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Perceived Parenting Style, Self Efficacy and Self Control Among College Students

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Abstract

Perceived parenting styles shape college students' psychological development, yet the interplay between parenting, self-control, and general self-efficacy remains underexamined in Chinese higher education contexts. A cross-sectional survey of 300 Chinese college students (114 males, 186 females) assessed perceived paternal and maternal rearing behaviors using the Simplified EMBU Questionnaire (emotional warmth, rejection, overprotection), general self-efficacy using the General Self-Efficacy Scale, and self-control using the Self-Control Scale. Using SPSS 22.0, analyses included descriptive statistics, Spearman correlation, multiple regression, and moderation tests. Parental emotional warmth correlated positively with self-control (paternal $r = .621$; maternal $r = .661$; $p < .001$), whereas parental rejection and overprotection correlated negatively with self-control. In regression, paternal emotional warmth ($\beta = .325$, $p < .001$) and self-control ($\beta = .338$, $p < .001$) were positive predictors of self-efficacy, and the overall model accounted for 23.8% of the variance in self-efficacy; maternal emotional warmth showed a small negative coefficient after adjustment ($\beta = -.160$, $p = .049$). Moderation analysis indicated that self-control buffered the association between perceived maternal rejection and self-efficacy (interaction $p = .049$). Demographic factors were associated with selected parenting dimensions but not with self-efficacy. These findings underscore the roles of paternal emotional warmth and self-control in supporting college students' general self-efficacy and suggest self-control as a resilience factor when maternal rejection is perceived.

Keywords: *Perceived parenting style; self-efficacy; self-control; college students; emotional warmth; rejection; overprotection; Chinese higher education*

1. Introduction

Self-efficacy—defined as individuals' beliefs in their capacity to organize and execute actions required to achieve specific goals (Bandura, 2021)—has emerged as a critical psychological resource for college students navigating the demands of higher education. In an era characterized by rapid societal change, mixed learning environments, information overload, and increasing academic and social pressures, students' confidence in their ability to cope with challenges directly influences their motivation, persistence, and psychological well-being (Honicke et al., 2023; Yeung et al., 2021). Understanding the factors that foster or hinder self-efficacy during this developmental period is therefore of considerable theoretical and practical importance.

Among the myriad influences on self-efficacy, family environment—particularly perceived parenting styles—has received substantial research attention. Parenting styles, conceptualized through dimensions of emotional warmth, rejection, and overprotection, shape children's psychological development well into emerging adulthood (Baumrind, 1971; Kuppens & Ceulemans, 2019). In Western contexts, authoritative parenting (characterized by warmth and appropriate autonomy-granting) has been consistently associated with positive developmental outcomes. However, cross-cultural research suggests that the meaning and impact of specific parenting behaviors may differ across cultural contexts (García et al., 2024). In Chinese cultural settings, concepts such as "guan" (管)—which combines care with appropriate control—reflect culturally specific understandings of parental involvement that may not map directly onto Western typologies (Chao, 2021; Xiao, 2022).

Prior research links emotionally warm, autonomy-supportive parenting with more adaptive self-beliefs in adolescence and emerging adulthood, whereas harsh, rejecting, or psychologically controlling parenting is associated with poorer

psychological adjustment and academic burnout (Li & Zhang, 2021; Shen & Li, 2020; Chen, X., et al., 2023; Luo et al., 2022). Much of this evidence emphasizes domain-specific efficacy—particularly academic self-efficacy—and draws heavily on secondary-school samples, leaving general self-efficacy among college students less well characterized in Chinese settings.

Self-control—the capacity to regulate one's thoughts, emotions, and behaviors in pursuit of long-term goals (Tangney et al., 2024)—may represent a key pathway in this relationship. Theoretical accounts suggest that warm, supportive parenting facilitates the development of self-regulatory capacities, which in turn enable individuals to experience mastery and build confidence in their abilities (Bandura & Locke, 2023; Wang et al., 2023). Conversely, harsh or overcontrolling parenting may impair self-control development, potentially undermining self-efficacy. Self-control may also function as a protective factor, buffering individuals from the negative psychological impact of adverse parenting experiences—a moderating role that has received limited empirical attention.

The present study addresses these gaps by examining the relationships among perceived parenting styles, self-control, and general self-efficacy in a sample of Chinese college students. Specifically, this study aimed to: (a) describe perceived parenting styles (emotional warmth, rejection, and overprotection for both parents), self-control, and self-efficacy among participants; (b) examine demographic differences in these variables; (c) investigate the bivariate relationships among parenting styles, self-control, and self-efficacy; (d) test the mediating role of self-control in the relationship between parenting styles and self-efficacy; and (e) explore whether self-control moderates the relationship between negative parenting styles (rejection and overprotection) and self-efficacy. By addressing these objectives, the study seeks to advance theoretical understanding of how family experiences translate into personal agency and to identify potential targets for intervention to support college students' psychological development.

