Behavioral Psychology /Psicología Conductual

Behav. Psychol. **2026**; 34(6): 47682
https://doi.org/10.31083/BP47682

Original Research

The Association Between Parental Warmth and Adolescents' Evasive Behaviors: A Chain Mediation Analysis of Parent-Child Closeness and Children's Self-Control

Hongwei Zhan[1], Xiuqin Zeng[2,*], Xudong Lin[3], Xuyang Liu[4], Rongzhao Wang[2]

[1]School of Humanities and Communication, Ningbo University, 315211 Ningbo, Zhejiang, China
[2]School of Journalism and Communication, Xiamen University, 361005 Xiamen, Fujian, China
[3]School of Communication and Design, Longyan University, 364012 Longyan, Fujian, China
[4]School of Journalism and Communication, Beijing Normal University, 100088 Beijing, China
*Correspondence: zengxq@xmu.edu.cn (Xiuqin Zeng)
Academic Editor: Dunia Garrido del Águila
Submitted: 25 October 2025 Revised: 16 January 2026 Accepted: 27 January 2026 Published: 30 October 2026

Abstract

Background: Although parents function as digital "gatekeepers" for their children, conflicts often emerge in parent-child interactions due to discrepancies in digital values and expectations. In particular, adolescents' high levels of digital engagement may enable them to circumvent parental mediation and monitoring, resulting in a persistent "cat-and-mouse" dynamic of control and resistance between parents and children. Focusing on Chinese family systems, this study investigated the mediating mechanisms through which parenting styles influence adolescents' evasive digital behaviors. By elucidating the psychological and behavioral processes underlying parent-child interactions in digital contexts, this research provides a theoretical basis for fostering healthier and more rational internet use among adolescents. **Methods:** A total of 826 secondary school students participated in this study. Data were collected using the Parental Warmth Questionnaire, the Parent-Child Relationship Scale, the Self-Control Scale, and the Evasive Behaviors Questionnaire. Structural equation modeling and statistical analyses were conducted using AMOS 27.0 and SPSS 26.0. **Results:** The findings indicated that: (1) parent-child closeness and adolescents' self-control significantly mediated the relationship between parental warmth and evasive behaviors, with a significant sequential (chain) mediating effect of parent-child closeness followed by self-control; and (2) parental warmth did not exert a direct effect on adolescents' evasive behaviors. **Conclusions:** Parental warmth, parent-child closeness, and adolescents' self-control are key factors influencing evasive behaviors among secondary school students. Although parental warmth does not directly affect adolescents' evasive behaviors, it exerts an indirect influence through the sequential mediation of parent-child closeness and adolescents' self-control.

Keywords: parental warmth; evasive behavior; parent-child closeness; self-control; chain mediation analysis

1. Introduction

With the rapid advancement of information and communication technologies, the internet, characterized by increasingly diverse platforms and content, has become an integral part of everyday life for a growing number of users, particularly adolescents (Benvenuti et al., 2023; Ehrenreich et al., 2021). For families of the younger generation of digital natives who have grown up in the internet era, new media has fundamentally transformed patterns of family communication. At the same time, it has intensified conflicts and tensions among family members (Tadpatrikar et al., 2021). Within family contexts, ongoing disagreements frequently arise between parents and children regarding the potential benefits and risks of media use, such as engagement in online games (Gao et al., 2023).

For instance, many parents tend to hold predominantly negative attitudes toward media forms such as digital games (Jiow et al., 2017; Kutner et al., 2008). Parents often perceive adolescents as not yet fully mature in their physical and psychological development and worry that exposure to games may introduce inappropriate content, thereby distorting adolescents' understanding of reality (Kutner et al., 2008). In contrast, adolescents typically view media such as games as having both positive and negative consequences (Jiow, 2014) and commonly believe that potential negative effects are unlikely to influence them personally (Hume and Mort, 2011).

Significant differences exist between parents and children in their perceptions of and attitudes toward internet technologies (Corcoran et al., 2022), and these discrepancies contribute to a broader generational divide in the digital age (Y. Zhou et al., 2022). Such intergenerational gaps often give rise to parent-child disagreements and conflicts surrounding media use (Barrie et al., 2019). Moreover, adolescents may exploit their comparative advantages in digital literacy and information technology to develop various strategies for circumventing parental mediation, thereby substantially undermining the effectiveness of parental regulation of their children's media use (Jiow, 2014; Vossen et al., 2024).

Copyright: © 2026 The Author(s). Published by IMR Press.
This is an open access article under the CC BY 4.0 license.

Publisher's Note: IMR Press stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Importantly, traditional Chinese culture places strong emphasis on maintaining interpersonal harmony and avoiding overt confrontation. Within this cultural context, adolescents may go to considerable lengths to circumvent parental mediation and restrictions, such as accessing the internet in secret, while parents and children often become engaged in a persistent "cat-and-mouse" dynamic of attempted control and evasive resistance (Livingstone, 2007). Consequently, determining how parents can supervise and guide their children's media use in a scientific and reasonable manner, while reducing adolescents' evasive behaviors and alleviating parent-child conflicts, has become a critical issue for both families and researchers in the field of family media education. Family-related factors, including parenting styles and the quality of parent-child relationships, substantially shape adolescents' media use patterns and may play a pivotal role in the emergence of evasive behaviors in response to parental supervision. In particular, adolescents raised in warm and supportive parenting environments tend to demonstrate greater resilience and proactive coping when faced with challenges, and are less likely to disengage or resort to avoidance strategies (Liu et al., 2021).

Although prior studies have examined the influence of factors such as parenting styles and parent-child relationships on adolescent development (Rodrigues et al., 2021; Zhao et al., 2020), considerable gaps remain in the existing literature. On the one hand, most previous research has focused on the effects of parental practices on traditional adolescent problem behaviors (Z. Zhou et al., 2022) as well as problematic online behaviors, such as cyberbullying (Martínez et al., 2019). However, relatively little attention has been paid to adolescents' behavioral feedback and coping responses to parental mediation during the process of media-related parenting. On the other hand, existing research has mainly explored parenting styles from the parents' perspective, whereas studies examining parenting styles as perceived by adolescents and their bidirectional links with adolescent behavior remain limited (Wang et al., 2025). Some scholars argue that adolescents' subjective perceptions of parenting may be more predictive of psychological and behavioral outcomes than objectively measured parenting behaviors (Human et al., 2016). Furthermore, empirical research on adolescents' evasive behaviors has largely been conducted within Western cultural contexts (Livingstone, 2007), whereas studies situated in the Chinese cultural context remain limited. Given the substantial cultural differences between China and Western societies, findings derived from Western samples may not be fully generalizable to Chinese adolescents.

Accordingly, this study adopts adolescents' perceptions of parenting styles as its point of departure, with the aim of further examining how parental warmth influences adolescents' psychological processes and behavioral responses during parental mediation, and how these processes, in turn, shape adolescents' evasive behaviors. Through this approach, the study seeks to provide a deeper understanding of the dynamic psychological and behavioral interactions between parents and children.

1.1 Parental Warmth and Adolescents' Evasive Behaviors

The family constitutes the primary environment for human development and is the context in which adolescents spend most of their time. Parenting styles play a pivotal role in children's education and emotional development (Schroeder and Mowen, 2014). Parenting style refers to the relatively stable patterns and overall tendencies of parental behaviors exhibited during the processes of childrearing and education. In empirical research, parenting styles are commonly conceptualized along two primary dimensions: warmth and strictness (Garcia et al., 2020). Parental strictness is characterized by high levels of demandingness and supervision, whereby parents excessively interfere in or tightly control their children's behaviors and attempt to regulate how they think and feel. In contrast, parental warmth is defined by responsiveness, acceptance, and involvement (Markus et al., 2003; McLeod et al., 2007), and is primarily expressed through open parent-child communication and the provision of emotional support.

