats that mothers experience in daily life. Existing research on mothers' social interactions has mainly focused on mothers' received support (e.g., Doyle et al., 1994), particularly in inter-familial relationships (e.g., spousal support) while attending far less to mothers' extra-familial relationships, especially interactions with other parents. Considering that frequent but minor daily stressors might be even more predictive of mothers' well-being and familial outcomes than major life stressors (Crnic & Greenberg, 1990), common interpersonal stressors such as competition, conflicts, or reduced intimacy in mothers' extra-familial relationships also require research attention. Social comparisons form the basis of many such contentious interactions (Garcia et al., 2013), and the negative emotions that arise from these comparisons might constitute a source of

interpersonal stress that impacts mothers' extra-familial relationships, psychological well-being, and parenting efforts.

Social comparisons provide relative, varying benchmarks for self-evaluation that might promote unstable self-concepts (Festinger, 1954). Studies generally suggest that mothers' tendencies to frequently engage in social comparison predict mental health problems and competitive or overly-intensive parenting ideologies (e.g., Chae, 2015). Negative emotions such as envy can arise when mothers learn of another parent's achievements in group chats or social media posts, for example, and then compare these highly curated experiences to their own. Coyne and colleagues (2017) found that mothers who made more comparisons with other mothers via social media also reported greater overload, depression, and conflict, as well as lower perceived parenting competence and life satisfaction. Although preliminary research on maternal social comparisons paints an overall negative picture, however, it should also be noted that studies outside of the parenting context have shown that upward social comparisons and related feelings of envy might at times facilitate self-improvement and improved task performance (Van de Ven et al., 2011). To our knowledge, this more positive perspective has yet to be explicitly investigated in the context of parenting. To understand both the negative and positive implications of mothers' social comparisons for their well-being, relationships, and parenting, it is imperative to examine how they interpret these social threats and experience related emotions.

Malicious and benign maternal envy

Given the centrality of parenting to many mothers' identities, they might experience envy when observing signs of other parents' "successful" childrearing. Envy is a negative emotion generated by upward social comparisons in identity-relevant domains (Lange & Crusius, 2015a; Salovey & Rodin, 1991), characterized by threatened selfworth and desires for another's advantages. However, prior research has disagreed as to whether envy is uniformly destructive, or might at times actually benefit personal and social well-being. Malicious Envy Theory (see Smith & Kim, 2007, for a review) conceptualizes envy as a singular, hostile emotion characterized by feelings of inferiority. More recently, Dual Envy Theory (e.g., Van de Ven et al., 2009) has conceptualized envy as a negative emotion that takes on either malicious or benign qualities. Van de Ven and colleagues (2009) argued that both malicious and benign envy exist across different cultures, regardless of whether languages distinguish between them (e.g., Dutch, Chinese) or do not (e.g., English). Studies have supported this dual conceptualization across multiple contexts, including luxury possessions (e.g., Loureiro et al., 2020), organizational management (e.g., Ierides, 2014), and athletics (Lange & Crusius, 2015a). In contrast to these more transient roles and settings, however, parenthood typically involves more permanent and pervasive changes to an individual's self-concept, social relationships, and future goals. It is important to consider whether experiences of malicious versus benign envy in such a far-reaching life domain show the same distinguishing characteristics as in professional or leisure-oriented spheres. Differentiating between mothers' experiences of benign and malicious maternal envy can provide more nuanced insights into varied interpretations and correlates of selfthreatening situations. Specifically, such research can identify conditions under which envy might motivate mothers' attempts to maliciously undermine another parent's "superior" status, and when it might instead serve as a force that steers their energies toward self-improvement and affiliation with the envied other. Prior literature suggests that these differing responses are likely to have detrimental or beneficial implications, respectively, for mothers' interpersonal intimacy, proneness to conflict, social reputations, and self-concept resilience (e.g., Eissa & Wyland, 2016; Lange et al., 2016).

Distinguishing between emotions requires demonstrations of unique patterns of action tendencies, motivations, and cognitive appraisals (Arnold, 1960; Roseman, 1996). Studies on malicious envy have predominantly emphasized associated hostility, unethical behaviors such as cheating, and derogating or tearing down the envied other (Gino & Pierce, 2009; Lange & Crusius, 2015b; Vecchio, 2000). In contrast, studies on benign envy have generally noted its functional role as a motivational force for selfimprovement, and a positive attitude toward the envied other (Van de Ven et al., 2009). However, recent research also suggests that self-improvement might not be a clear, distinguishing feature of benign envy. Experiments conducted by Salerno and colleagues (2019) showed that priming experiences of malicious envy activated outcome-focused (as opposed to process-focused) self-improvement goals (Study 1) and heightened sensitivity to reward over effort (Study 3). This suggests that malicious envy might also motivate self-improvement, but do so with less focus on learning and effort than benign envy. Self-improvement motivation might therefore be a feature of both envy types, and it stands to reason that this could be especially true for broad and highly significant life domains, such as parenting.

