



How helicopter parenting fosters malevolent creativity: A serial mediation model of family environment and moral identity

Lihua Xu^{1,2}, Jinmei Liu³, Yan Wang⁴ and Wenfu Li^{3,*}

¹School of Psychology and Mental Health, North China University of Science and Technology, Tangshan, China

²Hebei Key Laboratory of Mental Health and Brain Science, North China University of Science and Technology, Tangshan, China

³School of Rehabilitation Medicine, Jining Medical University, Jining, China

⁴School of Mental Health, Jining Medical University, Jining, China

*Correspondence: Wenfu Li, wenfulee@126.com

Received: 27 December 2025; Accepted: 24 March 2026; Published: 29 April 2026

Abstract: This study investigated the association between helicopter parenting and malevolent creativity among college students, and the serial mediating roles of family environment and moral identity. The study sample comprised 489 Chinese college students (females = 56.2%, 18–23 years old = 87.1%). The students completed self-report measures assessing helicopter parenting, family environment, moral identity, and malevolent creativity. The results of serial mediation model showed that helicopter parenting was significantly associated with higher malevolent creativity. Moreover, family environment and moral identity sequentially mediated this relationship. Specifically, helicopter parenting may contribute to a negative family environment and undermine individuals' moral identity, thereby leading to higher levels of malevolent creativity. The findings are consistent with Psychological Reactance Theory, Family Systems Theory, and Self-Determination Theory, indicating that helicopter parenting may foster malevolent creativity both directly and indirectly through its detrimental effects on family environment and moral development. These findings highlight the importance of parenting behaviors on malevolent creativity and provide a scientific basis for early identification and intervention in high-risk family contexts.

Keywords: malevolent creativity; helicopter parenting; family environment; moral identity

Introduction

Malevolent creativity refers to the act of individuals driven by malevolent thoughts, who deliberately create novel and unique products with the aim of harming others or society, thereby expanding their own interests and having a negative impact on others and society. Its essence lies in the dual components of harmful intent and behavioral novelty, representing a morally misdirected application of creative potential, reflecting the redirection of creative capacity toward self-serving or destructive purposes (Cromptley et al., 2008). Regarding its influencing factors, the family upbringing style undoubtedly plays a crucial role in shaping an individual's cognitive, emotional and behavioral patterns (Darling & Steinberg, 1993). Previous studies have shown that negative parenting styles may predict the malevolent creativity of college students (Bedu-Addo et al., 2023). However, there is limited research on the impact of over-controlling helicopter parenting on individuals' malevolent creativity. Meanwhile, in recent years, "helicopter parenting" has attracted significant attention due to its growing prevalence in contemporary families and its association with various negative outcomes. This pattern of parents' has been shown to hinder children's autonomy development and may lead to psychological problems such as anxiety, depression and decision-making delay (Wang et al., 2023; Wu et al., 2023). It may also cause conflicts between parents and children, thereby affecting the harmonious family environment (Leung, 2021). Moreover, excessive parental control could be detrimental to the formation of individual's moral identity (Ryan & Deci, 2000), risking

engaging in immoral behavior (Hardy & Carlo, 2011), including malevolent creativity. Given that helicopter parenting is an under-researched phenomena in regards to risks for malevolent creativity, this study aims to investigate whether helicopter parenting is associated with heightened malevolent creativity in college students, and to explore the mediating roles of family environment and moral identity in this process.

Helicopter parenting and malevolent creativity

Helicopter parenting usually represents excessive control by parents over their children, its essence lies in parents systematically depriving their children of opportunities to assume autonomous responsibility at critical developmental stages, all under the guise of "ensuring their children's success" (Bradley-Geist & Olson-Buchanan, 2014). Previous research has shown that creativity itself has a significant genetic effect and is a relatively stable cognitive potential, however, its direction may be influenced by the environment (Velázquez et al., 2015). At the same time, creative resources may be strategically redirected based on an individual's motivational state. Prior research has shown that when individuals perceive their freedom as threatened, they experience a motivational state comprised of anger and negative cognitions. This state drives them to restore their freedom, leading to rule-breaking and destructive behaviors (Rains & Turner, 2007). When intact creativity coexists with a motivation that is antagonistic or norm-violating, malevolent creativity emerges (Cromptley et al., 2008). Moreover, the research conducted



by Wang (2023a) reported that parental rejection and over-protection are positively correlated with Chinese college students' malevolent creativity, while parental emotional warmth negatively predicts malevolent creativity. As an extreme form of over-protection, helicopter parenting may similarly channel creative potential toward socially harmful ends. Therefore, we infer that helicopter parenting may be associated with malevolent creativity of college students.

Family environment as mediator

The family environment is the family context in which an individual grows and develops (Bronfenbrenner, 1979). On the one hand, parents' parenting styles, as one of the constituent factors of the family environment, have a close mutual influence relationship with the family environment. First of all, the family environment, as the primary place for an individual's socialization, its quality largely depends on the parenting style adopted by parents. As a micro-system that influences children's development, the internal interaction patterns of the family, especially the parenting behaviors of parents, will directly shape the emotional atmosphere and functional characteristics of the family, and determine its socialization function (Darling & Steinberg, 1993). Moreover, research on emerging adults indicates that over-controlled helicopter parenting is closely related to the family environment. Specifically, both parent-reported and child-reported perceptions of over-control are significantly positively associated with a critical family environment (Segrin et al., 2015).

On the other hand, the quality of the family environment is an important factor influencing the development of an individual's malevolent creativity. Firstly, research shows that within the family environment, excessive emotional distance between teenagers and their parents, a lack of protection and support among family members, an absence of family unity, and the family's neglect of order and organization are all closely related to an individual's destructive behavior (Kuznetsova & Rychkova, 2021). Furthermore, the family environment is closely related to an individual's creative behavior. Specifically, a negative family environment, such as a neglectful family environment, is one of the significant external triggers for malevolent creativity (Zhang et al., 2025). Based on the essential characteristics of malevolent creativity, it can be speculated that a positive family environment may be negatively linked with an individual's malevolent creative behaviors. Furthermore, based on the above analysis, it can be concluded that the helicopter parenting style may be associated with an adverse family environment, which in turn may be related to higher levels of malevolent creative behavior.