As active agents within the family system, adolescents may develop evasive behaviors as a means of avoiding direct parent-child conflicts and confrontations. Research indicates that when faced with ideological disagreements with their parents, adolescents often respond through behaviors such as lying, deliberate ambiguity, or concealment (Livingstone and Helsper, 2008). This tendency is particularly evident among the new generation of digital natives, who have developed sophisticated skills in using media technologies and strategies to circumvent parental mediation (Holloway and Valentine, 2003; Nguyen et al., 2012). Such negative reactions, which often function as passive coping strategies, may reflect adolescents' dissatisfaction with or resistance to specific parenting styles.

Previous research has established a clear association between parenting styles and adolescents' coping strategies (Gong et al., 2015). Negative parenting styles are positively associated with maladaptive coping patterns; for example, adolescents raised by authoritarian parents tend to report higher levels of evasive coping behaviors (Chan, 2010). In contrast, parental warmth is more likely to foster adaptive coping strategies and reduce adolescents' reliance on negative or avoidant coping responses. Accordingly, the present study proposes the following hypothesis:

H1: parental warmth has a negative effect on adolescents' evasive behaviors.

1.2 The Mediating Role of Parent-Child Relationship

Parent-child relationships refer to the distinctive and influential interpersonal bonds between parents and their children (Mihalec-Adkins, 2020). In empirical research, the quality of parent-child relationships is commonly concep-

tualized along two fundamental dimensions: parent-child closeness and parent-child conflict. However, a growing body of literature emphasizes that these two dimensions should be examined independently when seeking to understand and address parent-child dynamics (Qianwen and Zhenhong, 2023). Parent-child closeness captures the degree of emotional intimacy within the relationship and reflects the strength of the affective bond between parents and children. From the perspective of the attachment internal working model, parent-child closeness serves as a foundational factor influencing the development of individuals' broader interpersonal relationships and behavioral patterns (Zhijun and Jiwei, 2023; Etxaburu et al., 2024). Accordingly, the present study adopts parent-child closeness as the primary indicator of the parent-child relationship.

Existing research has demonstrated that parental warmth is conducive to the development of positive parent-child relationships (X. Xu et al., 2022). In contrast, parental strictness, which typically discourages bidirectional communication, demands unquestioned obedience, and constrains parental support and relational depth, tends to intensify parent-child conflict (Aloia and Warren, 2019). Moreover, the quality of parent-child relationships has been shown to significantly predict adolescents' behavioral outcomes (Hillekens et al., 2020). Adolescents raised in harmonious parent-child environments are more likely to develop prosocial behaviors, such as kindness, gratitude, and helpfulness, whereas those exposed to prolonged parent-child conflict are more prone to exhibit problem behaviors, including aggression and destructiveness (Yoo et al., 2013). Accordingly, the present study proposes the following hypotheses:

H2: Parent-child closeness plays a mediating role between parental warmth and adolescents' evasive behaviors.

H2a: Parental warmth positively influences parent-child closeness.

H2b: Parent-child closeness negatively influences adolescents' evasive behaviors.

1.3 The Mediating Role of Children's Self-Control

Self-control is commonly defined as an individual's capacity to inhibit immediate impulses and regulate behavior in accordance with social norms and long-term goals (Meldrum et al., 2016). The development of strong self-control abilities is particularly crucial during adolescence, a developmental stage characterized by heightened impulsivity and increased exposure to external stimuli. In the context of internet use, self-control reflects the capacity for top-down regulation of media-related desires and behaviors, enabling individuals to adapt to environmental demands by selecting appropriate actions and inhibiting maladaptive ones (Ent et al., 2015). As a key mechanism for mitigating the impulse toward problematic online behaviors, self-control can be broadly conceptualized as the ability to resist temptation (Ent et al., 2015).

Previous research has demonstrated that parenting styles exert a significant influence on children's self-control development (Crosswhite and Kerpelman, 2012). Parental warmth often reflects a supportive family environment in which adolescents are more likely to be granted autonomy and encouraged to adopt constructive media-use strategies (Schreurs and Vandenbosch, 2024). Individuals with higher levels of self-control are better equipped to regulate their impulses, thereby increasing the likelihood of positive behavioral outcomes. In contrast, adolescents raised in highly strict parenting environments with limited autonomy may be more inclined to cope by avoiding or withdrawing from challenging situations (Gong et al., 2015), which, in turn, increases the likelihood of evasive behaviors. Based on these findings, the present study proposes the following hypotheses:

H3: Children's self-control plays a mediating role between parental warmth and adolescents' evasive behaviors.

H3a: Parental warmth positively influences children's self-control.

H3b: Children's self-control negatively influences their own evasive behaviors.

1.4 The Chain Mediating Role of Parent-Child Closeness and Children's Self-Control

According to the bioecological model of human development (Lerner et al., 2006; Li et al., 2013), individual development is jointly shaped by personal characteristics and environmental contexts, with environmental factors conditioning how individual attributes are expressed (Lerner et al., 2006). Within this framework, the parent-child relationship represents the overall quality of the family relational environment, whereas self-control reflects individuals' internal capacity for active behavioral regulation; both are critical determinants of developmental outcomes. Importantly, as two key factors influencing adolescents' evasive behaviors, parent-child closeness and self-control do not operate independently or in parallel. Empirical evidence from studies on adolescent risk behaviors indicates that the effects of parent-child relationships on adolescents' behavioral outcomes are often transmitted indirectly through self-control (Liu et al., 2019). As a central indicator of effective family system functioning, a positive parent-child relationship may foster the development of children's self-control capacities (Kochanska et al., 1995). Based on this theoretical and empirical rationale, it is reasonable to infer that parent-child closeness positively predicts children's self-control. Building on these conceptual linkages, the present study proposes the following hypotheses:

H4: Parent-child closeness can positively affect children's self-control.

H5: Parent-child closeness and children's self-control may serve as chain mediators in the relationship between parental warmth and adolescents' evasive behaviors.

Based on the above discussion, this study constructs the model shown in Fig. 1:

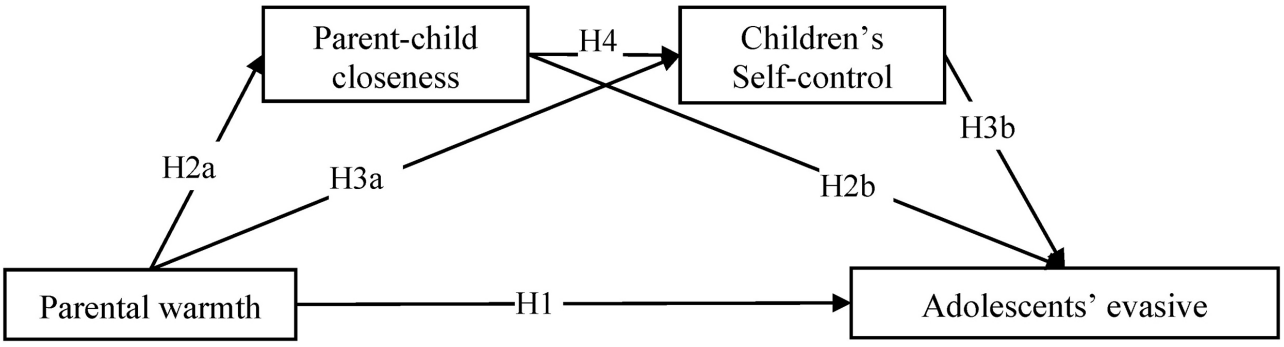


Fig. 1. A hypothesis chain mediation model of parental warmth and evasive behaviors. H, hypothesis.