Malicious and benign envy also show clear differences in their associated cognitive appraisals. Complementing the aforementioned focus on effort-independent outcomes, malicious envy is predicted by appraisals of one's inferiority being uncontrollable, and perceptions that the other does not deserve their success (Lange & Crusius, 2015a; Van de Ven et al., 2009, 2012). Benign envy, in contrast, is associated with appraisals of controllability and higher self-efficacy, and beliefs that targets deserve their advantages. Notably, most studies have assessed these behavioral and appraisal distinctions by priming different participants with different emotions in between-subjects research designs. However, it is possible that the distinctions identified in such studies are due to individual differences instead of distinctions across emotions. In order to examine potential within-person distinctions between these experiences, the present research asked the same participants to recall past episodes for each emotion as a way of controlling for potential individual differences in appraisals and action tendencies.

Distinguishing malicious and benign envy from related emotions

It is also necessary to distinguish malicious and benign forms of maternal envy from other similar, but qualitatively different, emotions. Previous studies have mainly distinguished malicious envy from resentment, and benign envy from admiration (Lange & Crusius, 2015a; Van de Ven et al., 2009, 2012). Malicious envy and resentment are two negative emotions including perceptions of unfairness and ill will toward the other (Van de Ven, 2016). Malicious envy arises from upward social comparison, however, while

resentment does not necessarily contain an explicit comparison, superior target, or feelings of inferiority (Van de Ven, 2016). Additionally, malicious envy might include stronger feelings of shame than resentment, but less intense moral indignation. Previous literature (Smith & Kim, 2007; Smith et al., 1994) has suggested that perceptions of unfairness accompanying malicious envy are mainly based on subjective judgments, while objective standards underlie unfairness perceptions that accompany resentment. In other words, people experiencing malicious envy might realize that they cannot legitimize their unfairness perceptions, and thus feel more ashamed and less indignant than when experiencing resentment.

Benign envy and admiration both involve a superior target and self-improvement motivation, but likely differ in their emotional valence, extent of self- versus otherfocus, and motivational force. Smith's (2000) categorization of social comparison emotions suggests that benign envy is still negative, as it stems from goal frustration and threatened self-worth. Admiration is a positive emotion arising from a stronger focus on the target, minimizing negative implications for self-worth. Some have also suggested that benign envy is more motivating than admiration, and leads to greater performance improvements. Van de Ven et al. (2011) argued that this discrepancy exists because benign envy increases active motivation, whereas admiration increases passive inspiration. For example, a mother who admires another parent's good relationship with their child may be inspired, without viewing such strengths as a threat to her own self-concept. The greater self-focus inherent in benign envy likely manifests as both stronger negative feelings about the self and stronger self-improvement motivation, compared to admiration.

Maternal envy in the Chinese context

Cultural differences between Western and Eastern societies, such as the prominence of contingent self-worth, views of interpersonal relationships, and expectations of parental roles, might impact determinants or outcomes of malicious and benign maternal envy. To our knowledge, no research has directly investigated the topic of maternal envy in Eastern cultures, nor distinctions between malicious versus benign variations in mothers' envy experiences. However, extensive research on Eastern parenting, particularly in Mainland China, suggests several cultural contributors to characteristics of maternal envy. First, the culture of face (mianzi) in China might promote frequent social comparisons and envy experiences among mothers. Chinese *mianzi* is the reflection of one's public image (Qi, 2011), maintained through others' favorable judgments and positive social comparisons of relative status (Kim et al., 2010). Being disadvantaged in these comparisons typically means losing *mianzi*, and might prompt Chinese mothers' envy. Second, children's achievement is a significant focus of Chinese mothers' social comparisons, and might be a major source of envious feelings. Chinese parents, compared with American parents, more strongly incorporate children's achievements into their own sense of self-worth (Ng et al., 2013, 2014). Raising a successful and moral child signals the fulfillment of culturally prescribed parental roles, and children's lower achievement may strongly threaten Chinese parents' self-worth. Compared with American parents, Chinese parents generally attribute children's academic performance

more to efforts than to innate capabilities (Ng et al., 2017) but also become more strongly outcome-oriented and critical when children experience academic failure (Ng et al., 2007). These shifts to harsher parenting and a focus on relative performance over mastery appear to parallel the aforementioned increases in outcome-focused self-improvement pursuits driven by malicious envy (Salerno et al., 2019). It therefore seems possible that previously observed distinctions between benign and malicious envy based on self-improvement might be less clear-cut in the Chinese parenting context.