Moral identity as mediator

The moral identity is the core component related to moral traits, values and beliefs in an individual's self-concept, reflecting the extent to which an individual internalizes moral qualities as self-identity. It was divided into two dimensions, which includes internalization and symbolization. Internalization refers to the degree to which moral traits are integrated into one's self-concept, while

symbolization refers to the extent to which these moral traits are manifested in external behaviors (Aquino & Reed II, 2002). Moral identity theory posits that moral behavior depends not only on moral judgment but also on whether moral traits are integrated into an individual's self-concept. When a person regards morality as a core part of themselves, moral identity becomes a crucial motivational foundation for inhibiting immoral behavior (Blasi, 1983). Previous studies have shown that there is a strong connection between moral identity and moral behavior, suggesting that the moral identity may serve as an important source of motivation for moral behavior. This is manifested by the fact that individuals with high moral identity may be more willing to donate to charities or engage in altruistic behaviors (Hardy & Carlo, 2011). Therefore, for contemporary college students, the cultivation of moral identity is particularly important.

The helicopter parenting style with excessive parental control may have a significant negative impact on the development of an individual's moral identity. Firstly, from the perspective of the internalization dimension of moral identity. Previous study based on the Self-Determination Theory showed that parents' psychological control can weaken their children's sense of self-determination, forcing them to passively follow external norms rather than truly identify with moral values (Soenens & Vansteenkiste, 2010). It hinders the process of moral internalization. Furthermore, from the perspective of the symbolization dimension, authoritarian parenting and psychological control over children are positively correlated with the moral evasion tendency of teenagers (Jiang et al., 2025), which is manifested as the evasion of moral responsibility and the rationalization of immoral behavior (Bandura et al., 1996), it increases the likelihood of individuals engaging in immoral behavior, then further weakens the stability of individuals' moral identity (Detert et al., 2008).

Meanwhile, there may also be a certain correlation between an individual's moral identity and their malevolent creativity. Firstly, malevolent creative behavior can serve as an expression of the low moral identity symbolization dimension. Individuals with a higher moral identity have a stronger motivation to maintain their moral image, thereby preventing themselves from engaging in immoral behaviors (Blasi, 1983). From the perspective of social cognitive theory, moral identity is a self-concept organized and established by an individual around moral characteristics, and it is a kind of moral cognitive schema (Aquino & Kay, 2018), individuals with high moral identity can restrain the exertion of their own malevolent creativity to a greater extent. Specifically, research shows that when an individual's moral identity is at a high level, even if the individual has a relatively high tendency towards malevolent creative behavior, they are less likely to exhibit malevolent creative behavior. On the contrary, when an individual's moral identity is at a low to medium level, the behavioral tendency of malevolent creativity is more likely to be transformed into actual manifestations of malevolent creativity (Gao et al., 2022). Therefore, it can be hypothesized that helicopter parenting may be linked to lower moral identity in individuals, which in turn may

be associated with the emergence of malevolent creativity in individuals.

Serial mediation rationale

The family environment, as an important place for individual socialization, has a profound influence on the formation and development of an individual's moral identity. Research has shown that parent-child interaction patterns in the family environment have a profound impact on children's moral cognition and emotional experience, and the high-quality interaction between parents and children has a positive impact on children's moral development (Kochanska & Murray, 2000). In addition, the family can influence an individual's moral cognition and behavior through various means, including the behavior of parents, the quality of family communication and the basic structure of family and so on (Wang, 2023b). Meanwhile, beyond the influence of immaterial factors in the family environment on an individual's moral identity, material environmental factors have also been shown to affect its development. For example, based on the moral identity model, social structural factors such as family socioeconomic status have a direct predictive effect on individuals' moral identity, and families with high socioeconomic status may provide more educational resources and social support for their children, which may promote the development of their moral reflection and prosocial behavior (Hart, 2005). In addition, parents' education level and socioeconomic status also affect their childrearing approaches and communication skills, thereby influencing their children's moral development (Tan & Yasin, 2020). Therefore, it can be inferred that a positive family environment may be positively correlated with an individual's moral identity.

Theoretical basis

This study integrates three complementary theoretical perspectives to explain how helicopter parenting may be associated with malevolent creativity. First, Psychological Reactance Theory (Brehm & Brehm, 2013) points that when individuals perceive that their behavioral freedom is threatened or deprived, they typically experience psychological reactance and develop a strong motivation to restore the threatened freedom. This oppositional motivation increases the likelihood of rule-challenging and destructive behaviors. It provides a motivational explanation for the direct link between helicopter parenting and malevolent creativity. Meanwhile, Family Systems Theory (Bowen, 1966) points that excessive parental control may alter the emotional dynamics of the entire family system rather than functioning as an isolated behavioral style. It indicates that parenting behaviors do not operate in isolation but reshape the entire family's emotional climate. Finally, Self-Determination Theory (Ryan & Deci, 2000) posits that the satisfaction of the three basic psychological needs, namely autonomy, competence, and relatedness, is a prerequisite for psychological well-being and high-quality motivation. Conversely, the frustration of these needs can lead to a range of maladaptive outcomes, including moral internalization. These frameworks provide a theoretical basis for the hypothesized serial mediation model.

The China context

In the Chinese cultural context, family relationships are strongly influenced by Confucian values that emphasize filial piety, family obligation, and respect for parental authority. Parents are generally expected to play an active and enduring role in guiding their children's development, particularly in educational and moral domains (Chuang et al., 2018). Meanwhile, compared with Western societies that often prioritize independence and early autonomy, Chinese families tend to place greater emphasis on parental involvement and interdependence between parents and children (Gao et al., 2021). As a result, parental monitoring and guidance frequently extend into late adolescence and even the college years. Furthermore, the tendency of Chinese-style "helicopter parenting" to overemphasize academic success and conformity (Zong & Hawk, 2022). It makes China a unique context for examining whether perceived excessive control, even when culturally sanctioned, still carries risks for maladaptive outcomes. Understanding this cultural nuance is essential for advancing cross-cultural theories of parenting and development.

Goal of the present study

This study aims to investigate the relationship between parental helicopter parenting and individual malevolent creativity, while also exploring the mediating roles of family environment and moral identity in this process. We propose the following four research hypotheses and present the mediation model in Figure 1.