2. Materials and Methods

2.1 Subjects of Survey

Adolescence represents a critical developmental stage for both physical and psychological growth, with the secondary school period in particular often regarded as a "low point" in mental health. This stage is frequently characterized by an increase in problematic internet use and heightened resistance to parental mediation, which can give rise to intensified family conflicts. To examine these issues in depth, the present study recruited students from six secondary schools located in a city in southeastern Fujian Province, China. Following the acquisition of informed consent from the participating schools, questionnaires were administered at the class level. Students were first asked to complete informed consent forms, after which questionnaires were distributed with the assistance of homeroom teachers. Participants then completed survey instruments containing demographic information and study measures on site, and all questionnaires were collected immediately by the research team. After data screening and quality checks, valid questionnaires were entered into a database and constituted the final dataset for subsequent analyses.

The study employed a multi-stage sampling strategy, resulting in a nested data structure of student→class→school. In the first stage, six secondary schools were selected using stratified sampling based on school type and institutional ranking. This sample included two key schools, two sub-key schools, and two ordinary schools, comprising three senior high schools and three junior high schools. In the second stage, classes were selected using stratified cluster sampling. Specifically, two classes were randomly selected from each of Grades 7, 8, 9, and 10. For Grades 11 and 12, two classes were randomly selected from each of the history (arts) and physics (science) tracks, reflecting the Chinese educational system in which students are streamed into arts and science tracks during the second year of senior high school. Subsequently, approximately 18 students were randomly selected from each class to form the final research sample. Although the study focused on family-level variables, students within the same class may share similar regional socioeconomic and cultural backgrounds, potentially leading to non-independence of family characteristics. Therefore, a preliminary cluster analysis was conducted at the class level. The intraclass correlation coefficient (ICC) was calculated using a combination of analysis of variance and the ICC formula proposed by Bartko (1976). The results indicated a class-level ICC of 0.077 and a design effect (deff) of 2.387. Given that these values met methodological requirements for multi-stage complex sampling designs (Kish, 1965), no further statistical adjustment was applied.

In total, 900 questionnaires were distributed, of which 826 were deemed valid and included in the final analysis, yielding an effective response rate of 91.8%. The sample comprised 426 male and 400 female participants. Detailed sampling characteristics are presented in Table 1, which indicates that the final sample size satisfies the statistical requirements for the analyses conducted.

Table 1. Distribution of demographic variables of respondents.

Variable	Class	Frequency	Percentage
Sex	Male	426	51.6%
	Female	400	48.4%
Grade	Grade 7	166	20.1%
	Grade 8	177	21.4%
	Grade 9	94	11.4%
	Grade 10	133	16.1%
	Grade 11	120	14.5%
	Grade 12	136	16.5%
Sibling quantity	Only child	264	32.0%
	Non-only child	562	68.0%
	Total	826	100%

2.2 Measures

2.2.1 Parental Warmth Questionnaire

Parental warmth was measured using the Chinese version of the short-form Parenting Style Scale developed by

Jiang et al. (2010). Given the complexity of the proposed model and the central role of parental warmth in adolescents' positive personal development, only the parental warmth dimension was included in the present study. This dimension consists of seven items, such as "My parents always try to encourage me to excel", "My parents praise me", and "My parents try to make my life more meaningful and enjoyable". Responses were recorded on a 5-point Likert scale ranging from 1 ("Never") to 5 ("Always"), with higher scores indicating greater perceived parental warmth. In the current study, the scale demonstrated excellent internal consistency, with a Cronbach's α of 0.928.

2.2.2 Evasive Behaviors Questionnaire

Adolescents' evasive behaviors were assessed using the Chinese version of the Evasive Tactics Scale developed by (Jiang et al., 2023). This scale comprises three items, including statements such as "I do not tell my parents about my internet use (e.g., what I do online)". In the present study, the scale yielded a Cronbach's α coefficient of 0.630, which falls within the commonly accepted threshold range of 0.60–0.70. Previous methodological research has noted that in emerging research areas, or when constructs are measured with a limited number of items, reliability coefficients of $\alpha \geq 0.60$ can still be considered acceptable and informative (Hair et al., 2019; Nunnally, 1978). Accordingly, given the small number of items included, the internal consistency of the evasive behaviors scale in this study is deemed adequate for subsequent analyses.

2.2.3 Parent-Child Closeness Scale

Parent-child closeness was assessed using the Chinese version of the parent-child relationship scale developed by Xiaoping (2014), which is adapted from Pianta's original scale. This instrument has demonstrated strong reliability, validity, and applicability across numerous empirical studies (Dandan and Xiaoyong, 2023). In the present study, the parent-child closeness dimension was selected to represent the quality of parent-child relationships within the family, an approach that has been validated in prior research. The parent-child closeness subscale comprises seven items, including statements such as "My parents easily understand my feelings", "I value my relationship with my parents", and "There is a relationship of mutual care and warmth between my parents and me". Responses were recorded on a 5-point Likert scale ranging from 1 ("Strongly disagree") to 5 ("Strongly agree"), with higher scores indicating greater perceived closeness. In the current sample, the scale demonstrated high internal consistency, with a Cronbach's α of 0.894.

2.2.4 Children's Self-Control Scale

The social media self-control strategy scale developed by Brevers and Turel (2019) comprises multiple dimensions, including doing another activity, building or selecting a safe context, modifying device features, delimiting specific usage times, self-talk, and straightforward self-control. Based on this framework, the present study adapted and refined the scale through semi-structured interviews to ensure cultural relevance within the Chinese context. The revised instrument consists of seven items, such as "I try to engage in other activities (e.g., outdoor activities) to limit my use of electronic devices", "I keep electronic devices such as mobile phones out of my sight (e.g., placing the phone under a pillow)", and "I set time limits for device use (e.g., stopping phone use after 11 p.m.)". Responses were recorded on a 5-point Likert scale ranging from 1 ("Never") to 5 ("Always"), with higher scores indicating stronger self-control strategies related to media use. The suitability of the data for factor analysis was confirmed by a Kaiser-Meyer-Olkin value of 0.850 and a significant Bartlett's test of sphericity ($\chi^2 = 1341.086$, $p < 0.001$). Exploratory factor analysis revealed a single-factor structure with satisfactory item loadings and adequate cumulative variance explained, indicating good construct validity. The scale demonstrated acceptable internal consistency, with a Cronbach's α coefficient of 0.784.

2.3 Data Processing and Common Method Bias Test

Structural equation modeling was conducted using AMOS 27.0 (IBM Corp., Armonk, NY, USA), while descriptive statistics and correlation analyses were performed with SPSS 26.0 (IBM Corp., Armonk, NY, USA). To mitigate potential common method bias, data were collected using a coded and anonymous survey procedure, thereby reducing respondents' evaluation apprehension and controlling for potential response biases. In addition, an exploratory factor analysis of all measurement items was conducted using SPSS 26.0, and Harman's single-factor test was applied. The results showed that the first unrotated factor accounted for 36.601% of the total variance, which is below the commonly accepted threshold of 40% (Zhou and Long, 2004). These findings indicate that common method bias was not a serious concern in the present study.

3. Results

3.1 Description and Pearson Correlation Analysis

Descriptive statistics and correlation coefficients for all study variables are presented in Table 2. Given that adolescents' gender and grade may differentially influence the outcomes, these variables were included as control variables in subsequent analyses. The mean score for parental warmth (M = 3.571, SD = 0.911) was relatively high, suggesting that warm parenting practices were commonly perceived by adolescents in the sample. Parent-child closeness was also above the midpoint (M = 3.566, SD = 0.841), indicating generally close parent-child relationships. In contrast, children's self-control was at a relatively low level (M = 2.775, SD = 0.827), implying comparatively weaker self-regulatory capacity. With respect to evasive behav-

Table 2. Means, standard deviations, and correlation coefficients of research variables.