Overview and hypotheses

This research examined distinctions between malicious and benign envy in the context of Chinese maternal childrearing. We focused on Chinese mothers whose children were in the last 2 years of high school or the first year of college, typically between 16 and 20 years old. The period from late adolescence to emerging adulthood is usually a time for youth's identity formation and role experimentation in major life domains (e.g., love, work, and worldviews; Arnett, 2000). Novel experiences, new skills, and complex social roles must be navigated in this period, setting the stage for successes, failures, and related social comparisons to repeatedly occur (Zarrett & Eccles, 2006). Mothers with children in this age group also experience psychological instabilities in their parenting ideologies and practices (Nelson et al., 2011) and might therefore more frequently seek out validation and evaluation of their childrearing. We utilized a within-subjects design to control for individual differences in emotional experiences, appraisals, and action tendencies, in order to focus on differentiations across emotions. Using a combination of content coding and mothers' self-reports, we aimed to examine differences in appraisals, action tendencies, and eliciting events that prompted experiences of malicious and benign envy. We hypothesized that both malicious and benign maternal envy would show relatively high negative feelings about the self (i.e. frustration, shame, and negative self-evaluation), but that benign envy would include more positive feelings toward the other, higher perceived control, and lower perceptions of the target's undeserved success. We also hypothesized that malicious envy would show higher levels of aggression (i.e. wishing to derogate, harm, or take something from the envied other) than benign envy. Additionally, while we expected benign envy to show higher self-improvement motivation than malicious envy, we also acknowledged the possibility for this distinction to be less clear-cut in the context of Chinese parenting.

Further, we investigated whether these two types of maternal envy diverged from the related emotions of admiration and resentment. We hypothesized that both malicious and benign envy would include greater explicit comparisons between the self and the other, compared to admiration or resentment. We also expected that malicious envy and resentment would show similar levels of unfairness perceptions and ill will toward the other, but that malicious envy would show less intense negative feelings toward the other and more shameful feelings toward the self, compared with resentment. For benign envy and admiration, we hypothesized that benign envy would include more negative self-evaluations than admiration. We also expected that, while both emotions would be linked to relatively high levels of self-improvement motivations, benign envy would still show stronger self-improvement motivations than admiration.

Method

Participants

Participants were an online sample of 156 mothers recruited from 24 provinces and municipalities in Mainland China. All the mothers had at least one child aged between 16 and 20 years. One outlier beyond ± 3 SD for mother age was identified and removed. Three participants reported being divorced or widowed and were excluded because prior research has found that parental divorce and death both have significant effects on parent-child relationships and parents' mental health (Amato, 1999; Worden & Silverman, 1993). All remaining participants were married and not currently pregnant. The remaining 152 participants were 46.91 years old (SD = 2.26), on average. Most (86.2%) had only one child. Regarding mothers' educational levels, 13.8% had senior high school education or below, 36.8% had secondary vocational or junior college education, 45.4% of the participants had a 4-year undergraduate degree, and 3.9% had postgraduate degree.

Procedure

Participants were recruited from Sojump.com, an internet survey platform in Mainland China with a large sample pool varying in age, gender, occupation, and geographic distribution. Recruitment was random after screening for sample requirements. At the start of the survey, the purpose, time commitment, and confidentiality of responses were explained. The survey was administered in Chinese and took an average of 23.14 minutes to complete. The current research was approved by the Ethics Review Board of the authors' institution. All participants consented to take part in the study.

We aimed to differentiate between benign and malicious maternal envy using open-recall, experiential prompts similar to those developed by Van de Ven et al. (2009). In contrast to the between-subjects design employed in this prior research, however, we utilized a within-subjects design instructing participants to recall and describe one experience each for benign envy (xiànmù), malicious envy (jìdù), admiration (pèifù), and resentment (yuànhèn). The prompt for recall task was, "Describe a situation where you felt strong [target emotion] toward another parent. Please indicate the situation, the relationship between you and the other parent, the advantage(s) of the other parent that made you feel [target emotion], and why you felt [target emotion] toward that parent." Participants described a past experience of each emotion, presented in a random order, in one or two sentences. After each emotion prompt, participants completed the follow-up questions described below.

Measures

The current study is the first, to our knowledge, to compare benign versus malicious envy experiences among Chinese parents. We conducted translation and back translation to create Mandarin Chinese versions of measures when no previous translations existed.

Content coding of eliciting events. Two coders, blind to emotion, examined participants' open-field responses and classified the eliciting events described for each experience. Through extensive discussion informed by prior research on teen mothers (Higginson, 1998), coders arrived at a set of topic domains present in the recalled experiences: Child Personal Characteristics, Child Academic Performance, Parent Personal Characteristics and Achievements, Provision of Material and Educational Resources, Parent-Child Relationship, and Received Support. Our coding scheme allowed for multiple domains to be present within a single response. Average agreement between the coders was .94 (agreements between .83 and 1.00). Remaining differences were resolved through discussion and recoding. Coders further analyzed participants' descriptions of three hypothesized preconditions for envy identified in prior research: Making Explicit Comparison, Perceived Control Over Gaining the Desired Attribute, and Perceived Unfairness/Undeservingness. Instead of merely coding presence or absence of these categories (cf. Van de Ven et al., 2009), we adopted scale ratings to examine degree of intensity. Ratings were made on a 5-point Likert scale (1 = "not at all," 2 = "to a small extent," 3 = "to a moderate extent," 4 = "to a great extent," and 5 = "to a very great extent"). Intraclass Correlation Coefficients (ICCs) showed good average coder agreements (overall agreement = .93), ranging from .82 to .99 across the four emotions and the three categories.