H1: Helicopter parenting is positively associated with malevolent creativity among college students;

H2: Helicopter parenting is less likely in a positive family environment, and a risk for malevolent creativity;

H3: Helicopter parenting is associated with lower moral identity, higher malevolent creativity;

H4: Family environment and moral identity sequentially mediate the relationship between helicopter parenting and malevolent creativity for higher malevolent creativity.

An in-depth analysis of this mediating mechanism is conducive to revealing the complex psychological path of the formation of malevolent creativity, providing a theoretical basis for the formulation of subsequent intervention measures, and further offering a reference for the balanced development of mental health education and creativity cultivation.

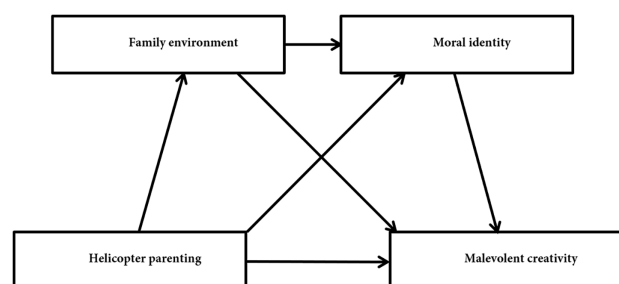


Figure 1. The conceptual model

Methods

Participants and setting

A convenience sample of 489 college students comprised the study sample (56.2% female students). The majority of the participants' ages ranged from 18 to 23 years old, with 426 (87.1%) of them. Moreover, there was 1 (0.2%) under the age of 18, 60 (12.3%) aged between 24 and 28, and 2 (0.4%) over the age of 28. There are 45 (9.2%) freshmen, 177 (36.2%) sophomores, 141 (28.8%) juniors and 126 (25.8%) seniors and above.

Measures

Helicopter parenting

The Helicopter Parenting Scale (HPS; Padilla-Walker & Nelson, 2012) was used to assess the level of helicopter parenting. It was validated in Chinese context (Wang et al., 2021). This scale comprises 5 items (Example item: My parents make important decisions for me, such as where to live, where to work, what courses to take, and so on). The items are on a five-point Likert scale (1 = "Strongly Disagree", 5 = "Strongly Agree"). Higher total scores indicate greater levels of helicopter parenting. The Cronbach's alpha coefficient for scores from the HPS in our study was 0.874.

Family environment

The Chinese version of the Family environment scale (FES-CV), originally developed by Moos and Moos (1981) and validated by Xue et al. (2014) in the Chinese context. The FES-CV comprises 27 items on three dimensions, including family cohesion (Example item: Members of my family always help and support each other), the degree of family freedom expression (Example item: Everyone in our family is completely free to come and go as they please), and public conflicts among family members (Example item: Family members rarely lose their temper with one another). The 0–1 scoring method of the secondary scoring scale was used (0 = "No", 1 = "Yes"). The Cronbach's alpha coefficient for FES-CV scores was 0.753 in the present study.

Moral identity

The Moral identity scale (MIS) which was originally developed by Aquino and Reed II (2002), and validated by Wang and Yang (2013) among Chinese college students. This scale comprises 10 items on two dimensions: moral internalization (Example item: Being a person who has good moral qualities makes me feel good) and moral representation (Example item: The way I dress and groom myself makes me look like a person who has good moral qualities). Items are on a 5-point Likert scale (1 = "Strongly Disagree", 5 = "Strongly Agree"). The Cronbach's alpha coefficient of this scale in our study was 0.713.

Malevolent creativity

The malevolent creativity was measured by the Malevolent Creativity Behavior Scale (MCBS), which was developed by Hao et al. (2016). It has been validated among Chinese adults, demonstrating good reliability and validity (Hao

et al., 2016). The scale consists of 13 items and is divided into 3 dimensions: hurting people (Example item: I have thought of new ways to punish people who do something wrong), lying (Example item: Lying is easy for me; I can justify it with sound reasoning), and play tricks on others (Example item: A lot of ideas for playing tricks on others pop into my head). This scale adopts the Likert 5-point scoring method (1 = "Not at all", 5 = "Always"). The higher total scores indicate greater malevolent creativity in daily life. The Cronbach's alpha coefficient for MCBS scores was 0.931 in the present study.

Procedure

This study was approved by the Ethics Committee of Jining Medical University (JNMC-2021-YX-015). All participants provided informed consent after being informed of the study details, and their voluntary participation was assured. The questionnaires were distributed online through the questionnaire survey platform "Wenjuanxing" (<https://www.wjx.cn>).

Data analysis

We utilized Model 6 in PROCESS 4.1 compiled by Hayes (2013) to investigate the mediating effect of family environment and moral identity between helicopter parenting and malevolent creativity. To enhance the comparability of model coefficients, all predictor variables were standardized (z-score standardization) prior to conducting the chain-mediation model analysis. Furthermore, given that the variables were significantly correlated with one another, there might be collinearity concerns. We assessed collinearity using variance inflation factors (VIFs). The results showed that the VIF values for all variables ranged from 1.05 to 1.30 (all below 2), and tolerance values ranged from 0.77 to 0.95 (all above 0.1), indicating no significant collinearity.

The Bootstrap method was used to examine the mediation model and calculate the 95% confidence interval with 5000 Bootstrap sampling times. Serial mediation analysis was conducted with gender, grade as control variables, providing a robust test of our hypothesized pathways. This analytical approach allowed us to quantify the unique and sequential mediating roles of family environment and moral identity, to assess the plausibility of the underlying causal process.

Common method bias test

Because the data were collected using the subjects' self-report method, this may lead to common method bias. Therefore, the Harman test was used to assess the common method bias in this study. The results showed that 13 factors had eigenvalues greater than 1. The first factor explained 19.79 percent of the overall variation, which was below the 40% threshold (Zhou & Long, 2004), suggesting that the common methodological biases did not pose a significant threat in this study.