Variables	M	SD	Sex	Grade	Parental warmth	Parent-child closeness	Self-control	Evasive behaviors
Sex			1					
Grade			−0.012	1				
Parental warmth	3.571	0.911	−0.104**	−0.049	1			
Parent-child closeness	3.566	0.841	0.009	−0.042	0.748***	1		
Self-control	2.775	0.827	−0.021	−0.157***	0.323***	0.316***	1	
Evasive behaviors	2.863	0.973	0.074*	0.333***	−0.238***	−0.290***	−0.216***	1

*** means $p < 0.001$; ** means $p < 0.01$; * means $p < 0.05$. M, mean; SD, standard deviation.

iors, the mean score was below the scale midpoint (M = 2.863, SD = 0.973), indicating that adolescents did not report high levels of evasive behaviors overall. As shown in Table 2, the correlation analysis revealed significant associations among the main study variables. The independent variable, parental warmth, was positively correlated with both mediating variables, parent-child closeness (r = 0.748, $p < 0.01$) and children's self-control (r = 0.323, $p < 0.01$), and was negatively correlated with evasive behaviors (r = −0.238, $p < 0.01$). Parent-child closeness was positively associated with children's self-control (r = 0.316, $p < 0.01$) and negatively associated with evasive behaviors (r = −0.290, $p < 0.01$). Additionally, children's self-control was significantly negatively correlated with evasive behaviors (r = −0.216, $p < 0.01$). Collectively, these findings provide preliminary support for the hypothesized mediating roles of parent-child closeness and children's self-control in the relationship between parental warmth and evasive behaviors.

3.2 Evaluation for the Measurement Model

The goodness-of-fit indices for the measurement model indicated an acceptable fit to the data: $\chi^2 = 652.049$, df = 239, $\chi^2/df = 2.728$, root mean square error of approximation (RMSEA) = 0.046, goodness-of-fit index (GFI) = 0.938, adjusted goodness-of-fit index (AGFI) = 0.922, comparative fit index (CFI) = 0.958, normed fit index (NFI) = 0.936, and tucker-lewis index (TLI) = 0.952 (Jackson et al., 2009). The psychometric quality of the measurement model was further evaluated in terms of convergent and discriminant validity. Convergent validity was considered adequate when the composite reliability (CR) exceeded 0.60 even if the average variance extracted (AVE) was below 0.50. In this study, the AVE values of self-control (0.365) and evasive behaviors (0.374) were below 0.50, but their CR values (0.800 and 0.638, respectively) exceeded 0.60, indicating acceptable convergent validity (Fornell and Larcker, 1981). Discriminant validity was examined using the heterotrait-monotrait ratio of correlations (HTMT), an increasingly recommended approach for assessing construct distinctiveness across multiple dimensions. Discriminant validity between constructs is considered satisfactory when HTMT values are below 0.85 (Henseler et al., 2015). As shown in Table 3, all constructs, parental warmth, parent-child closeness, children's self-control, and evasive behaviors, met the recommended criteria for both convergent and discriminant validity.

3.3 The Association Between Parental Warmth and Adolescents' Evasive Behaviors: A Chain Mediated Effect Analysis

The mediating effects were examined by constructing a structural equation model using AMOS 27.0. Given that certain constructs in the study were measured with a relatively large number of items, which could increase model complexity and compromise estimation stability, the item parceling approach commonly used in structural equation modeling was employed to aggregate selected measurement indicators (Yan and ZhongLin, 2011). In the proposed model, parental warmth was specified as the independent variable, with parent-child closeness and children's self-control included as mediating variables, and adolescents' evasive behaviors as the outcome variable. Adolescents' gender and grade were entered as control variables. The detailed model specification and standardized path coefficients are presented in Fig. 2.

As shown in Table 4, all model fit indices met the recommended criteria, with RMSEA below 0.08, GFI, AGFI, CFI, NFI, and TLI exceeding 0.90, and χ^2/df less than 5 (Jackson et al., 2009). These results indicate that the structural model demonstrated a good fit to the data and exhibited satisfactory model validity.

As shown in Table 5, five of the six hypothesized paths reached statistical significance, whereas the direct path from parental warmth to adolescents' evasive behaviors was not significant; therefore, Hypothesis H1 was not supported. As a result, the initially proposed model was only partially supported by the data. Based on these findings, the non-significant path was constrained, and a revised competing model was subsequently constructed to further examine the proposed mediating effects.

To identify the most accurate and parsimonious mechanism model, partial and full mediation were examined through the construction of competing structural models. Model comparisons were conducted using the chi-square

Table 3. Convergent and discriminant validity for all variables.

Constructs	Convergent validity		Discriminant validity (HTMT)			
	CR	AVE	Parental warmth	Parent-child closeness	Self-control	Evasive behaviors
Parental warmth	0.928	0.648	1.000			
Parent-child closeness	0.890	0.538	0.822	1.000		
Self-control	0.800	0.365	0.382	0.380	1.000	
Evasive behaviors	0.638	0.374	0.311	0.380	0.309	1.000

CR, composite reliability; AVE, average variance extracted; HTMT, heterotrait-monotrait ratio of correlations.

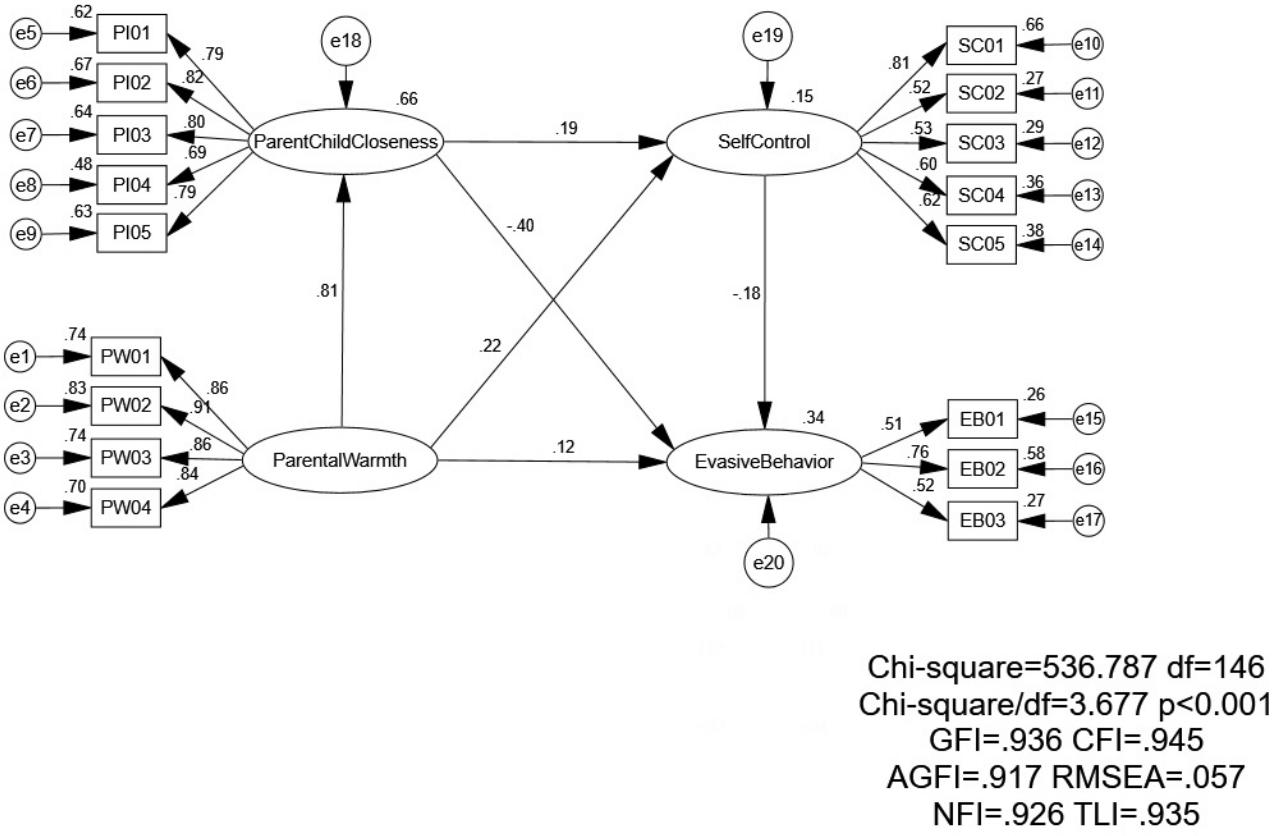


Fig. 2. Chain mediation model of parental warmth and evasive behaviors between parent-child closeness and self-control. RMSEA, root mean square error of approximation; GFI, goodness-of-fit index; AGFI, adjusted goodness-of-fit index; CFI, comparative fit index; NFI, normed fit index; TLI, tucker-lewis index.