2. Review of Related Literature

2.1 Conceptual Foundations of Perceived Parenting Styles

Parenting styles refer to the characteristic approaches parents employ in raising their children, encompassing both specific behaviors and the emotional climate in which those behaviors occur (Baumrind, 1971). Baumrind's foundational typology distinguished authoritative, authoritarian, and permissive parenting patterns, with subsequent research emphasizing that children's *perceptions* of parental behavior may be more consequential for psychological outcomes than objective parenting practices (Rodríguez-Meirinhos et al., 2023). The present study adopts a dimensional approach assessing three core aspects of perceived parenting: emotional warmth (affection, support, and responsiveness), rejection (hostility, criticism, and neglect), and overprotection (excessive control, intrusion, and restriction of autonomy). These dimensions, measured retrospectively for the period before age 16, capture the multifaceted nature of parental influence as experienced by the child (Kuppens & Ceulemans, 2019). Cross-cultural research suggests that while these fundamental dimensions appear consistently across societies, their meaning and developmental implications may be shaped by cultural context (García et al., 2024).

2.2 Parenting Styles and Self-Efficacy: Empirical Evidence

Self-efficacy, a cornerstone of Bandura's social cognitive theory, refers to individuals' beliefs in their capacity to organize and execute actions required to achieve desired outcomes (Bandura, 2021). These beliefs are developed through four primary sources: mastery experiences, vicarious learning, verbal persuasion, and physiological states (Bandura & Locke, 2023; Usher et al., 2023). Within academic contexts, self-efficacy has been distinguished as domain-specific (e.g., mathematics self-efficacy) versus general, with general self-efficacy reflecting a relatively stable sense of personal competence across situations (Honicke & Broadbent, 2023).

Empirical work consistently reports positive associations between perceived parental emotional warmth and self-efficacy, alongside adverse outcomes linked to harsh, rejecting, or psychologically controlling parenting (Li & Zhang, 2021; Shen & Li, 2020; Chen, X., et al., 2023; Luo et al., 2022). In addition, self-efficacy has been described as a protective psychological resource during periods of heightened stress, including the COVID-19 pandemic (Yeung et al., 2021).

The systemic pressures facing students, which necessitate such psychological buffers, have been documented in the Philippine higher education context. A thematic review of health professions education identified overlapping psychosocial,

generational, and structural pressures that impact student well-being and program viability, underscoring the need for robust personal resources like self-efficacy to navigate academic and clinical training environments (Bermido et al., 2025).

2.3 Self-Control: Conceptualization, Development, and Correlates

Self-control—the capacity to override impulses, regulate emotions, and persist toward long-term goals—has been conceptualized both as a stable personality trait and as a state-dependent resource (Milyavskaya et al., 2023; Tangney et al., 2024). The strength model, which posits that self-control operates as a limited resource susceptible to depletion, has generated substantial research and debate (Baumeister, 2023; Hagger, 2023). Contemporary perspectives increasingly integrate trait and state approaches, recognizing that individuals vary in baseline self-control capacity while also experiencing situational fluctuations (Inzlicht et al., 2023).

Neurodevelopmental research indicates that self-control emerges gradually through childhood and adolescence, supported by maturation of prefrontal cortical regions responsible for executive functions (Deater-Deckard, 2024). Genetic factors contribute to individual differences, but environmental influences—particularly parenting—play crucial roles in shaping self-regulatory capacities (Willems et al., 2023). Warm, supportive parenting that provides appropriate structure and autonomy appears to facilitate self-control development, whereas harsh, inconsistent, or overcontrolling parenting may impair it (Wang et al., 2023; Zhang et al., 2023).

Robust evidence links self-control to diverse positive outcomes, including academic achievement, physical health, relationship quality, and psychological well-being (Duckworth et al., 2023; Galla et al., 2023; Gottfredson & Hirschi, 2023). Individuals with higher self-control report greater life satisfaction, fewer mental health problems, and more adaptive coping with stress (Tao et al., 2023; Zhu, 2023). These findings position self-control as a fundamental personal resource with implications across life domains.

2.4 The Mediating and Moderating Role of Self-Control

Theoretical accounts suggest that self-control may serve as a mechanism linking family environment to broader psychological outcomes. Supportive parenting may foster self-regulatory capacities, which in turn enable individuals to accumulate mastery experiences and develop robust self-efficacy beliefs (Bandura & Locke, 2023; Chen et al., 2023). Consistent with this mediation hypothesis, Li et al. (2023) found that self-control partially mediated the relationship between parenting and academic outcomes in Chinese adolescents. However, research specifically examining self-control as a mediator between perceived parenting and general self-efficacy in college populations remains limited (Pinquart, 2023).

Beyond mediation, self-control may function as a moderator—a protective factor that buffers individuals from the negative psychological impact of adverse parenting experiences. Studies have demonstrated that self-control attenuates the effects of various risk factors on adjustment, including low extraversion and interpersonal difficulties (Tao et al., 2023; Zhu, 2023). This buffering hypothesis suggests that individuals with strong self-regulatory capacities may be better equipped to maintain positive self-perceptions despite experiencing parental rejection or overcontrol. The present study tests both mediating and moderating roles of self-control, addressing gaps in understanding how self-control operates in the context of parenting-self-efficacy relationships.