Table 1. Means, standard deviations, and correlation of the major study variables

Variable	M	SD	1	2	3	4	5	6
1. Gender	1.56	0.50	1					
2. Grade	2.71	0.95	-0.098*	1				
3. Helicopter parenting	31.09	8.23	0.049	-0.090*	1			
4. Family environment	20.83	3.96	0.054	-0.063	-0.140**	1		
5. Moral identity	39.75	4.74	0.015	0.049	-0.209***	0.456***	1	
6. Malevolent creativity	27.40	9.98	0.050	0.041	0.416***	-0.426***	-0.413***	1

Note. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Results

Descriptive statistics and the correlation between the main variables

Table 1 presents the means, standard deviations, and correlation coefficients for helicopter parenting, family environment, moral identity and malevolent creativity. The correlation analysis revealed a statistical association among all study variables. Helicopter parenting was positively correlated with malevolent creativity ($p < 0.001$), and negatively correlated with family environment ($p < 0.01$). Moral identity was negatively correlated with helicopter parenting and malevolent creativity ($p < 0.001$). Family environment was positively correlated with moral identity ($p < 0.001$), and negatively correlated with malevolent creativity ($p < 0.001$). Regarding the control variables, gender and grade showed a weak negative correlation ($p < 0.05$), and grade was also weakly negatively correlated with helicopter parenting ($p < 0.05$). The preliminary results of the correlation analysis support the theoretical expectations of this study: helicopter parenting is associated with a more negative family environment, lower moral identity, and higher malevolent creativity; while a positive family environment is related to higher moral identity, and both are associated with lower malevolent creativity. These initial correlations provide the necessary premise for testing more complex sequential mediation paths.

Serial mediation model analysis

Based on the significant correlations among helicopter parenting, family environment, moral identity, and malevolent creativity, further mediation analysis was conducted to explore the relationships between these variables.

Table 2 and Figure 2 present the results of the regression analysis. After controlling for irrelevant variables, results showed that helicopter parenting significantly positively predicted malevolent creativity ($\beta = 0.421$, $p < 0.001$). This provides support for our main effect hypothesis (H1), indicating that parents' over-controlling behavior is associated with higher levels of malevolent creativity, while it significantly negatively predicted family environment ($\beta = -0.149$, $p < 0.001$) and moral identity ($\beta = -0.142$, $p < 0.001$). This discovery indicates that excessive control is not only directly linked to negative outcomes, but is also indirectly associated with family environment and moral identity. Moreover, from a practical perspective, the standardized coefficient indicates that for every one standard deviation increase

in helicopter parenting, malevolent creativity increases by 0.421 standard deviations. Therefore, even moderate shifts in parenting practices may contribute to measurable differences in developmental outcomes. In addition, Family environment significantly positively predicted moral identity ($\beta = 0.440$, $p < 0.001$), which implies that a positive family atmosphere is an important factor in fostering an individual's moral identity, and constitutes the core link of our sequential mediation model. Finally, when both the family environment and moral identity are taken into account simultaneously. The family environment significantly negatively predicted malevolent creativity ($\beta = -0.278$, $p < 0.001$). Additionally, moral identity significantly negatively predicted malevolent creativity ($\beta = -0.220$, $p < 0.001$). At this point, although the direct predictive effect of helicopter parenting on malevolent creativity remains significant, the effect value has decreased ($\beta = 0.334$, $p < 0.001$). This change suggests that both the family environment and moral identity jointly explain part of the correlation between helicopter parenting and malevolent creativity. These results indicated that the serial mediating effect of family environment and moral identity between helicopter parenting and malevolent creativity is significant. Additionally, grade showed a weak positive predictive effect on malevolent creativity in the first regression model ($\beta = 0.086$, $p < 0.05$), but this effect became non significant after family environment and moral identity were included in the model. Gender did not demonstrate any significant predictive effect in all models.

Furthermore, the complete model that includes two mediating variables ($R^2 = 0.354$) provides a significantly greater explanatory power for malevolent creativity compared to the baseline model that only includes helicopter parenting ($R^2 = 0.181$). This substantial increase in explanatory power indicates that incorporating the family environment and moral identity into the model can greatly deepen our understanding of the causes of malevolent creativity, surpassing the explanatory framework based solely on a single parenting behavior.

To quantify the effects of these indirect paths, we conducted a Bootstrap mediation effect test. Table 3 shows the mediating effect values of family environment and moral identity between helicopter parenting and malevolent creativity. After controlling for demographic variables, the effect value of helicopter parenting on malevolent creativity was 0.421, with a 95% confidence interval of [0.340, 0.503] (excluding 0), indicating a significant overall effect. The total indirect effect value was 0.087,

Table 2. Regression analysis of the relationship between variables

Variable	Malevolent creativity		Family environment		Moral identity		Malevolent creativity	
	β	t	β	t	β	t	β	t
Gender	0.076	0.917	0.109	1.200	0.009	0.115	0.119	1.607
Grade	0.086	1.983*	-0.075	-1.585	0.068	1.615	0.073	1.880
Helicopter parenting	0.421	10.204***	-0.149	-3.303***	-0.142	-3.512***	0.334	8.891***
Family environment					0.440	10.911***	-0.278	-6.713***
Moral identity							-0.220	-5.277***
R		0.425		0.168		0.484		0.595
R ²		0.181		0.028		0.234		0.354
F		35.619***		4.687**		36.937***		53.027***

Note. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

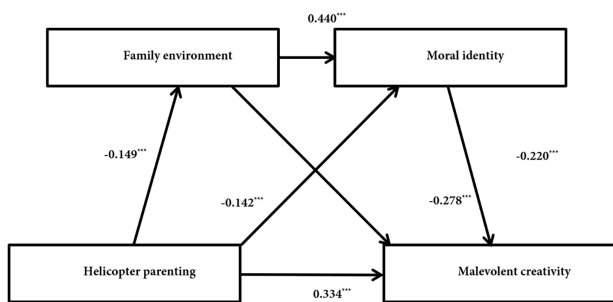


Figure 2. The serial mediation model. Note. *** $p \leq 0.001$.

with a 95% confidence interval of [0.040, 0.140], and the direct effect value was 0.334, with a 95% confidence interval of [0.261, 0.408], both excluding 0. This indicates that the total indirect effect and the direct benefit are both significant. Moreover, the 95% confidence intervals of all three mediating paths did not include 0, which indicated that the three paths were all significant. These not only demonstrate the roles of family environment and moral identity as independent mediating variables, but also confirm their theoretical conception as sequential mediators. Furthermore, the total indirect effect accounted for 20.67% of the total effect. The proportions of the indirect effects for the three pathways were 9.74%, 7.36%, and 3.33%, respectively.