Table 4. Equation model fit of this study.

	χ^2	*df*	χ^2/df	GFI	AGFI	NFI	TLI	CFI	RMSEA
	536.787	146	3.677	0.936	0.917	0.926	0.935	0.945	0.057
Reference value			1 < NC < 5	>0.9	>0.9	>0.9	>0.9	>0.9	<0.08

NC, normed chi-square.

difference test ($\Delta\chi^2$) and information criteria, including the Akaike information criterion (AIC), Browne-Cudeck criterion (BCC), and Bayesian information criterion (BIC). In general, lower values on these information indices indicate superior model fit. During the competing model construction process, non-significant paths were prioritized for removal. The initial structural model served as the baseline model (Model 0). Model 1 was derived by constraining the non-significant path from parental warmth to adolescents' evasive behaviors identified in Model 0. The comparison results indicated no significant difference between Model 1 and Model 0 ($\Delta\chi^2 = 2.417$, $p = 0.120 > 0.05$). Furthermore, Model 1 yielded lower information criterion values and exhibited a more parsimonious structure. Accordingly, Model 1 was considered superior to Model 0 (see Table 6).

Table 5. Regression coefficients and significance tests of the initial model.

Mediation paths	Estimate	SE	CR
Parental warmth→Evasive behaviors	0.124	0.069	1.207
Parental warmth→Parent-child closeness	0.811***	0.030	21.450
Parental warmth→Self-control	0.219**	0.067	2.854
Parent-child closeness→Self-control	0.190*	0.086	2.458
Parent-child closeness→Evasive behaviors	–0.399***	0.098	–4.143
Self-control→Evasive behaviors	–0.180***	0.050	–4.296

*** Means $p < 0.001$; ** Means $p < 0.01$; * Means $p < 0.05$.

Table 6. Equation model fit of model comparison.

		χ^2	df	χ^2/df	$\Delta\chi^2$	AIC	BCC	BIC
Initial model	Model 0	536.787	146	3.677	——	624.787	626.973	832.317
Limited Model	Model 1	539.204	147	3.668	2.417	625.204	627.340	828.017

AIC, akaike information criterion; BCC, browne-cudeck criterion; BIC, bayesian information criterion.

Table 7. Regression coefficients and significance tests of the limited model.

Mediation paths	Estimate	SE	CR	Hypothesis
Parental warmth→Parent-child closeness	0.809***	0.030	21.426	H2a
Parental warmth→Self-control	0.214**	0.067	2.814	H3a
Parent-child closeness→Self-control	0.194*	0.086	2.514	H4
Parent-child closeness→Evasive behaviors	–0.293***	0.055	–5.316	H2b
Self-control→Evasive behaviors	–0.172***	0.043	–3.567	H3b

*** Means $p < 0.001$; ** Means $p < 0.01$; * Means $p < 0.05$.

As shown in Table 7, parental warmth exerts a significant positive effect on parent-child closeness and children's self-control. In addition, parent-child closeness positively predicts children's self-control and negatively predicts adolescents' evasive behaviors. Children's self-control also shows a significant negative association with evasive behaviors.

To further examine the magnitude and significance of the indirect effects, mediation analyses were conducted using the bias-corrected percentile bootstrap method. The bootstrap procedure was performed with 5000 resamples and a 95% confidence interval (CI). An indirect effect was considered statistically significant when the CI did not include zero. The results revealed several significant mediation pathways. First, parent-child closeness fully mediated the relationship between parental warmth and adolescents' evasive behaviors. The indirect effect of parental warmth on evasive behaviors through parent-child closeness was significant ($\beta = -0.237$, $SE = 0.044$, $p < 0.001$, 95% CI [−0.325, −0.150]). Second, children's self-control also served as a full mediator between parental warmth and evasive behaviors. The indirect effect through self-control was statistically significant ($\beta = -0.037$, $SE = 0.020$, $p = 0.007$, 95% CI [−0.089, −0.007]). In addition, a significant chain mediation effect was identified, whereby parental warmth influenced adolescents' evasive behaviors sequentially through parent-child closeness and children's self-control ($\beta = -0.027$, $SE = 0.016$, $p < 0.05$, 95% CI [−0.070, −0.004]). The total indirect effect of parental warmth on adolescents' evasive behaviors was also significant ($\beta = -0.274$, $SE = 0.043$, $p < 0.001$, 95% CI [−0.355, −0.187]). Overall, these findings support Hypotheses H2, H3, H4, and H5.

4. Discussion

In the present study, a chain mediation model was employed to examine the relationship between parental warmth and adolescents' evasive behaviors, as well as the underlying mechanisms involving parent-child closeness and children's self-control. The findings indicate that parental warmth is negatively associated with adolescents' evasive behaviors, and that this relationship is mediated by both parent-child closeness and children's self-control. Specifically, higher levels of parental warmth contribute to closer parent-child relationships and stronger self-control in adolescents, which in turn reduce the likelihood of evasive behaviors. These results offer valuable insights into potential pathways for mitigating adolescents' evasive behaviors and inform strategies for effective family-based media guidance.

4.1 Relationship Between Parental Warmth and Adolescents' Evasive Behaviors

The results indicate that parental warmth does not exert a direct effect on adolescents' evasive behaviors; therefore, Hypothesis 1 was not supported. This finding is consistent with (Bandura, 1977) assertion that behavioral development and change are rarely attributable to a single factor. Although warm parenting provides an important foundation for reducing adolescents' avoidance tendencies, it may be insufficient on its own to produce effective behavioral change. Conflicts arising from "intergenerational interests" often lead adolescents to adopt strategies of apparent compliance coupled with covert resistance. This tendency is particularly pronounced during adolescence, a developmental period marked by heightened striving for autonomy and independence, during which adolescents may deliberately limit communication with parents regarding parenting-related issues (Bengtson and Kuypers, 1971; Kapetanovic and Boson, 2022). Accordingly, the emergence and modification of adolescents' evasive behaviors should be understood as the outcome of the dynamic interplay among multiple individual and contextual factors.

4.2 The Mediated Role of Parent-Child Closeness

The findings demonstrate that parent-child closeness mediates the relationship between parental warmth and adolescents' evasive behaviors, thereby supporting Hypothesis 2. Previous research has shown that parenting styles are significant predictors of the quality of parent-child relationships, as they enhance emotional support and relational depth while reducing interpersonal conflict Aloia and Warren (2019). Parental warmth, characterized by affection, acceptance, and active involvement, facilitates the development of positive social relationships and helps maintain close and enduring interpersonal bonds (Safdar and Zahrah, 2016). According to parental acceptance-rejection theory, parental acceptance fosters children's psychological adjustment and adaptive behavioral functioning, whereas parental rejection is associated with adverse developmental outcomes (Rohner, 2021). Within the context of the present study, parental warmth appears to cultivate a supportive and accepting relational climate that promotes stable and intimate parent-child bonds, enhances effective communication, and increases positive emotional exchanges between parents and adolescents. Such close parent-child relationships enable adolescents to maintain more positive emotional states in daily life and reduce their susceptibility to problem behaviors (Bluth and Wahler, 2011). Consequently, adolescents are better equipped to cope proactively with challenges associated with internet use, thereby reducing the likelihood of evasive behaviors.