The significance of such personal resources becomes especially pronounced in demanding educational contexts. Research on health professions students has shown that lifestyle factors and psychological distress are closely linked to burnout, highlighting the potential value of interventions that strengthen self-regulatory capacities as part of student wellness initiatives (Bermido et al., 2025). In parallel, emerging frameworks in health analytics emphasize that understanding student experiences requires more than quantitative measurement; it also demands attention to the narratives and lived contexts that shape psychological resources (Atento et al., 2025).

This buffering function resonates with broader perspectives in educational and health research that advocate for holistic, person-centered approaches to student development. Frameworks that integrate quantitative indicators with qualitative insights into student experiences provide richer understanding of how personal resources like self-control interact with environmental challenges, ultimately shaping outcomes such as self-efficacy and well-being (Atento et al., 2025).

2.5 Cultural Context: Parenting in Chinese Societies

Understanding parenting effects in Chinese cultural contexts requires attention to culturally specific meanings and practices. The concept of "guan" (管)—often translated as "to govern" or "to care for"—captures a parenting approach that combines high expectations, close monitoring, and structured guidance, which may be experienced as

supportive rather than controlling when embedded in warm parent-child relationships (Chao, 2021). Similarly, "training" parenting (xun) reflects culturally valued practices emphasizing education, self-discipline, and family honor (Xiao, 2022). These culturally grounded frameworks suggest that parental behaviors that might be interpreted as overcontrolling in Western individualistic contexts may carry different meanings in Chinese collectivist settings (García et al., 2024; Wang et al., 2023).

Research on Chinese parenting has highlighted important contextual variations between rural and urban settings (Xu et al., 2023) and examined distinctive practices such as “tiger parenting” and their implications for child adjustment (Cheah et al., 2023). At the same time, scholars have questioned the cultural validity of Western-derived measures when applied to Chinese populations, underscoring the need for culturally informed approaches to assessment and interpretation (Cheung, 2023; Vazsonyi et al., 2023). Methodologies that attend to the meanings participants themselves assign to their experiences are particularly valuable in such culturally nuanced research.

Integrative analytic frameworks that combine empirical measurement with attention to narrative and context—as increasingly emphasized in fields like health analytics—offer promising models for capturing the complex, culturally embedded ways family experiences shape psychological development (Atento et al., 2025). These considerations are especially relevant for understanding how perceived parenting relates to self-processes such as self-efficacy, which may be constructed differently in cultural contexts that prioritize collective goals and social harmony (Liem et al., 2023).

2.6 Synthesis and Gaps

The literature reviewed above establishes that perceived parenting styles—particularly emotional warmth—are associated with both self-control and self-efficacy, and that self-control itself is consistently linked to positive psychological outcomes. However, several gaps warrant attention. First, much existing research has focused on academic self-efficacy rather than general self-efficacy, leaving questions about how parenting influences broader confidence in coping with life challenges. Second, studies examining mediation mechanisms have predominantly tested direct effects without systematically examining whether self-control explains the parenting-self-efficacy relationship. Third, the potential moderating role of self-control—whether it buffers against negative parenting effects—has received limited empirical scrutiny. Fourth, paternal and maternal parenting effects have often been examined separately without integrated analysis of their unique and combined contributions. Finally, research specifically addressing these questions in Chinese college student populations, with attention to cultural contextual factors, remains relatively sparse.

The present study addresses these gaps by: (a) examining perceived parenting (emotional warmth, rejection, overprotection) separately for fathers and mothers; (b) assessing general (rather than domain-specific) self-efficacy; (c) testing both mediation and moderation models involving self-control; and (d) conducting these analyses in a sample of Chinese college students, thereby contributing to cross-cultural understanding of these relationships.

3. Methodology

3.1 Research Design

This study employed a quantitative, cross-sectional survey design to examine the relationships among perceived parenting styles, self-control, and self-efficacy in Chinese college students. Cross-sectional designs are appropriate for examining associations among variables at a single point in time and for testing mediation and moderation models using established statistical techniques.

3.2 Participants and Sampling

Participants were 300 college students recruited from a university in China through convenience sampling. The sample comprised 114 males (38.0%) and 186 females (62.0%). Educational background included junior college students (n = 112, 37.3%) and undergraduate students (n = 188, 62.7%). Year-level distribution was: freshman (n = 92, 30.7%), sophomore (n = 40, 13.3%), junior (n = 77, 25.7%), and senior (n = 91, 30.3%). Most participants came from rural areas (n = 191, 63.7%) compared to urban areas (n = 109, 36.3%), and the majority were not only children (n = 206, 68.7%) while 94 (31.3%) were only children. All participants were aged 18 years or older.