Experience characteristics. Others have suggested that the intensity and clarity of recalled emotional experiences should be considered when differentiating between them, to account for potential response biases caused by social desirability or frequency of occurrence. Following the procedure utilized by Van de Ven et al. (2009), participants reported on 9-point Likert scales how intensely they had experienced the emotion in question (1 = "not at all" to 9 = "very intense"), how long ago it had happened (1 = "a very long time ago" to 9 = "only a short while ago"), and how easy it was to recall the experience (1 = "very difficult" to 9 = "very easy").

Emotions and self-other evaluations. Next, participants answered 20 questions created by Van de Ven et al. (2009) assessing feelings and appraisals included in the experiences (e.g., "Felt frustrated," "Thought negatively about myself"), as well as actions and motivations (e.g., "Wanted to improve my own position," "Tried to hurt the other's position"). Responses were on a 9-point scale from $1 = "not \ at \ all"$ to $9 = "very \ much \ so."$

Strategy of analyses

We first conducted separate one-way Repeated Measures ANOVAs for Intensity, Recency, and Difficulty in recalling the four emotions, to examine whether they differed in these respects. We then examined the proportions of recalled experiences that included each of the coder-identified thematic domains, allowing for multiple themes within a single response. Mean intensity scores given by the two coders for Comparison, Control, and Unfairness/Undeservingness were examined via one-way Repeated Measures ANOVAs, separately for each of these ratings, to examine overall and pairwise

differences across the four emotions. Finally, in line with the strategy adopted by Van de Ven et al. (2009), a series of one-way Repeated Measures MANOVAs examined each of the 20 questions related to participants' thoughts, feelings, and action tendencies, in order to examine overall and pairwise differences across the four emotions. Greenhouse-Geisser estimates were used in order to correct for violations of sphericity ($ps \le .035$).

Results

Content coding of eliciting events

Thematic domain percentages are shown in Figure 1. The most frequently mentioned themes, per emotion, were Child Personal Characteristics (48.68%) for benign envy, Child Personal Characteristics and Provision of Material and Educational Resources (each at 32.24%) for malicious envy, and Parent Personal Characteristics and Achievements for both admiration and resentment (each at 86.84%). Results of the Repeated-Measures ANOVAs for coders' ratings of Comparison, Control, and Unfairness/Undeservingness are shown in Table 1. Mean scores for each of these ratings differed significantly across the four emotions (all ps < .001). For Making Explicit Comparison, benign envy and malicious envy showed higher levels than admiration or resentment (ps < .001), with no further significant differences. For Perceived Control, admiration and benign envy showed higher levels than malicious envy or resentment (ps < .001), with admiration showing the highest score among the emotions (all ps < .001) and resentment showing the lowest score (all ps < .001). For Unfairness/Undeservingness, malicious envy and resentment showed similar levels (p = .624), which were higher than benign envy and admiration ($ps \le .002$). Benign envy also showed higher Unfairness/ Undeservingness than admiration (p = .001).

Experience characteristics

Results of the Repeated Measures ANOVAs on recalled Intensity, Recency, and Difficulty are shown in Table 1. All the three questions showed overall differences across the four emotions. Malicious envy experiences were less intense than benign envy, admiration, and resentment (all ps < .001). Admiration experiences were more recent than malicious envy (p = .001). Finally, both malicious envy and resentment were reported as more difficult to recall than benign envy ($ps \le .007$). Malicious envy was also more difficult to recall than admiration (p < .001).

Emotions and self-other evaluations

Results of the Repeated Measures MANOVAs conducted on participants' reports of their emotions and self-other evaluations are shown in Table 2. Benign and malicious envy generally showed more negative thoughts and feelings about the self, compared to admiration or resentment. Consistent with hypotheses, both benign and malicious envy were more frustrating and less pleasant than admiration (ps < .001), more shameful than admiration (ps < .014) or resentment (ps < .002), and included more negative thoughts about the self than resentment (ps < .005). Regarding positive thoughts about the other,

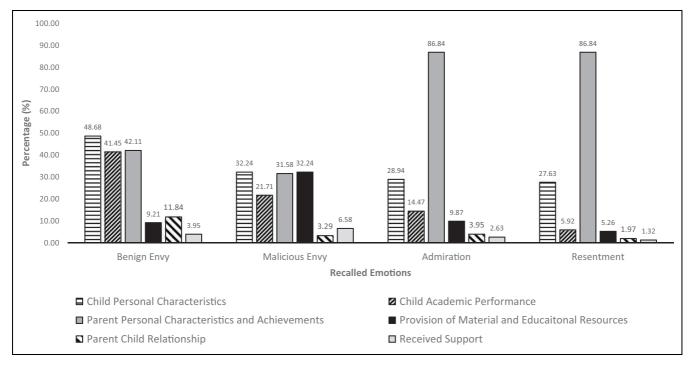


Figure 1. Percentages for presence of recalled experience domains (%).

Table 1. One-way repeated measures ANOVAs on recalled emotion intensity, recency, difficulty and for content coding.