4.3 The Mediated Role of Children's Self-Control

The analysis of the relationship between parental warmth and adolescents' evasive behaviors further revealed that parental warmth indirectly predicts adolescents' evasive behaviors through children's self-control, thereby supporting Hypothesis 3. Previous studies have consistently shown that positive parenting styles contribute to the development of adolescents' self-regulated learning abilities (Lim, 2014; Park et al., 2010). In particular, parental warmth and other positive parenting practices have been positively associated with adolescents' effective time management and self-regulatory skills (Alnafea and Curtis, 2017; Amani et al., 2020). Warm and supportive parents tend to consider their children's perspectives, provide appropriate guidance and resources, and offer meaningful rationales for expected behaviors, thereby encouraging adolescents to engage in activities in a self-directed manner (Sanders et al., 2019). By affording adolescents opportunities for autonomy, parents facilitate the internalization of parental values and help adolescents learn how to establish constructive relationships with other authority figures (Gregory and Weinstein, 2004). This autonomy-supportive environment is likely to satisfy adolescents' basic psychological needs, strengthen their self-control capacities, and ultimately reduce their reliance on evasive coping strategies.

4.4 The Mediated Effect of Parent-Child Closeness and Self-Control in the Relationship Between Parental Warmth and Adolescents' Evasive Behaviors

The findings indicate that parent-child closeness and children's self-control function as mediating variables, rather than moderators, in the relationship between parental warmth and adolescents' evasive behaviors. Specifically, both variables independently mediate this relationship, and they further constitute a chain mediation pathway in which parental warmth influences adolescents' evasive behaviors sequentially through parent-child closeness and children's self-control (parental warmth → parent-child closeness → children's self-control → adolescents' evasive behaviors).

Parental warmth, as a positive parenting style, promotes healthy parent-child relationships by providing supportive parenting practices and a nurturing family environment. It encourages parents to cultivate present-centered awareness in their parenting, listen attentively, and engage fully in communication with their children (Jiow, 2014). At the same time, parental warmth guides parents to attend to both their own emotional states and those of their children, which facilitates the development of parent-child relationships characterized by high closeness and low conflict (Duncan et al., 2009). Parent-child closeness serves as an important external resource for adolescents' development. Positive parent-child relationships satisfy adolescents' basic psychological needs for autonomy, competence, and relatedness, promote the internalization of parental expectations (L. Xu et al., 2022), enhance children's self-control capacities, and ultimately reduce the likelihood of evasive behaviors.

4.5 Recommendations

The present study focuses on adolescents' evasive behaviors and examines the underlying mechanisms through which parental warmth influences these behaviors. The findings confirm both the independent mediating effects and the chain mediating effect of parent-child closeness and children's self-control in the relationship between parental warmth and evasive behaviors. These results provide important theoretical foundations and practical educational insights for the prevention and intervention of adolescents' evasive behaviors. From a theoretical perspective, by integrating interpersonal acceptance-rejection theory with the bioecological model of human development, this study identifies internal individual resources (self-control) and external developmental resources (parent-child closeness) as key mechanisms linking parental warmth to adolescents' evasive behaviors. In doing so, it further validates the applicability of these theoretical frameworks within a Chinese adolescent context and offers a valuable theoretical reference for promoting adolescents' healthy psychological and behavioral development. From a practical perspective, the findings highlight the importance of encouraging parents to understand and adopt the concepts and practices of parental warmth in daily parenting and parent-child interactions. Parents are encouraged to listen attentively to their children, respond with acceptance rather than criticism, and remain aware of both their own and their children's emotions in the present moment. By reducing unconscious and automatic negative parenting behaviors, parents can foster closer parent-child relationships and, in turn, decrease adolescents' evasive behaviors. At the same time, parents should respect adolescents' need for individualized and autonomous development, pay close attention to emotional and behavioral changes when adolescents encounter online risks or difficulties, and actively stimulate their motivation and initiative in independent problem-solving. By guiding adolescents to develop effective self-control and self-regulation skills, parents can help prevent avoidance-oriented coping strategies such as passive responses, withdrawal, and evasive behaviors.

4.6 Limitations and Future Directions

Due to several constraints in the research conditions, this study has certain limitations that should be acknowledged. First, a cross-sectional research design was employed to examine the association between parental warmth and adolescents' evasive behaviors; therefore, causal relationships among the variables cannot be established. Future studies are encouraged to adopt longitudinal or experimental designs to more clearly determine the directionality and causal mechanisms underlying these relationships. Second, the study relied exclusively on adolescents' self-reported data, which may be subject to social desirability bias and common method variance. Subsequent research could strengthen the robustness of the findings by incorporating multi-informant data sources, such as reports from parents, teachers, or peers, as well as objective behavioral indicators. Third, this study focused primarily on factors within the family system and did not consider the potential influence of broader ecological contexts, including schools, peer groups, and community environments. Future research should integrate multiple environmental systems to more comprehensively examine the contextual mechanisms influencing adolescents' evasive behaviors. Fourth, the key outcome variable, evasive behaviors, was assessed using only three items and demonstrated relatively low internal consistency. Although acceptable for exploratory research, future studies should employ more comprehensive and psychometrically robust measurement instruments to improve reliability and validity. Finally, due to survey cost constraints, this study was unable to further increase the number of sampling units or reduce group sizes within clusters. Future research should employ more standardized and refined sampling strategies, expand sample diversity, and incorporate broader contextual variables to enhance the generalizability and reliability of the findings.

5. Conclusions

In the present study, a chain mediation model was employed to examine the relationship between parental warmth and adolescents' evasive behaviors, as well as the underlying mechanisms involving parent-child closeness and children's self-control. The findings indicate that parental warmth did not exert a significant direct effect on adolescents' evasive behaviors, and that both parent-child closeness and children's self-control serve as significant mediating variables in this relationship. These results offer valuable insights into the mechanisms through which positive parenting practices may reduce adolescents' evasive behaviors and provide important implications for prevention and intervention strategies.

Availability of Data and Materials

The data are not publicly available due to privacy and ethical restrictions, as they contain information that could compromise the privacy of research participants. The data are available from the corresponding author upon reasonable request.

Author Contributions

HZ and XZ designed the research study. HZ, XLin, and XLiu performed the research. HZ, XLin, XLiu, and RW collected and analyzed the data. HZ drafted the original manuscript. XZ, XLin, XLiu, and RW critically revised the manuscript for important intellectual content. All authors read and approved the final manuscript and the byline order of authors. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

Ethics Approval and Consent to Participate

The study was conducted in accordance with the Declaration of Helsinki. The study protocol was approved by the Ethics Committee of Xiamen University. As all participants were minors, written informed consent was obtained from their parents or legal guardians, and verbal assent was obtained from the adolescents themselves prior to data collection.

Acknowledgment

Thanks are expressed to the participants for their contributions to the study and the volunteers participating in collecting the data.

Funding

This work was supported by the Hu Lan Outstanding Doctoral Fund of Ningbo University.

Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work the authors used DeepSeek in order to check spelling and grammar. After using this tool, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

References

Alnafea T, Curtis DD. Influence of mothers' parenting styles on self-regulated academic learning among Saudi primary school students. Issues in Educational Research. 2017; 27: 399–416. https://doi.org/10.3316/informit.007967669733972

Aloia LS, Warren R. Quality Parent–Child Relationships: The Role of Parenting Style and Online Relational Maintenance Behaviors. Communication Reports. 2019; 32: 43–56. https://doi.org/10.1080/08934215.2019.1582682

Amani M, Nazifi M, Sorkhabi N. Parenting styles and academic achievement of early adolescent girls in Iran: mediating roles of parent involvement and self-regulated learning. European Journal of Psychology of Education. 2020; 35: 49–72. https://doi.org/10.1007/s10212-019-00422-y

An DD, Zhang XY. The Effect of Parents' Psychological Flexibility on Children's Problem Behaviors: The Mediating Role of Parental Psychological Flexibility and the Moderating Role of Teacher-Child Relationship. Psychological Communications. 2023; 6: 205–211. https://doi.org/10.12100/j.issn.2096-5494.223032 (In Chinese)

Bandura A. Social learning theory. Prentice-Hall: Englewood Cliffs, NJ. 1977.

Barrie CK, Bartkowski JP, Haverda T. The Digital Divide among Parents and Their Emerging Adult Children: Intergenerational Accounts of Technologically Assisted Family Communication. Social Sciences. 2019; 8: 83. https://doi.org/10.3390/socsci8030083

Bartko JJ. On various intraclass correlation reliability coefficients. Psychological Bulletin. 1976; 83: 762–765. https://doi.org/10.1037//0033-2909.83.5.762

Bengtson VL, Kuypers JA. Generational Difference and the Developmental Stake. Aging and Human Development. 1971; 2: 249–260. https://doi.org/10.2190/ag.2.4.b

Benvenuti M, Wright M, Naslund J, Miers AC. How technology use is changing adolescents' behaviors and their social, physical, and cognitive development. Current Psychology. 2023; 42: 16466–16469. https://doi.org/10.1007/s12144-023-04254-4

Bluth K, Wahler RG. Parenting Preschoolers: Can Mindfulness Help? Mindfulness. 2011; 2: 282–285. https://doi.org/10.1007/s12671-011-0071-4

Brevers D, Turel O. Strategies for self-controlling social media use: Classification and role in preventing social media addiction symptoms. Journal of Behavioral Addictions. 2019; 8: 554–563. https://doi.org/10.1556/2006.8.2019.49

Chan SM. Aggressive behaviour in early elementary school children: relations to authoritarian parenting, children's negative emotionality and coping strategies. Early Child Development and Care. 2010; 180: 1253–1269. https://doi.org/10.1080/03004430902981447

Corcoran E, Shaffer E, Warner M, Gabrielli J. Associations between parental media mediation and youth attitudes about online privacy in a sample of US adolescents. Computers in Human Behavior. 2022; 137: 107423. https://doi.org/10.1016/j.chb.2022.107423

Crosswhite JM, Kerpelman JL. Parenting and Children's Self-Control: Concurrent and Longitudinal Relations. Deviant Behavior. 2012; 33: 715–737. https://doi.org/10.1080/01639625.2011.647597

Duncan LG, Coatsworth JD, Greenberg MT. A model of mindful parenting: implications for parent-child relationships and prevention research. Clinical Child and Family Psychology Review. 2009; 12: 255–270. https://doi.org/10.1007/s10567-009-0046-3

Ehrenreich SE, George MJ, Burnell K, Underwood MK. Importance of Digital Communication in Adolescents' Development: Theoretical and Empirical Advancements in the Last Decade. Journal of Research on Adolescence: the Official Journal of the Society for Research on Adolescence. 2021; 31: 928–943. https://doi.org/10.1111/jora.12643

Ent MR, Baumeister RF, Tice DM. Trait self-control and the avoidance of temptation. Personality and Individual Differences. 2015; 74: 12–15. https://doi.org/10.1016/j.paid.2014.09.031

Etxaburu N, Herrero M, Estévez A. Self-compassion as a moderating variable between attachment, emotional dependence, stress, anxiety, and depression in Spanish adolescents. Behavioral Psychology. 2024; 32: 269–288. https://doi.org/10.51668/bp.8324203n

Fornell C, Larcker DF. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research. 1981; 18: 39–50. https://doi.org/10.1177/002224378101800104

Gao B, Liao F, Xie H. Parents, children, and electronic games: Analyzing the formation path and countermeasures of contra-

dictions. Environment and Social Psychology. 2023; 8: 1638. https://doi.org/10.18063/esp.v8.i1.1638

Garcia OF, Fuentes MC, Gracia E, Serra E, Garcia F. Parenting Warmth and Strictness across Three Generations: Parenting Styles and Psychosocial Adjustment. International Journal of Environmental Research and Public Health. 2020; 17: 7487. https://doi.org/10.3390/ijerph17207487

Gong X, Fletcher KL, Bolin JH. Dimensions of Perfectionism Mediate the Relationship Between Parenting Styles and Coping. Journal of Counseling & Development. 2015; 93: 259–268. https://doi.org/10.1002/jcad.12024

Gregory A, Weinstein RS. Connection and regulation at home and in school: Predicting growth in achievement for adolescents. Journal of adolescent research. 2004; 19: 405–427. https://doi.org/10.1177/0743558403258859

Hair JF, Babin BJ, Anderson RE, Black WC. Multivariate Data Analysis. 8th edn. Cengage Learning: Andover, UK. 2019.

Henseler J, Ringle CM, Sarstedt M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the Academy of Marketing Science. 2015; 43: 115–135. https://doi.org/10.1007/s11747-014-0403-8

Hillekens J, Buist KL, Horváth LO, Koper N, Ólafsdóttir J, Karkdijk E, et al. Parent-early adolescent relationship quality and problem behavior in Hungary, the Netherlands, India, and Iceland. Scandinavian Journal of Psychology. 2020; 61: 763–774. https://doi.org/10.1111/sjop.12667

Holloway S L, Valentine G. Cyberkids: Children in the information age. Routledge: London. 2003.

Human LJ, Chan M, Ifthikhar R, Williams D, DeLongis A, Chen E. Accuracy and Positivity in Adolescent Perceptions of Parent Behavior: Links With Adolescent Psychological Adjustment and Proinflammatory Profiles. Social Psychological and Personality Science. 2016; 7: 796–805. https://doi.org/10.1177/1948550616660590

Hume M, Mort GS. Fun, Friend, or Foe: Youth Perceptions and Definitions of Online Gambling. Social Marketing Quarterly. 2011; 17: 109–133. https://doi.org/10.1080/15245004.2010.546939

Jackson DL, Gillaspy JA, Purc-Stephenson R. Reporting practices in confirmatory factor analysis: an overview and some recommendations. Psychological Methods. 2009; 14: 6–23. https://doi.org/10.1037/a0014694

Jiang C, Zeng XQ, Zhan HW. Modeling Cognitive Impact: Parental Mediation of Adolescents' Game-playing. Journalism Research. 2023; 3: 1–14+119. (In Chinese)

Jiang J, Lu ZR, Jiang B, Xu Y. Revision of the short-form Egna Minnen av Barndoms Uppfostran for Chinese. Psychological development and education. 2010; 26: 94–99.

Jiow HJ, Lim SS, Lin J. Level Up! Refreshing Parental Mediation Theory for Our Digital Media Landscape. Communication Theory. 2017; 27: 309–328. https://doi.org/10.1111/comt.12109

Jiow HJ. Parental mediation of video gaming in Singapore [[Doctoral Thesis]]. National University of Singapore: Singapore. 2014.

Kapetanovic S, Boson K. Discrepancies in parents' and adolescents' reports on parent-adolescent communication and associations to adolescents' psychological health. Current Psychology. 2022; 41: 4259–4270. https://doi.org/10.1007/s12144-020-00911-0

Kish L. Survey sampling. Wiley: New York. 1965.

Kochanska G, Aksan N, Koenig AL. A longitudinal study of the roots of preschoolers' conscience: committed compliance and emerging internalization. Child Development. 1995; 66: 1752–1769.