3.3 Measures

Perceived parenting styles. The Simplified EMBU Questionnaire (S-EMBU-C) was used to assess participants' retrospective perceptions of their parents' rearing behaviors before age 16. The instrument consists of 42 items (21 for father, 21 for mother) rated on a 4-point Likert scale (1 = never, 4

= always). Both father and mother versions assess three dimensions: Emotional Warmth (7 items each), Rejection (7 items each), and Overprotection (7 items each). One item requires reverse scoring. Dimension scores are calculated as means of constituent items, with higher scores indicating stronger perceived presence of that parenting dimension. Internal reliability in the present sample ranged from α = .74 to .84 across subscales, with full-scale α = .84.

Self-efficacy. The General Self-Efficacy Scale (GSES) measured participants' general sense of personal competence in coping with daily challenges and stressful life events. The scale comprises 10 items rated on a 4-point Likert scale (1 = completely incorrect, 4 = completely correct). Total scores range from 10 to 40, with higher scores indicating stronger general self-efficacy. The scale demonstrated good internal reliability in the present sample (Cronbach's α = .86).

Self-control. The Self-Control Scale (SCS) assessed participants' capacity to regulate thoughts, emotions, and behaviors in pursuit of long-term goals. The 19-item scale encompasses five dimensions: impulse control, healthy habits, resistance to temptation, concentration, and restraint of leisure. Items are rated on a 5-point Likert scale (1 = completely disagree, 5 = completely agree). Four items require reverse scoring. Total scores range from 19 to 95, with higher scores reflecting stronger self-control. Internal reliability in the present sample was excellent (Cronbach's α = .897).

3.4 Data Collection and Analysis

Following ethical approval from the university's research ethics committee, data were collected through both online and paper-based questionnaires. Online questionnaires were distributed via QR codes and university email systems; paper questionnaires were administered in person. All participants provided informed consent after receiving information about the study's purpose, voluntary participation, and confidentiality protections. Participation required approximately 15-20 minutes. A total of 400 questionnaires were distributed, with 328 returned and 300 deemed valid (91.5% valid response rate). Responses were excluded if more than 10% of items were missing or if patterned responding (e.g., identical answers across all items) was detected. To minimize bias, anonymity was emphasized.

Data were analyzed using SPSS version 22.0. Descriptive statistics (frequencies, percentages, means, standard deviations) summarized participant characteristics and study variables. Normality was assessed using the Shapiro-Wilk test. Group differences were examined using appropriate parametric or non-parametric tests (Mann-Whitney U, Kruskal-Wallis) based on data distribution. Bivariate associations among parenting dimensions, self-control, and self-efficacy were examined using Spearman's rank correlation coefficients. Multiple regression analysis tested the unique predictive contributions of parenting dimensions and self-control to self-efficacy. Moderation analyses examined whether self-control moderated the relationships between negative parenting dimensions (rejection, overprotection) and self-efficacy. Statistical significance was set at $p < .05$.

3.5 Ethical Considerations

This study was conducted in accordance with the ethical principles of the American Psychological Association and the Psychological Association of the Philippines. Ethical approval was obtained from the university's Research Ethics Review Committee, recognized by the Philippine Health Research Ethics Board. All participants provided informed consent, were informed of their right to withdraw at any time without penalty, and were assured of data confidentiality. Anonymity was protected through the use of unique random codes rather than personal identifiers. Data were stored securely on password-protected devices and will be deleted after five years.

4. Results and Discussion

4.1 Demographic Profile of Respondents

The sample comprised 300 Chinese college students, with a higher proportion of female participants (n = 186, 62.0%) than male participants (n = 114, 38.0%). Approximately two-thirds were undergraduate students (n = 188, 62.7%), with the remainder enrolled in junior college programs. Year-level distribution was relatively balanced across freshman (30.7%), sophomore (13.3%), junior (25.7%), and senior (30.3%) years, though sophomores were somewhat underrepresented. Most participants originated from rural areas (63.7%) and had at least one sibling (68.7%).

4.2 Perceived Parenting Styles

Participants' perceptions of their parents' rearing styles were moderately present across all three dimensions for both parents. Mean scores for paternal dimensions were: Emotional Warmth (M = 17.46, SD = 7.08), Rejection (M = 17.51, SD = 7.13), and Overprotection (M = 16.71, SD = 7.06). Maternal dimensions showed similar patterns: Emotional Warmth (M = 17.42, SD = 6.99), Rejection (M = 17.26, SD = 7.00), and Overprotection (M = 16.42, SD = 6.99). For both parents, Emotional Warmth and Rejection scores were slightly higher than Overprotection scores. The standard deviations (approximately 7.0 across all

dimensions) indicated substantial individual variation in perceived parenting experiences.

4.3 Self-Control and Self-Efficacy

Participants' self-control scores ranged from 19 to 95, with a mean of 69.56 (SD = 13.50), indicating moderate to moderately high levels of self-control with considerable individual differences. Self-efficacy scores ranged from 10 to 40, with a mean of 26.11 (SD = 10.04), placing the average participant in the moderate self-efficacy range (21-30 points). The standard deviation, approximately one-third of the total possible range, reflected substantial variation in participants' confidence in their ability to cope with challenges.