Discussion

Firstly, the present study found that helicopter parenting was positively associated with malevolent creativity among Chinese college students. Numerous previous studies have demonstrated a significant correlation between parenting styles and the malevolent creativity of college students: for instance, neglectful parenting positively predict malevolent creative behavior in college students (Bedu-Addo et al., 2023). The findings of the present study contrast with this discovery, suggesting that both the absence and excess of parental involvement may steer creativity toward malevolent expression. Similarly, Parental over-protection can also predict malevolent creativity among college students (Wang, 2023a). In the present study, as an extreme form of over-protection, helicopter parenting may similarly be linked to malevolent creativity among Chinese college students. In China, although college students have reached emerging adulthood, many remain financially and emotionally dependent on their parents. In such a context, excessive parental control may continue to shape their value orientation and behavioral tendencies, it can not only inhibit their positive creativity, but also be related to externalization problems of them, such as disruptive behaviors (Fan et al., 2024; Urone et al., 2024). Viewed through the lens of Psychological Reactance Theory, Helicopter parenting may be associated with a strong psychological reactance in college students, thereby fostering oppositional motivation that is negative and destruction-oriented (Brehm &

Table 3. Serial mediation analysis of family environment and moral identity

Paths	Effect	BootSE	95%CI	Effect ratio
Total effect	0.421	0.041	[0.340, 0.503]	100.00%
Direct effect	0.334	0.038	[0.261, 0.408]	79.33%
Total indirect effect	0.087	0.025	[0.040, 0.140]	20.67%
Indirect effect 1	0.041	0.019	[0.009, 0.082]	9.74%
Indirect effect 2	0.031	0.012	[0.011, 0.057]	7.36%
Indirect effect 3	0.014	0.007	[0.003, 0.030]	3.33%

Note. Indirect effect 1: Helicopter parenting → Family environment → Malevolent creativity; Indirect effect 2: Helicopter parenting → Moral identity → Malevolent creativity; Indirect effect 3: Helicopter parenting → Family environment → Moral identity → Malevolent creativity.

Brehm, 2013). Although our data did not directly measure individuals' psychological reactance, this interpretation is theoretically grounded and highlights a key mechanism for future investigation.

Secondly, helicopter parenting was significantly negatively linked to a positive family environment, and a positive family environment is significantly negatively correlated with malevolent creativity. Darlow et al. (2017) confirmed that helicopter parenting is negatively correlated with interaction preferences between parents and children, and the deterioration of such interactions constitutes an important aspect of a negative family environment (Bai, 2025). In addition, negative family interactions have been found to increase malevolent creativity among college students (Chen et al., 2025), indicating that the family environment may serve as an indirect inducing factor for an individual's malevolent creativity. Under over-controlling parenting, children who are chronically exposed to a high-pressure family environment may develop more confrontational and destructive behavior as a way to cope with or resist parental control (Zhang et al., 2024). This pathway suggests that helicopter parenting does not operate in isolation but reshapes the emotional climate of the entire family system. Over-controlling helicopter parenting is associated with a high-pressure, low emotional expression family climate, which may weaken the internal regulation of creativity and increase the likelihood that creative thinking will be expressed in socially harmful ways.

Furthermore, moral identity is an important mediating variable in the relationship between helicopter parenting affects college students' malevolent creativity. Specifically, helicopter parenting may be associated with higher level of malevolent creativity through its negative association with moral identity. This finding suggests that excessive parental control may influence not only behavioral outcomes but also the internal moral self-structure that regulates how creative potential is directed. Consistent with prior research, negative parenting practices have been shown to undermine college students' moral identity (Zhang et al., 2021). Hoffman (1975) once pointed out that when parents adopt coercive methods such as excessive control over their children, this inhibits the internalization of children's moral norms and hinders the development of their moral conscience. Similarly, the findings of this study further elucidate Self-Determination Theory, suggesting that strictly controlling parenting behaviors may be associated with lower levels of moral internalization (Soenens & Vansteenkiste, 2010). In the context of emerging adulthood, a developmental stage characterized by identity consolidation, continued parental over-control may result in moral standards being experienced as externally imposed rather than autonomously endorsed, thereby weakening the stability of moral identity. In addition, lower moral identity is associated with greater engagement in malevolent creativity (Gao et al., 2022). Individuals with low moral identity tend to rationalize immoral behaviors (Detert et al., 2008), and thus are more likely to carry out malevolent creative behaviors (Xu et al., 2021). Furthermore, individuals with a lower level of moral identity rely more on specific cognition of the outside world when

facing moral dilemmas (Rupp et al., 2013), which indicates that their cognitive processing pays more attention to outcome performance and ignores moral consequences, thereby increasing the possibility of applying creative thinking to immoral purposes. Neuroscience research has further provided physiological evidence for this conclusion. In an fNIRS study, Qiao et al. (2023) found that all three types of malevolent creative tasks (lying, harming others, and playing pranks) involve cortical regions related to moral judgment, and when an individual's internal moral assessment mechanism is suppressed, the individual could perform malevolent creative tasks more effectively.

Finally, we found that the series of mediators composed of family environment and moral identity is also an important way in which helicopter parenting affects an individual's malevolent creativity. Specifically, helicopter parenting was negatively linked to a positive family environment, a decline in family environment quality undermines moral identity, which in turn increases malevolent creativity. Firstly, parental psychological control over college students is likely to trigger parent-child conflicts. Specifically, when parents attempt to control their children's thoughts, emotions, or decisions, children tend to develop rebellious tendencies, leading to a negative family environment characterized by blame and negation (Jiang & Song, 2023). Meanwhile, a positive family environment can provide college students with stable emotional support and clear value guidance, which helps enhance their awareness and judgment of moral cues. On the contrary, negative family environment is not conducive to their moral development (Song et al., 2025). Moreover, the individuals with a lower moral identity are more inclined to use their creativity for harmful purposes (Keem et al., 2018). However, from a cognitive consistency perspective, individuals may selectively recall parental behaviors in ways that align with their current self-concept and behavioral tendencies. Therefore, the present findings should be interpreted as associations between perceived helicopter parenting and malevolent creativity, rather than definitive evidence of a unidirectional developmental causal pathway.