			М (SD)			Pairwise comparison significance levels						
		BE	ME	AD	RS	Overall difference	Overall sig.	BE & ME	BE & AD	BE & RS	ME & AD	ME & RS	AD & RS
Recalled emotion	Intensity	7.05 (1.51)	5.51 (2.42)	7.21 (1.68)	6.89 (2.18)	F(2.70,406.96) = 36.11	***	***			***	***	
	Recency	5.11 (2.04)	4.84 (2.27)	5.60 (2.04)	5.27 (2.35)	F(2.89,432.77) = 4.81	**				**		
	Difficulty	6.76 (1.90)	5.63 (2.32)	6.45 (2.00)	6.08 (2.26)	F(2.88,434.40) = 14.16	***	***		**	***		
Content coding	Making comparison	2.14 (1.67) ^a	$2.19(1.57)^{a}$	1.47 (1.16) ^b	, ,	F(2.74,367.07) = 31.66	***		***	*	**	***	**
	Perceived control	2.94 (0.67) ^b	2.60 (0.74) ^c	$3.30 (0.77)^a$		F(3,399) = 239.02	***	**	***	***	**	***	***
	Perceived unfairness/ undeservingness	1.44 (0.90) ^b	2.12 (1.22) ^a	1.14 (0.52) ^c		F(2.52,340.81) = 29.19	***	***	**	**	***		***

Note. BE = benign envy; ME = malicious envy; AD = admiration; RS = resentment. Different superscripts indicate significant differences between the emotion conditions. *p < .05. **p < .01. ***p < .01.

Table 2. One-way repeated measures MANOVA for the experiential content questions.

	M (SD)				Overall -	Pairwise comparison significance levels						
Experiential content	BE	ME	AD	RS	difference $F(3, 453)$	BE & ME	BE & AD	ME & RS	BE & RS	ME & AD	AD & RS	
Feelings												
I. Felt frustrated	4.37 (2.10)	4.51 (2.34)	3.25 (2.00)	4.42 (2.45)	13.89***		***			***	***	
2. Felt shame for my thoughts	3.26 (2.03)	3.70 (2.34)	2.72 (2.11)	2.64 (1.78)	13.21***		*	***	**	***		
3. Felt admiration for the other person	7.06 (1.72)	6.05 (2.32)	7.54 (1.77)	2.65 (2.15)	196.96***	***	*	***	***	***	***	
4. Felt pleasant	4.67 (2.08)	4.36 (2.23)	5.81 (2.12)	2.83 (2.02)	77.08***		***	***	***	***	***	
Thoughts	` '	, ,	, ,	, ,								
5. Thought of injustice being done to me	3.76 (1.99)	4.46 (2.39)	3.34 (2.04)	4.10 (2.50)	10.27***	**				***	**	
6. Thought negatively about myself	3.76 (2.18)	3.76 (2.17)	3.31 (1.98)	2.98 (2.01)	7.62***			***	**			
7. Thought positively about the other	6.82 (1.88)	5.87 (2.21)	7.00 (2.03)	3.11 (2.26)	130.52***	***		***	***	***	***	
8. Thought of improving my situation	6.52 (2.08)	6.36 (2.03)	6.52 (1.92)	5.35 (2.25)	19.70***			*okok	***		***	
Action tendencies												
9. Wanted to take something from other	2.85 (2.06)	3.57 (2.32)	2.97 (2.06)	3.13 (2.17)	6.36***	***				**		
10. Wanted to degrade other	2.22 (1.59)	2.84 (2.01)	2.26 (1.73)	4.88 (2.64)	77.80***	**		***	***	**	***	
II. Wanted to improve own position	6.15 (2.10)	6.31 (2.08)	6.29 (1.96)	5.78 (2.14)	4.23**			*			*	
12. Wanted to be near other	5.73 (2.14)	5.58 (2.23)	5.89 (2.18)	2.91 (2.15)	88.47***			**	**		**	
Actions	` ,	` ,	, ,	` ,								
13. Tried to hurt the other's position	2.16 (1.69)	2.63 (1.88)	2.28 (1.75)	3.55 (2.31)	24.36***	*		**	**		**	
14. Talked negatively about other			2.24 (1.64)		90.62***	**		**	**	***	**	
15. Complimented the other sincerely	7.20 (1.70)	6.00 (2.27)	7.41 (1.61)	3.03 (2.38)	182.78***	**		*okok	**	***	***	
16. Reacted actively	6.04 (1.96)	5.70 (2.12)	6.25 (1.79)	5.05 (2.21)	15.71***			*	**	**	**	
Motivational goals	` ,	` ,	, ,	` ,								
17. Hoped the other would fail in something	2.28 (1.52)	2.98 (2.16)	2.33 (1.82)	4.21 (2.56)	41.14***	***		*otok	***	**	*No*	
18. Hoped for justice to be done	5.86 (1.99)	5.90 (2.13)	5.61 (2.05)	5.65 (2.42)	1.26							
19. Hoped the other would do well	, ,	, ,	6.97 (1.75)	` ,	44.40***	**		***	***	***	**	
20. Hoped to remain/become friends with other	` ,	` ,	7.36 (1.84)	` ,	123.30***	***		***	***	***	*olok	

Note. BE = benign envy; ME = malicious envy; AD = admiration; RS = resentment. *p < .05. **p < .01. ***p < .001.