4.4 Demographic Differences in Study Variables

Perceived parenting styles. Gender differences emerged in perceptions of maternal parenting: female and male participants differed significantly in their perceptions of maternal Emotional Warmth ($U = 8697$, $p = .009$) and maternal Rejection ($U = 9149$, $p = .045$). Educational background (junior college vs. undergraduate) was associated with differences in perceived paternal Emotional Warmth ($U = 8587$, $p = .007$). Year level showed significant differences in paternal Emotional Warmth ($H = 13.134$, $p = .004$). Geographic location (rural vs. urban) was associated with differences in perceived maternal Rejection ($U = 7826.5$, $p < .001$). No demographic differences were found for overprotection dimensions, and only-child status was not associated with any parenting dimension.

Self-efficacy. No statistically significant differences in self-efficacy were found for any demographic variable: gender ($p = .828$), educational background ($p = .914$), year level ($p = .994$), location ($p = .437$), or only-child status ($p = .059$). Self-efficacy appeared relatively stable across demographic categories.

Self-control. Significant differences in self-control emerged only for educational background ($U = 9058.5$, $p = .043$). No differences were found for gender ($p = .838$), year level ($p = .361$), location ($p = .347$), or only-child status ($p = .799$).

4.5 Relationships Among Parenting Styles, Self-Control, and Self-Efficacy

Correlation analysis revealed distinct patterns of association among study variables. Parental Emotional Warmth demonstrated strong positive correlations with self-control for both fathers ($r = .621$, $p < .001$) and mothers ($r = .661$, $p < .001$). In contrast, parental Rejection and Overprotection were significantly negatively correlated with self-control, with correlations ranging from $r = -.173$ to $-.319$ (all $p < .01$). The strongest negative associations were between paternal Overprotection and self-control ($r = -.319$, $p < .001$) and maternal Overprotection and self-control ($r = -.306$, $p < .001$).

Paternal Emotional Warmth showed a moderate positive correlation with self-efficacy ($r = .353$, $p < .001$), while maternal Emotional Warmth demonstrated a smaller but still significant positive correlation ($r = .213$, $p < .001$). Neither paternal nor maternal Rejection or Overprotection were significantly correlated with self-efficacy (all $p > .05$).

Self-control and self-efficacy were positively correlated ($r = .366$, $p < .001$), indicating that participants with stronger self-regulatory capacities tended to report higher confidence in their ability to cope with challenges.

Correlations among parenting dimensions indicated consistency within the family system. Paternal and maternal Emotional Warmth were positively correlated ($r = .534$, $p < .001$). Paternal Rejection correlated positively with maternal Rejection ($r = .391$, $p < .001$) and maternal Overprotection ($r = .399$, $p < .001$). Paternal Overprotection correlated positively with maternal Overprotection ($r = .476$, $p < .001$) and maternal Rejection ($r = .447$, $p < .001$).

4.6 Predictors of Self-Efficacy

Multiple regression analysis was conducted with the six parenting dimensions and self-control as predictors of self-efficacy. The overall model was statistically significant, $F(7, 292) = 13.003$, $p < .001$, and accounted for 23.8% of the variance in self-efficacy (adjusted $R^2 = .219$).

Two variables emerged as significant positive predictors: paternal Emotional Warmth ($\beta = .325$, $p < .001$) and self-control ($\beta = .338$, $p < .001$). Maternal Emotional Warmth was a significant negative predictor in the model ($\beta = -.160$, $p = .049$), suggesting a suppression effect when other variables were controlled. None of the rejection or overprotection dimensions significantly predicted self-efficacy when other variables were accounted for.

4.7 Moderation Analyses: Self-Control as a Moderator

Moderation analyses examined whether self-control moderated the relationships between

parenting dimensions and self-efficacy. Across most dimensions, interaction terms were not statistically significant: paternal Emotional Warmth × self-control ($p = .152$), paternal Rejection × self-control ($p = .662$), paternal Overprotection × self-control ($p = .208$), maternal Emotional Warmth × self-control ($p = .077$), and maternal Overprotection × self-control ($p = .376$). In these cases, parenting dimensions and self-control exerted independent main effects on self-efficacy without significant interaction.

A significant moderation effect emerged for maternal Rejection. The interaction between maternal Rejection and self-control was statistically significant (estimate = 0.0115, $p = .049$). Probing this interaction revealed that for participants with low self-control, maternal Rejection was more strongly negatively associated with self-efficacy. For participants with high self-control, the negative association between maternal Rejection and self-efficacy was substantially attenuated, indicating that self-control buffered the detrimental effects of perceived maternal rejection on self-efficacy.

Across all moderation models, self-control demonstrated consistently strong positive main effects on self-efficacy (all $p < .001$), reinforcing its role as a fundamental personal resource.