Implications for research and practice

Understanding helicopter parenting is essential for clarifying how creativity is shaped and channeled toward either constructive or harmful outcomes. Meanwhile, it is worth noting that the concepts of helicopter parenting and malevolent creativity were initially developed in Western contexts. Within the Chinese cultural framework, behaviors that might be labeled as "helicopter parenting" in a Western context, such as high levels of parental control, may be interpreted in China as expressions of parental love and responsibility rather than merely as restriction (Wang et al., 2025). Nevertheless, the significant associations observed in the present study suggest that even within a cultural framework where parental involvement is expected, perceived excessive control may still have negative implications for moral development and creativity. Future cross-cultural research is needed to further examine the measurement invariance and functional equivalence of these constructs across cultures. Meanwhile, an alternative interpretation should be acknowledged.

Because helicopter parenting was assessed through retrospective self-report, it remains possible that individuals with stronger malevolent creative tendencies may reinterpret or reconstruct their childhood experiences as more controlling.

In conclusion, the findings of this study carry several practical implications for educators and parents. Firstly, parents should grant children more autonomy, aiming to reduce the likelihood that an over-controlling parenting style leads to malevolent creativity. Secondly, fostering a warm, cohesive, and low conflict family atmosphere can serve as a protective factor against malevolent creativity. Thirdly, parents and educators should consciously model and reinforce moral behavior, helping children internalize moral standards. Meanwhile, for college students, particularly those from high risk family backgrounds, university based mental health services should be made available. Overall, multi level interventions targeting parenting practices, family dynamics, and moral development are needed to reduce the likelihood of individuals engaging in malevolent creativity.

Strengths, limitations and future directions

A serial mediation model explains that helicopter parenting is not only directly related to the formation of an individual's malevolent creativity, but also indirectly related to an individual's malevolent creativity through the mediating effects of the family environment and moral identity, respectively. This finding not only promotes the understanding of the influencing factors and mechanism of malevolent creativity among college students, but also provides a new perspective on the complex relationship between family upbringing styles and the psychological development of college students.

However, there are also deficiencies in this study. Firstly, this study adopts a cross-sectional design, which is difficult to reveal the causal relationship among variables. In the future, longitudinal studies and experimental methods can be used to further explore the causal relationship among various variables. Secondly, this study adopted the method of questionnaire survey, making it difficult to determine whether the respondents' answers were consistent with the actual situation. Moreover, only college students from one Province of China were selected for study and findings may not generalize to other settings. Last but not least, the present study relied on retrospective self-reports of helicopter parenting, which may be subject to memory reconstruction bias. Individual' current psychological characteristics, including malevolent creativity tendencies, may influence how they recall and interpret their parents' past behaviors. It is therefore possible that participants with higher malevolent creativity reconstruct their childhood parenting experiences as more controlling, independent of the objective parenting practices they actually experienced. Future research should adopt longitudinal or multi-informant designs to better disentangle temporal ordering and reduce potential attribution bias.

Conclusions

This study aimed to explore the relationship between helicopter parenting and malevolent creativity among Chinese

college students, as well as the serial mediating mechanism, which may have significant implications for studying the influencing factors of malevolent creativity. This study found that the family environment and moral identity played a mediating role in the relationship between helicopter parenting and malevolent creativity. This mediating effect operates through three distinct pathways: the independent mediating effect of the family environment, the independent mediating effect of moral identity, and their combined serial mediating effect. These findings highlight the importance of family climate and moral identity in the development of malevolent creativity. Accordingly, interventions that reduce helicopter parenting, promote a supportive family environment, and cultivate moral identity may help channel creative potential toward socially beneficial rather than destructive outcomes.

Acknowledgement: Not applicable.

Funding Statement: This research was funded by the Natural Science Foundation of Shandong Province (ZR2022MC113); the Project of Humanities and Social Sciences of Shandong Federation of Social Sciences (2024-QNRC-76); the General Project of Humanities and Social Sciences of the Ministry of Education (24YJC190015); the Project of Youth Talent Team of Philosophy and Social Sciences of Jining City.

Author Contributions: All authors contributed to the study's conception and design. Material preparation, data collection and analysis were performed by Lihua Xu, Jinmei Liu, Yan Wang. The first draft of the manuscript was written by Lihua Xu and was supervised by Wenfu Li. All authors reviewed and approved the final version of the manuscript.

Availability of Data and Materials: The data that support the findings of this study are available from the Corresponding Author upon reasonable request.

Ethics Approval: This study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of Jining Medical University (JNMC-2021-YX-015). All participants provided informed consent after being informed of the study details, and their voluntary participation was assured.

Conflicts of Interest: The authors declare no conflicts of interest.

References

- Aquino, K., & Kay, A. (2018). A social cognitive model of moral identity. In: *Atlas of moral psychology* (pp. 133–140), New York, NY, USA: The Guilford Press.
- Aquino, K., & Reed II, A. (2002). The self-importance of moral identity. *Journal of Personality and Social Psychology*, 83(6), 1423–1440. <https://doi.org/10.1037/0022-3514.83.6.1423>
- Bai, X. (2025). The influence of family environment on elementary students' behavioral qualities and countermeasures. *New Education*, 22(10), 118–120. (In Chinese).

- Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Mechanisms of moral disengagement in the exercise of moral agency. *Journal of Personality and Social Psychology, 71*(2), 364–374. <https://doi.org/10.1037/0022-3514.71.2.364>
- Bedu-Addo, P. K. A., Mahama, I., Amoako, B. M., Amos, P. M., & Antwi, T. (2023). Neglectful parenting and personality traits as predictors of malevolent creativity among Ghanaian tertiary education students. *Creative Education, 14*(2), 232–244. <https://doi.org/10.4236/ce.2023.142016>
- Blasi, A. (1983). Moral cognition and moral action: A theoretical perspective. *Developmental Review, 3*(2), 178–210. [https://doi.org/10.1016/0273-2297\(83\)90029-1](https://doi.org/10.1016/0273-2297(83)90029-1)
- Bowen, M. (1966). The use of family theory in clinical practice. *Comprehensive Psychiatry, 7*(5), 345–374. [https://doi.org/10.1016/S0010-440X\(66\)80065-2](https://doi.org/10.1016/S0010-440X(66)80065-2)
- Bradley-Geist, J. C., & Olson-Buchanan, J. B. (2014). Helicopter parents: An examination of the correlates of over-parenting of college students. *Education + Training, 56*(4), 314–328. <https://doi.org/10.1108/ET-10-2012-0096>
- Brehm, S. S., & Brehm, J. W. (2013). *Psychological reactance: A theory of freedom and control*. Cambridge, MA, USA: Academic Press.
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Cambridge, MA, USA: Harvard University Press. <https://doi.org/10.4159/9780674028845>
- Chen, F., Xiao, Y., Wang, Y., Huang, Y., Yang, W., et al. (2025). The link between family support and malevolent creativity: The mediating roles of reflective rumination and brooding rumination. *Psychological Reports, 117*(7), 1177/00332941251363462
- Chuang, S. S., Glozman, J., Green, D. S., & Rasmi, S. (2018). Parenting and family relationships in Chinese families: A critical ecological approach. *Journal of Family Theory & Review, 10*(2), 367–383. <https://doi.org/10.1111/jftr.12257>
- Cropley, D. H., Kaufman, J. C., & Cropley, A. J. (2008). Malevolent creativity: A functional model of creativity in terrorism and crime. *Creativity Research Journal, 20*(2), 105–115. <https://doi.org/10.1080/10400410802059424>
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin, 113*(3), 487–496. <https://doi.org/10.1037/0033-2909.113.3.487>
- Darlow, V., Norvilitis, J. M., & Schuetze, P. (2017). The relationship between helicopter parenting and adjustment to college. *Journal of Child and Family Studies, 26*(8), 2291–2298. <https://doi.org/10.1007/s10826-017-0751-3>
- Detert, J. R., Treviño, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: A study of antecedents and outcomes. *Journal of Applied Psychology, 93*(2), 374–391. <https://doi.org/10.1037/0021-9010.93.2.374>
- Fan, H., Feng, Y., & Zhang, Y. (2024). Parental involvement and student creativity: A three-level meta-analysis. *Frontiers in Psychology, 15*, 1407279. <https://doi.org/10.3389/fpsyg.2024.1407279>
- Gao, D., Liu, J., Bullock, A., & Chen, X. (2021). Children's interpretation moderates relations of maternal autonomy support with sociability and assertiveness in China. *Social Development, 30*(2), 449–462. <https://doi.org/10.1111/sode.12491>
- Gao, Z., Qiao, X., Xu, X., & Hao, N. (2022). Darkness within: The internal mechanism between dark triad and malevolent creativity. *Journal of Intelligence, 10*(4), 119. <https://doi.org/10.3390/jintelligence10040119>
- Hao, N., Tang, M., Yang, J., Wang, Q., & Runco, M. A. (2016). A new tool to measure malevolent creativity: The malevolent creativity behavior scale. *Frontiers in Psychology, 7*, 682. <https://doi.org/10.3389/fpsyg.2016.00682>
- Hardy, S. A., & Carlo, G. (2011). Moral identity: What is it, how does it develop, and is it linked to moral action? *Child Development Perspectives, 5*(3), 212–218. <https://doi.org/10.1111/j.1750-8606.2011.00189.x>
- Hart, D. (2005). The development of moral identity. *Nebraska Symposium on Motivation, 51*(4), 165–196. <https://doi.org/10.1159/000086860>
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York, NY, USA: The Guilford Press.
- Hoffman, M. L. (1975). Moral internalization, parental power, and the nature of parent-child interaction. *Developmental Psychology, 11*(2), 228–239. <https://doi.org/10.1037/h0076463>
- Jiang, H., Qin, H., Ren, L., Xu, F., Shao, L., et al. (2025). Parental psychological control and cyberbullying in vocational college students: The role of the moral disengagement and the dual system of self-control. *Journal of Psychology in Africa, 35*(3), 355–360. <https://doi.org/10.32604/jpa.2025.067170>
- Jiang, C., & Song, Y. (2023). A case study on the influence of parental psychological control on anxiety in college students. *Asian Social Science, 19*(5), 37. <https://doi.org/10.5539/ass.v19n5p37>
- Keem, S., Shalley, C. E., Kim, E., & Jeong, I. (2018). Are creative individuals bad apples? A dual pathway model of unethical behavior. *Journal of Applied Psychology, 103*(4), 416–431. <https://doi.org/10.1037/apl0000290>
- Kochanska, G., & Murray, K. T. (2000). Mother-child mutually responsive orientation and conscience development: From toddler to early school age. *Child Development, 71*(2), 417–431. <https://doi.org/10.1111/1467-8624.00154>
- Kuznetsova, M., & Rychkova, L. (2021). Psychological predictors of destructive behavior of an individual. Personality in norm and in pathology. In: *European Proceedings of Social and Behavioural Sciences* (vol. 112, pp. 90–95). Heraklion, Greece: European Publisher. <https://doi.org/10.15405/epsbs.2021.06.04.11>
- Leung, J. T.-Y. (2021). Overparenting, parent-child conflict and anxiety among Chinese adolescents: A cross-lagged panel study. *International Journal of Environmental Research and Public Health, 18*(22), 11887. <https://doi.org/10.3390/ijerph182211887>
- Moos, R. H., & Moos, B. S. (1981). *Family environment scale manual*. Sunnyvale, CA, USA: Consulting Psychologist Press.
- Padilla-Walker, L. M., & Nelson, L. J. (2012). Black hawk down?: Establishing helicopter parenting as a distinct construct from other forms of parental control during emerging adulthood. *Journal of Adolescence, 35*(5), 1177–1190. <https://doi.org/10.1016/j.adolescence.2012.03.007>
- Qiao, X., Lu, K., Yun, Q., & Hao, N. (2023). Similarities and distinctions between cortical neural substrates that underlie generation of malevolent creative ideas. *ENeuro, 10*(9), ENEURO.0127-23.2023. <https://doi.org/10.1523/eneuro.0127-23.2023>
- Rains, S. A., & Turner, M. M. (2007). Psychological reactance and persuasive health communication: A test and extension of the intertwined model. *Human Communication Research, 33*(2), 241–269. <https://doi.org/10.1111/j.1468-2958.2007.00298.x>
- Rupp, D. E., Shao, R., Thornton, M. A., & Skarlicki, D. P. (2013). Applicants' and employees' reactions to corporate social