benign envy and admiration included stronger admiration of the other, sincere compliments, hopes that the other would do well, and intentions to remain/become friends, compared to malicious envy or resentment (all ps < .001). Contrary to hypotheses, benign envy, malicious envy, and admiration all showed stronger motivations than resentment to improve one's own situation (p < .001), be near the other (p < .001), and react actively (p < .001 for benign envy and admiration compared with resentment; p = .020 for malicious envy and resentment). In line with hypotheses, malicious envy, compared with benign envy, showed more thoughts of injustice (p = .011; but not more hope for justice to be done, p = 1.000) and more motivation to take something from the other, talk negatively about the other, degrade the other, hope the other would fail (all $ps \le .001$), and hurt the other's position (p = .031). Overall, results suggested that both benign and malicious envy included feelings of frustration and self-improvement motivation, while malicious envy additionally included lower perceived control, higher perceived unfairness, and more hostility toward the comparison other.

Discussion

The goals of the current study were to examine the distinctions between Mainland Chinese mothers' experiences of malicious and benign envy within the context of parenting, and to distinguish these two forms of envy from related emotions (i.e., admiration and resentment). The results generally supported the notion that malicious and benign envy are two distinct emotions, with different cognitive appraisals, associated motivations, and action tendencies. In particular, benign envy was associated with benevolent feelings toward the envied target, while malicious envy was associated with desires to degrade the other and diminish their standing. Contrary to prior research, however, both malicious and benign maternal envy in the Mainland Chinese context included motivations for self-improvement. Overall, the results suggest that Chinese malicious and benign maternal envy are two independent emotions, also distinguishable from admiration and resentment, which contain distinctive cognitive appraisals and action tendencies, and has important implications for research on social comparisons made in the context of parenting.

This study provides insights in how mothers' social comparisons with other parents' achievements might serve both as a source of interpersonal stress and as a motivational force for self-improvement. While many previous studies on mothers' extra-familial social interactions have focused on the benefits of social support (e.g., Doyle et al., 1994; Woody & Woody, 2007), investigations of how other parents might threaten mother's self-concepts have been limited. Recent research has generally revealed that higher tendencies toward upward social comparisons are associated with mothers' mental health problems and negative child outcomes (Lee et al., 2020; Sidani et al., 2020). Nevertheless, social comparison is a common and frequent activity in daily life, and facilitates self-evaluation and goal-directed decisions-making, especially in the absence of objective standards (Festinger, 1954). Previous findings emphasizing the negative impacts of maternal social comparison might therefore mask the complexity, and potential benefits, of these cognitions and the negative emotions that arise from them. Our findings offer a more nuanced perspective on how mothers' envy stemming

from upward social comparisons might be either detrimental or beneficial to their relationships and future behaviors. The differentiation between malicious and benign maternal envy provides important insights in how mothers might interpret these negative situations differently. On the one hand, mothers might internalize the other parents' achievements in a way that damages their self-concepts, and feel malicious envy. On the other hand, mothers might use the desire to reduce envy as an incentive for bettering their childrearing without necessarily feeling hostile toward the other parent. The direction that mothers' envy ultimately takes is related to cognitive appraisals about whether their disadvantage is changeable, and whether the envied other deserves the advantages that they enjoy. This divergence in emotional response might further predict mothers' differing social outcomes, such as proneness to interpersonal conflict, unethical behaviors, and changes in status or reputation (Eissa & Wyland, 2016; Lange et al., 2016). Our findings might imply new approaches to alleviating negative outcomes related to maternal envy and promoting its positive influences. Teachers, coaches, and practitioners who observe evidence of envy between parents in their respective environments might aim to alter mothers' cognitive appraisals, instead of merely attempting to prevent mothers from engaging in social comparison.

Themes present in mothers' recalled experiences

Content coding results suggested that Chinese mothers experience malicious or benign envy in various domains related to both themselves and their children. The present study provided insights into how Chinese mothers make expanded-self social comparisons related to children's characteristics and achievements, and experience envy toward other parents based on perceptions about children's shortcomings. Previous research has suggested that mothers base their self-worth on children's achievements (Ng et al., 2014) and protect evaluations of their children's achievements as if protecting evaluations of their own achievements (Thai et al., 2019). The current study extends existing literature on these expanded-self social comparisons by exploring the various emotional responses that they might generate, and how they might be predicted by mothers' cognitive appraisal processes. Our content coding results showed that child characteristics and academic performance comprised a major context for both benign and malicious maternal envy. In addition, mothers appeared to experience malicious envy more often than benign envy when making comparisons regarding provision of material and educational resources for children, which might reflect their low perceived control over access to these resources. The present findings suggest that mothers can experience both types of envy for their child as if they were experiencing it in response to their own personal disadvantages. The malicious or benign nature of this envy depends on their cognitive appraisals of control and deservingness. Our findings are particularly beneficial for future research on examining how close others' qualities might guide individuals' own self-evaluations and related emotions.