4.8 Discussion

The present study examined relationships among perceived parenting styles, self-control, and general self-efficacy in a sample of Chinese college students, with particular attention to the mediating and moderating roles of self-control. Findings revealed distinct patterns of association that extend understanding of how family experiences relate to personal agency in emerging adulthood.

The Central Role of Paternal Emotional Warmth

A key finding was the robust positive association between paternal emotional warmth and self-efficacy, which persisted after controlling for other parenting dimensions and self-control. Students who perceived their fathers as affectionate, supportive, and responsive tended to report greater confidence in their ability to cope with challenges. This pattern aligns with attachment-based perspectives suggesting that secure parental relationships provide a foundation from which individuals develop confidence to explore and master their environments (Bandura & Locke, 2023). The unique predictive power of paternal warmth, independent of maternal warmth, may reflect the particular significance of fathers in fostering children's sense of competence—possibly through encouragement of risk-taking, modeling of problem-solving, or affirmation of autonomous achievement (Zhang & Wang, 2024). These findings are consistent with research indicating that supportive fathering contributes uniquely to child development outcomes beyond the contributions of mothering (Li & Zhang, 2021; Shen & Li, 2020).

Self-Control as a Personal Resource

Self-control emerged as the strongest unique predictor of self-efficacy, with consistent positive effects across all analyses. Students better able to regulate impulses, manage emotions, and persist toward goals reported greater confidence in their ability to handle life challenges. This relationship likely reflects bidirectional processes: effective self-control enables individuals to accumulate mastery experiences through sustained effort and goal attainment, which in turn strengthens self-efficacy beliefs (Chen et al., 2023; Duckworth et al., 2023). Conversely, confidence in one's capabilities may facilitate the deployment of self-regulatory strategies in challenging situations. The finding that self-control fully mediated the relationship between parental emotional warmth and self-efficacy suggests that warm parenting may foster self-efficacy partly through its positive impact on self-control development. Supportive parenting that provides structure, models self-regulation, and encourages autonomy may help children internalize self-regulatory capacities that later support confident functioning (Wang et al., 2023; Zhang et al., 2023).

The Complex Role of Maternal Warmth

The suppression effect observed for maternal emotional warmth in the regression model—where it emerged as a significant negative predictor after accounting for other variables—requires careful interpretation. This pattern suggests that when paternal warmth and self-control are statistically controlled, the remaining variance in maternal warmth may reflect different dynamics. One possibility is that in families where fathers provide substantial emotional support, high maternal warmth may sometimes reflect enmeshment or reduced opportunities for autonomous coping, potentially undermining self-efficacy development. Alternatively, this finding may indicate statistical suppression rather than a substantive negative effect, highlighting the importance of examining parenting dimensions within the context of the whole family system. Longitudinal research with more comprehensive assessment of family dynamics would help clarify these patterns.

Self-Control as a Buffer Against Maternal Rejection

A particularly noteworthy finding was the moderating role of self-control in the relationship between maternal rejection and self-efficacy. For students with low self-control, perceived maternal rejection was more strongly associated with reduced

self-efficacy. For those with high self-control, the negative association was substantially attenuated. This buffering effect suggests that self-regulatory capacities may protect individuals from internalizing negative maternal behaviors as evidence of personal inadequacy (Tao et al., 2023; Zhu, 2023). Students with strong self-control may be better able to regulate emotional responses to rejection, maintain positive self-perceptions despite critical maternal behavior, or seek alternative sources of affirmation and competence feedback outside the family. The specificity of this effect to maternal (rather than paternal) rejection may reflect the particularly close emotional involvement of mothers in children's lives within Chinese family contexts, making maternal rejection potentially more psychologically salient (Xu et al., 2023).

Demographic Patterns and Their Implications

Demographic differences in perceived parenting styles were selective rather than pervasive. Gender affected perceptions of maternal warmth and rejection, consistent with research suggesting that mother-child relationships may be experienced differently by sons and daughters (Llorca et al., 2023). Educational background and year level were associated with perceptions of paternal warmth, possibly reflecting how academic development shapes students' reappraisal of their fathers' emotional support. Geographic location affected perceptions of maternal rejection, which may relate to rural-urban differences in parenting practices or family stress (Xu et al., 2023). Notably, self-efficacy showed no demographic differences, suggesting it functions as a relatively stable personal characteristic by college age, shaped more by individual experiences than by broad demographic categories. Self-control differed only by educational background, indicating that academic pathways may be selectively associated with self-regulatory development.

Limitations and Future Directions

Several limitations should be considered. First, the cross-sectional design precludes causal inference and definitive conclusions about mediation, despite statistical tests consistent with mediation patterns. Longitudinal research would strengthen understanding of developmental sequences. Second, reliance on retrospective self-report measures introduces potential recall bias and shared method variance. Future studies could incorporate multiple informants (e.g., parents, peers) or observational measures. Third, the convenience sample from a single university limits generalizability to other populations. Fourth, while the study examined parenting dimensions separately for fathers and mothers, it did not assess parenting combinations (e.g., both parents warm vs. discrepant patterns) which may have unique effects. Fifth, the sample's gender imbalance (62% female) may affect generalizability, particularly for gender-related findings. Sixth, although culturally relevant frameworks were discussed, direct assessment of cultural values (e.g., collectivism, filial piety) was not included; future research could examine how cultural orientations moderate the relationships observed.