- responsibility: The moderating effects of first-party justice perceptions and moral identity. *Personnel Psychology*, 66(4), 895–933. <https://doi.org/10.1111/peps.12030>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037//0003-066x.55.1.68>
- Segrin, C., Givertz, M., Swaitkowski, P., & Montgomery, N. (2015). Overparenting is associated with child problems and a critical family environment. *Journal of Child and Family Studies*, 24(2), 470–479. <https://doi.org/10.1007/s10826-013-9858-3>
- Soenens, B., & Vansteenkiste, M. (2010). A theoretical upgrade of the concept of parental psychological control: Proposing new insights on the basis of self-determination theory. *Developmental Review*, 30(1), 74–99. <https://doi.org/10.1016/j.dr.2009.11.001>
- Song, H., Fan, S., Zhao, Y., & Wang, Y. (2025). Family environment and prosocial behavior tendency of college students: The chain mediating role of empathy and moral sensitivity. *PLoS One*, 20(5), e0323375. <https://doi.org/10.1371/journal.pone.0323375>
- Tan, W., & Yasin, M. (2020). Parents' roles and parenting styles on shaping children's morality. *Universal Journal of Educational Research*, 8(3), 70–76. <https://doi.org/10.13189/UJER.2020.081608>
- Urone, C., Verdi, C., Iacono, C. L., & Miano, P. (2024). Dealing with overparenting: Developmental outcomes in emerging adults exposed to overprotection and overcontrol. *Trends in Psychology*, 55(5), 469. <https://doi.org/10.1007/s43076-024-00407-x>
- Velázquez, J. A., Segal, N. L., & Horwitz, B. N. (2015). Genetic and environmental influences on applied creativity: A reared-apart twin study. *Personality and Individual Differences*, 75(5), 141–146. <https://doi.org/10.1016/j.paid.2014.11.014>
- Wang, Q. (2023a). The effect of parenting practices on creativity: Mediating role of psychological resilience. *Psychology Research and Behavior Management*, 16, 4501–4514. <https://doi.org/10.2147/prbm.S436370>
- Wang, Y. (2023b). Literature review: The influence of the family environment on moral and cognitive development. *Interdisciplinary Humanities and Communication Studies*, 1(1), 1–5. <https://doi.org/10.61173/b2ghgy07>
- Wang, J., Lai, R., Yang, A., Yang, M., & Guo, Y. (2021). Helicopter parenting and depressive level among non-clinical Chinese college students: A moderated mediation model. *Journal of Affective Disorders*, 295(1), 522–529. <https://doi.org/10.1016/j.jad.2021.08.078>
- Wang, C., Shi, H., & Li, G. (2023). Helicopter parenting and college student depression: The mediating effect of physical self-esteem. *Frontiers in Psychiatry*, 14, 1329248. <https://doi.org/10.3389/fpsy.2023.1329248>
- Wang, Z., Wang, H., & Saeed, S. (2025). Bridging parental rejection and overprotection: Implications of their co-occurrences for family-based interventions in children with attention deficit hyperactivity disorder. *Translational Pediatrics*, 14(11), 3073–3085. <https://doi.org/10.21037/tp-2025-462>
- Wang, X., & Yang, J. (2013). Moral disengagement and college students' prosocial behavior: The moderating effect of moral identity. *Journal of Psychological Science*, 36(4), 904–909. (In Chinese). <https://doi.org/10.16719/j.cnki.1671-6981.2013.04.009>
- Wu, W., Zhang, Y., & Wang, Y. (2023). Associations between profiles of helicopter parenting and decisional procrastination among Chinese adolescents. *Journal of Youth and Adolescence*, 52(6), 1219–1234. <https://doi.org/10.1007/s10964-023-01764-z>
- Xu, X., Zhao, J., Xia, M., & Pang, W. (2021). I can, but I won't: Authentic people generate more malevolently creative ideas, but are less likely to implement them in daily life. *Personality and Individual Differences*, 170, 110431. <https://doi.org/10.1016/j.paid.2020.110431>
- Xue, L., Zhu, X., Bai, M., Zhang, Y., & Zhang, L. (2014). The Chinese version of family environment scale symptoms questionnaire in adolescent students: Its reliability and validity. *China Journal of Health Psychology*, 22(6), 881–883. (In Chinese). <https://doi.org/10.13342/j.cnki.cjhp.2014.06.033>
- Zhang, S., Chang, T., & Li, Z. (2024). Parental psychological control and college students' negative risk-taking behaviors: The chain-mediating of autonomy and self-control. *Psychology Research and Behavior Management*, 17, 2687–2699. <https://doi.org/10.2147/prbm.S463664>
- Zhang, Y., Chen, C., Teng, Z., & Guo, C. (2021). Parenting style and cyber-aggression in Chinese youth: The role of moral disengagement and moral identity. *Frontiers in Psychology*, 12, 621878. <https://doi.org/10.3389/fpsyg.2021.621878>
- Zhang, J., Lu, J., Ge, J., Li, S., & Liang, X. (2025). Managing malice in negative environments: The mediating effect of coping styles on the relationship between negative sense of place and malevolent creativity among Chinese high school students. *BMC Psychology*, 13(1), 35. <https://doi.org/10.1186/s40359-024-02333-0>
- Zhou, H., & Long, L. (2004). Statistical remedies for common method biases. *Advances in Psychological Science*, 12(6), 942–950. (In Chinese).
- Zong, W., & Hawk, S. T. (2022). Evaluating the structure and correlates of helicopter parenting in mainland China. *Journal of Child and Family Studies*, 31(9), 2436–2453. <https://doi.org/10.1007/s10826-022-02370-6>