Mothers' admiration or resentment, in contrast, appeared to mostly arise in the context of the other parent's personal characteristics and achievements. Although mothers also frequently felt envious in this regard, our results suggested that this domain might be less self-threating compared with others such as children's academic

performance and material possessions. In the Chinese context, competition and related social comparisons are prevalent regarding academic performance and access to material and educational resources. Indeed, previous literature has suggested that Chinese parents attach great social, moral, and financial importance to children's academic achievements (Chao, 1996; Ng & Wei, 2020). Previous research has also reported a stronger correlation between external contingent self-worth and materialistic values in China than in Western Europe (Zhang et al., 2020). The dual focus on the self and other in the domains of academic performance and material possession might more likely lead to envy, compared with the other domains in our content coding.

Distinguishing malicious and benign maternal envy

Our results suggested that malicious and benign maternal envy can be considered as two envy subtypes, as they were both frustrating emotions arising from upward social comparison (Lange & Crusius, 2015a). The focus on the self in these comparisons, combined with mothers' awareness of their relative inferiority, presented threats to maintaining a positive self-concept. Mothers' reports of their emotions and evaluations of self and the envied target showed that malicious and benign envy contained similar levels of negative self-focused feelings (e.g., frustration, shame) and self-evaluations, which suggests that malicious and benign maternal envy do not differ in these respects.

Nevertheless, malicious and benign envy differed in terms of their associated cognitive appraisals and action tendencies. Our content coding showed that malicious envy, compared to benign envy, was characterized by lower perceived control over gaining the envied other's desired attributes, higher perceptions of unfairness regarding the other's advantages, and higher aggression toward the envied target. As Heider (1958) argued, malicious envy often includes a sense of injustice. Our results showed that there were circumstances in which mothers felt the other's advantage was well-deserved, because they noticed and focused on the efforts that the other had made. When individuals believe that they are capable of achieving similar success through those same efforts, they are likely to hold much more friendly attitudes toward the envied person and might also make healthier efforts toward self-improvement. In contrast, when the perceived balance of justice was disturbed and mothers felt incapable of changing their situation, they felt malicious envy and attributed their own disadvantage to the "rule breaker." In such situations, pulling the other down might seem a more viable means of reducing self-other discrepancies.

The hostility that characterizes malicious envy might also manifest as schadenfreude (Van Dijk et al., 2015), aggression (Smith & Kim, 2007), and social undermining (Duffy et al., 2012). Despite the fact that hostility toward others tends to be a moral violation that puts individuals' interpersonal relationships at risk, aggression arising from malicious envy might still offer potential benefits for protecting threatened self-concepts (Salmivalli, 2001). Malicious intentions and behaviors toward the other could alleviate this frustration and bolster the self at the cost of the target (Wert & Salovey, 2004), without requiring much self-sacrifice. The envious individual can potentially overcome the cognitive barriers of social and moral prescriptions, and commit socially undermining actions through moral disengagement (Duffy et al., 2012). However that these

short-term boosts to one's self-concept will likely come at long-term costs to one's interpersonal relationships and reputation. These results align with previous correlational and experimental evidence distinguishing benign envy from malicious envy (Crusius & Lange, 2014; Lange & Crusius, 2015b; Van de Ven et al., 2009), and suggest addressing feelings of self-efficacy and (un)fairness as two potential avenues for reducing the perceived disparities between the self and envied parent.

In contrast to prior research (e.g., Van de Ven et al., 2009), malicious and benign maternal envy showed similar levels of self-improvement motivation and desires to be near the envied parent. However, other studies have also suggested that the exclusive association between self-improvement and benign envy might be overstated. For example, Salerno and colleagues (2019) showed that both malicious and benign envy prompted self-improvement motivations when there were opportunities to do so outside of the envy-eliciting domain. They also found that benign envy triggered processfocused goals and increased emphasis on efforts invested, while malicious envy activated outcome-focused self-improvement goals, through beliefs that effort does not determine reward. Indeed, some have suggested that even negative emotions can facilitate adaptive behaviors, and that the behavioral consequences of emotions can vary according to context (Keltner & Gross, 1999). The pervasive and permanent implications of parenthood for other areas of life suggest that even mothers who experience malicious envy may try to improve themselves, to address perceived self-other discrepancies. The lack of control in the comparison domain associated with malicious envy might leave mothers with little recourse but to use compensatory strategies, such as becoming advantaged in another parenting domain. Our study could not detect these nuanced selfimprovement differences with the rather general items derived from prior research. However, the equivalent self-improvement motivations observed for malicious and benign maternal envy can serve as a basis for further examining the distinctions in domains psychological orientations that might drive compensatory strategies in these differing emotional contexts.

Another explanation for the presence of self-improvement motivations in malicious maternal envy might be the Chinese cultural emphasis on life-long learning and mastery in the face of upward comparisons. Such failure might induce a sense of shame, regardless of whether malicious or benign envy is experienced. Some literature suggests that, compared with Western societies, shame in the Chinese context often has a restorative function and serves as a motivation for bettering oneself (Chen, 2018). It is therefore possible that Chinese mothers, in particular, might be motivated to improve their childrearing even when experiencing malicious envy toward another parent.