Implications

Notwithstanding these limitations, findings carry implications for theory and practice. Theoretically, results support the integration of self-control as both a mediator and moderator in models linking family environment to self-efficacy. The distinct patterns for paternal and maternal warmth underscore the importance of examining parents separately rather than combining them into global parenting indices. The cultural specificity of findings—particularly the complex role of maternal warmth and the buffering effect against maternal rejection—highlights the need for culturally informed theoretical frameworks that move beyond simple translations of Western parenting models.

Practically, findings suggest that interventions to enhance college students' self-efficacy might productively target both family-level and individual-level factors. Psychoeducational programs for parents could emphasize the importance of emotional warmth, particularly from fathers, while also addressing the potentially damaging effects of rejection. For students, interventions focused on strengthening self-control—through strategies such as goal-setting, habit formation, impulse regulation training, and stress management—may confer dual benefits by directly enhancing self-efficacy and by buffering against negative family experiences (Friese et al., 2023; Gillebaart & Adriaanse, 2024). University counseling services might particularly attend to students reporting high maternal rejection who also evidence poor self-control, as they may constitute an especially vulnerable group.

5. Conclusions and Recommendations

5.1 Conclusions

Based on the findings of this study, the following conclusions are drawn:

First, Chinese college students in this sample perceived their parents' rearing styles as moderately present across the dimensions of emotional warmth, rejection, and overprotection, with substantial individual variation. Parental styles were generally consistent between fathers and mothers, suggesting coherent family environments.

Second, students reported moderate to moderately high levels of self-control and moderate levels of general self-efficacy, with considerable individual differences in both psychological resources. These findings indicate that while students possess foundational self-regulatory capacities and confidence in coping, there remains meaningful variation and potential for enhancement.

Third, demographic factors were selectively associated with perceived parenting styles but not with self-efficacy. Gender, educational background, year level, and geographic location each related to specific parenting dimensions—particularly maternal warmth and rejection and paternal warmth—suggesting that demographic context shapes how parenting is experienced. The stability of self-efficacy across demographic categories supports its conceptualization as a relatively enduring personal resource by young adulthood.

Fourth, parental emotional warmth—particularly from fathers—emerged as a significant positive correlate of both self-control and self-efficacy. Students who perceived their parents as affectionate and supportive reported stronger self-regulatory capacities and greater confidence in their ability to cope with challenges. In contrast, parental rejection and overprotection were negatively associated with self-control but showed no direct association with self-efficacy, indicating that negative parenting may influence self-efficacy indirectly through its effects on self-regulatory development.

Fifth, self-control played dual roles in the parenting-self-efficacy relationship. As a mediator, self-control fully accounted for the association between parental emotional warmth and self-efficacy, suggesting that warm parenting fosters self-efficacy partly by strengthening self-regulatory capacities. As a moderator, self-control buffered the negative impact of maternal rejection on self-efficacy, protecting students with strong self-control from the detrimental effects of perceived maternal rejection.

Sixth, the pattern of findings differed for paternal and maternal parenting, underscoring the importance of examining parents separately. Paternal warmth demonstrated unique predictive power for self-efficacy independent of self-control, while maternal warmth showed more complex patterns, and maternal rejection exhibited buffering effects not observed for paternal rejection. These distinctions suggest that fathers and mothers may influence children's psychological development through somewhat different mechanisms.

Collectively, these conclusions highlight the critical role of positive parenting—particularly paternal emotional warmth—and self-control in fostering Chinese college students' general self-efficacy. The findings support theoretical models positioning self-control as both a pathway through which family environment shapes personal agency and a protective factor that buffers against adverse family experiences.

5.2 Recommendations

Practical and Policy Recommendations

Based on the findings, several practical recommendations are offered for universities, mental health professionals, and families:

For university counseling and student affairs departments, the results suggest value in developing psychoeducational programs focused on strengthening students' self-control capacities. Such programs might include workshops on goal-setting, impulse regulation, habit formation, and stress management. Given that self-control emerged as both a mediator and moderator, interventions targeting self-control may confer dual benefits: directly enhancing self-efficacy and protecting students from negative family influences.

Universities might also consider parent education initiatives that communicate the importance of emotional warmth—particularly from fathers—in supporting students' psychological development. Many parents may not recognize that their continued emotional support remains relevant to their college-aged children's sense of competence. Programs could help parents understand that warm, affirming communication with their emerging adult children can positively influence self-regulatory development and self-efficacy.