Distinguishing benign and malicious envy from admiration and resentment

Our results supported prior arguments that malicious maternal envy is distinct from resentment, and that benign maternal envy is distinct from admiration. Consistent with existing accounts (Smith, 2000) both malicious and benign envy were characterized by stronger explicit self-other comparisons than were admiration or resentment. Furthermore, malicious envy and resentment included stronger unfairness perceptions, compared to benign envy and admiration. Malicious envy and resentment also included

heightened frustration, unpleasant feelings, negative self-evaluations, and ill will toward the target person. However, malicious envy and resentment differed in that malicious envy included more shameful thoughts toward the self, but less intense negative feelings and ill will. Malicious envy usually contains judgments of unfairness that are largely based on subjective standards (Smith & Kim, 2007). In contrast, unfairness perceptions associated with resentment are usually based on objective injustices that others would also notice (Smith et al., 1994). This may make mothers view their emotions as more legitimate, and they might be more willing to express negative feelings and aggression.

Benign maternal envy could also be distinguished from admiration. Benign maternal envy included more negative feelings and thoughts about the self, supporting the notion of valence distinction between these two emotions (Smith, 2000). However, we did not find evidence for our hypothesis that benign envy would be more motivating for selfimprovement than admiration, as they both showed similar levels of motivations to improve one's own position and desires to be close to the target person. It should be noted that previous findings reporting this distinction did not find especially large differences (Van de Ven et al., 2009). Other literature also suggests that the passive selfimprovement motivation characterizing admiration might be delayed, as individuals are inspired to search for broader opportunities to improve themselves (Schindler et al., 2013), while benign envy triggers more immediate actions to reduce unpleasant feelings and similar success in the comparison domain (Van de Ven, 2016). These finer distinctions might have been lost in our retrospective task, which did not differentiate between short-term and long-term responses. These temporal distinctions might provide fruitful avenues for further research on the motivational differences between envy and related emotions.

Limitations and future directions

This research included notable strengths. First, our participants came from numerous provinces and municipalities instead of being limited to a small number of major cities (e.g., Beijing, Shanghai) in Mainland China, offering a more comprehensive picture of maternal envy experiences in a large country that has notable regional differences in urbanization, globalization, and endorsement of traditional Confucian philosophies. Secondly, we utilized within-subject design to ensure that the differences we found are reflections of differences between emotions instead of differences between individuals. Furthermore, our use of objective content analysis also provided insights into both the eliciting events and the cognitive appraisals that differentiated between the various emotions of interest.

This research has several limitations, however. The use of self-reported recall to collect experiences of maternal envy might be influenced by social desirability. Indeed, our results showed that mothers generally reported malicious envy experiences as less intense, less recent, and more difficult to recall, which might point to a general reluctance to recount such experiences. Future research should explicitly include a measure of socially desirable responding, to examine its covariance with participants' reports of malicious and benign envy experiences. Fatigue might also be a drawback for the withinsubjects design used in this study. Mothers might have become bored or exhausted as

they recalled and reported on multiple experiences. Although the average completion time for the study was relatively short (23.14 minutes), further explicit comparisons of within-subjects designs and relatively shorter, between-subjects approaches might be beneficial for eliminating such concerns.

This study did not address questions such as whether malicious and benign maternal envy actually predict differentiated (e.g., adaptive or overbearing) childrearing behaviors, nor the parent or child personality characteristics that might influence mothers' experiences of these emotions, their associated responses, or effects on familial and extra-familial interactions. For example, others have suggested that malicious envy might facilitate impairments in narcissistic individuals' abilities to maintain intimate social relationships and positive status (Krizan & Johar, 2012; Lange et al., 2016; Neufeld & Johnson, 2016). These gaps could be informed through future investigations on links between parent/child characteristics, maternal envy, and parenting behaviors, or through observations of actual parent-child interactions. Future research could also include perspectives and envy experiences of fathers, to better understand the whole-family emotional dynamics that might be at play. Finally, our explanations about the cultural factors at play in Chinese maternal envy lack cross-cultural evidence. Future research could explore maternal envy conceptualizations across multiple cultural contexts and various parenting ideologies.

Despite these limitations, this research provides insights into Chinese mothers' experiences of malicious or benign envy, and how malicious and benign maternal envy are different from related emotions such as admiration and resentment. Our extension of the dual envy perspective to the domain of Chinese parenting demonstrates that the distinction between malicious and benign envy can be made in a specific life context, in a country with different cultural norms compared to the country in which this distinction was initially researched, and can pertain to mothers' evaluations of both their own and their children's relative disadvantages. Although upward social comparisons and resulting feelings of envy might act as sources of interpersonal stress that have negative implications for mothers' social interactions and personal well-being, these experiences might also motivate them toward developing stronger bonds with parental "role models" and working to improve their own parenting skills and child outcomes. Our findings might be beneficial for future investigations of maternal envy effects upon mothers' interactions with their children, as well as associations with youth's adaptive functioning.

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Open research statement

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available. The data can be obtained by emailing wq.zong@link.cuhk.edu.hk. The materials used in the research are available. The materials can be obtained by emailing wq.zong@link.cuhk.edu.hk.

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