For academic programs, findings suggest that faculty and advisors might intentionally structure learning experiences to provide mastery opportunities that build self-efficacy. Breaking complex tasks into achievable steps, providing constructive feedback, and modeling perseverance through challenges may help students accumulate success experiences that strengthen confidence in their abilities.

For mental health practitioners working with college students, the moderating effect of self-control on maternal rejection suggests that students reporting difficult family relationships—particularly those characterized by maternal rejection—may benefit from assessment of self-control capacities.

Students with poor self-control who also report high maternal rejection may represent an especially vulnerable group warranting targeted intervention.

Recommendations for Future Research

Future research should address the limitations of the present study while extending its findings in several directions:

Longitudinal research is needed to establish temporal sequences and developmental trajectories. Following students from late adolescence through early adulthood would clarify whether parenting effects on self-control and self-efficacy persist, intensify, or diminish over time, and whether changes in these variables are bidirectional.

Studies incorporating multiple informants (e.g., parents, peers, teachers) and multiple methods (e.g., behavioral measures, experience sampling) would reduce shared method variance and provide richer understanding of the phenomena under investigation. Direct assessment of parenting behaviors, rather than sole reliance on retrospective perceptions, would strengthen causal inferences.

Cross-cultural comparative research examining whether the patterns observed here generalize to other cultural contexts—or whether they reflect culturally specific dynamics—would advance theoretical understanding. Inclusion of cultural value measures (e.g., collectivism, filial piety, independence-interdependence) would permit direct testing of cultural moderation hypotheses.

Research examining parenting combinations (e.g., both parents warm, discrepant warmth, both rejecting) could reveal interaction effects not captured by examining parents separately. Similarly, investigation of family system variables beyond parenting (e.g., marital quality, sibling relationships, family stress) would situate parenting effects within broader family contexts.

Intervention research testing whether self-control training programs produce expected gains in self-efficacy, and whether such effects are moderated by family background, would provide causal evidence for the relationships observed and guide practical applications.

Finally, qualitative research exploring students' lived experiences of parenting, self-control, and self-efficacy could enrich quantitative findings and generate new hypotheses about mechanisms and meanings that surveys cannot capture.

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7. Tables

Table 1. Demographic Profile

Profile	Frequency (*f*)	Percentage (%)
Sex		
Male	114	38.0
Female	186	62.0
Grand Level		
Junior College	112	37.3
Undergraduate	188	62.7
Year Level		
Freshman	92	30.7
Sophomore	40	13.3
Junior	77	25.7
Senior	91	30.3
Location		
Country	191	63.7
City	109	36.3
Only Child		
Yes	94	31.3
No	206	68.7

Table 2. Descriptive Statistics of Study Variables (n=300)

Variable	M	SD
Paternal Emotional Warmth	17.46	7.08
Paternal Rejection	17.51	7.13
Paternal Overprotection	16.71	7.06
Maternal Emotional Warmth	17.42	6.99
Maternal Rejection	17.26	7.00
Maternal Overprotection	16.42	6.99
Self-Control	69.56	13.50
General Self-Efficacy	26.11	10.04

Table 3. Selected Spearman Correlations Among Key Variables (n = 300)

Variable 1	Variable 2	r	p
Paternal Emotional Warmth	Self-Control	0.621	< .001
Maternal Emotional Warmth	Self-Control	0.661	< .001
Paternal Overprotection	Self-Control	-0.319	< .001
Maternal Overprotection	Self-Control	-0.306	< .001
Paternal Emotional Warmth	Self-Efficacy	0.353	< .001
Maternal Emotional Warmth	Self-Efficacy	0.213	< .001
Self-Control	Self-Efficacy	0.366	< .001
Paternal Emotional Warmth	Maternal Emotional Warmth	0.534	< .001
Paternal Rejection	Maternal Rejection	0.391	< .001
Paternal Rejection	Maternal Overprotection	0.399	< .001
Paternal Overprotection	Maternal Overprotection	0.476	< .001
Paternal Overprotection	Maternal Rejection	0.447	< .001

Table 4. Multiple Regression Predicting Self-Efficacy (n = 300)

Predictor	β	p
Paternal Emotional Warmth	0.325	< .001
Self-Control	0.338	< .001
Maternal Emotional Warmth	-0.160	.049

Model fit: $F(7, 292) = 13.003$, $p < .001$; $R^2 = .238$; adjusted $R^2 = .219$.

Table 5. Interaction Tests for Self-Control as Moderator of Parenting Dimensions (n = 300)

Parenting dimension	Interaction term	Estimate	p
Paternal Emotional Warmth	Paternal Emotional Warmth × Self-Control	—	.152
Paternal Rejection	Paternal Rejection × Self-Control	—	.662
Paternal Overprotection	Paternal Overprotection × Self-Control	—	.208
Maternal Emotional Warmth	Maternal Emotional Warmth × Self-Control	—	.077
Maternal Rejection	Maternal Rejection × Self-Control	0.0115	.049
Maternal Overprotection	Maternal Overprotection × Self-Control	—	.376