Kutner LA, Olson CK, Warner DE, Hertzog SM. Parents' and Sons' Perspectives on Video Game Play: A Qualitative Study. Journal of Adolescent Research. 2008; 23: 76–96. https://doi.org/10.1177/0743558407310721

Lerner RM, Lerner JV, Almerigi J, Theokas C. Dynamics of individual ←→ context relations in human development: a developmental systems perspective. In Thomas JC, Segal DL, Hersen M (eds.) Comprehensive handbook of personality and psychopathology, Vol. 1: Personality and everyday functioning (pp. 23–43). John Wiley & Sons: Hoboken, NJ. 2006.

Li D, Li X, Wang Y, Zhao L, Bao Z, Wen F. School connectedness and problematic internet use in adolescents: a moderated mediation model of deviant peer affiliation and self-control. Journal of Abnormal Child Psychology. 2013; 41: 1231–1242. https://doi.org/10.1007/s10802-013-9761-9

Lim SA. The effects democratic and non-democratic parenting style on child's self-regulated learning ability, school adjustability, and academic achievement of elementary school children (using SEM). The Journal of Elementary Education. 2014; 56: 73–93.

Liu L, Wang N, Tian L. The parent-adolescent relationship and risk-taking behaviors among Chinese adolescents: the moderating role of self-control. Frontiers in Psychology. 2019; 10: 542. https://doi.org/10.3389/fpsyg.2019.00542

Liu T, Chen XM, Lu XR, Yang Y. The influence of positive parenting style on coping style of middle school students: the mediating role of social support and self-efficacy. Studies of Psychology and Behavior. 2021; 19: 507–514. (In Chinese)

Livingstone S, Helsper EJ. Parental mediation of children's internet use. Journal of broadcasting & electronic media. 2008; 52: 581–599. https://doi.org/10.1080/08838150802437396

Livingstone S. Strategies of parental regulation in the media-rich home. Computers in Human Behavior. 2007; 23: 920–941. https://doi.org/10.1016/j.chb.2005.08.002

Markus MT, Lindhout IE, Boer F, Hoogendijk TH, Arrindell WA. Factors of perceived parental rearing styles: the EMBU-C examined in a sample of Dutch primary school children. Personality and Individual Differences. 2003; 34: 503–519. https://doi.org/10.1016/s0191-8869(02)00090-9

Martínez I, Murgui S, Garcia OF, Garcia F. Parenting in the digital era: Protective and risk parenting styles for traditional bullying and cyberbullying victimization. Computers in Human Behavior. 2019; 90: 84–92. https://doi.org/10.1016/j.chb.2018.08.036

McLeod BD, Wood JJ, Weisz JR. Examining the association between parenting and childhood anxiety: a meta-analysis. Clinical Psychology Review. 2007; 27: 155–172. https://doi.org/10.1016/j.cpr.2006.09.002

Meldrum RC, Connolly GM, Flexon J, Guerette RT. Parental Low Self-Control, Family Environments, and Juvenile Delinquency. International Journal of Offender Therapy and Comparative Criminology. 2016; 60: 1623–1644. https://doi.org/10.1177/0306624X15584907

Mihalec-Adkins BP. Parent-Child Relationships. In Zeigler-Hill V, Shackelford TK (eds.) Encyclopedia of Personality and Individual Differences (pp. 3433–3435). Springer International Publishing: Cham. 2020. https://doi.org/10.1007/978-3-319-24612-3_1866

Nguyen M, Bin YS, Campbell A. Comparing online and offline self-disclosure: a systematic review. Cyberpsychology, Behavior and Social Networking. 2012; 15: 103–111. https://doi.org/10.1089/cyber.2011.0277

Nunnally JC. Psychometric theory. 2nd ed. McGraw-Hill: New York. 1978.

Park JH, Seo SW, Chung JH, Li SS, Jang SH. The Relationship between Parents Parenting Style and Self-Directed Learning Readiness in Middle School Students. Journal of Learner-Centered Curriculum and Instruction. 2010; 10: 107–126. https://doi.org/10.22251/jlcci.2010.10.1.107

Qianwen L, Zhenhong W. The interactive effects of parent-child relationship, sensory processing sensitivity, and the COMT Val158Met polymorphism on preschoolers' prosocial behaviors. Acta Psychologica Sinica. 2023; 55: 711–725. https://doi.org/10.3724/SP.J.1041.2023.00711 (In Chinese)

Rodrigues M, Sokolovic N, Madigan S, Luo Y, Silva V, Misra S, et al. Paternal Sensitivity and Children's Cognitive and Socioemotional Outcomes: A Meta-Analytic Review. Child Development. 2021; 92: 554–577. https://doi.org/10.1111/cdev.13545

Rohner RP. Introduction to Interpersonal Acceptance-Rejection Theory (IPARTheory) and Evidence. Online Readings in Psychology and Culture. 2021; 6. https://doi.org/10.9707/2307-0919.1055

Safdar S, Zahrah SM. Impact of parenting styles on the intensity of parental and peer attachment: Exploring the gender differences in adolescents. American Journal of Applied Psychology. 2016; 4: 23–30. https://doi.org/10.12691/ajap-4-2-1

Sanders MR, Turner KMT, Metzler CW. Applying Self-Regulation Principles in the Delivery of Parenting Interventions. Clinical Child and Family Psychology Review. 2019; 22: 24–42. https://doi.org/10.1007/s10567-019-00287-z

Schreurs L, Vandenbosch L. Investigating the Longitudinal Relationships Between Active Parental and Peer Mediation and Adolescents' Social Media Literacy on the Positivity Bias. Mass Communication and Society. 2024; 27: 551–575. https://doi.org/10.1080/15205436.2022.2159432

Schroeder RD, Mowen TJ. Parenting style transitions and delinquency. Youth & Society. 2014; 46: 228–254. https://doi.org/10.1177/0044118X12469041

Tadpatrikar A, Sharma MK, Viswanath SS. Influence of technology usage on family communication patterns and functioning: A systematic review. Asian Journal of Psychiatry. 2021; 58: 102595. https://doi.org/10.1016/j.ajp.2021.102595

Vossen HGM, van den Eijnden RJJM, Visser I, Koning IM. Parenting and Problematic Social Media Use: A Systematic Review. Current Addiction Reports. 2024; 11: 511–527. https://doi.org/10.1007/s40429-024-00559-x

Wang K, Huang Y, Ye Z, Wang X, Zhang X. How Do Adolescents' Perceptions of Parenting and Their Behavior Shape Each Other? The Bidirectional Relationship Between Perceived Parenting Styles, Emotion Regulation, and Prosocial Behavior. Journal of Youth and Adolescence. 2025; 54: 2236–2254. https://doi.org/10.1007/s10964-025-02191-y

Xiaoping D. Relationship between teachers'behavior, parent-child interaction and children's creativity in preschool [[Ph.D. Dissertation]]. Northeast Normal University: China. 2014.

Xu L, Ma L, Duan P. Relationship Between Perceived Parental Academic Expectations and Students' Self-Regulated Learning Ability: A Cross-Sectional Study. Frontiers in Psychology. 2022; 13: 786298. https://doi.org/10.3389/fpsyg.2022.786298

Xu X, Zhu L, Li Y, Xiong J. Parenting styles and parent-child relationships: the actor-partner interdependence model. Chinese Journal of Clinical Psychology. 2022; 6: 1423–1427.

Yan W, ZhongLin W. Item parceling strategies in structural equation modeling. Advances in Psychological Science. 2011; 19: 1859.

Yoo H, Feng X, Day RD. Adolescents' empathy and prosocial behavior in the family context: a longitudinal study. Journal of Youth and Adolescence. 2013; 42: 1858–1872. https://doi.org/10.1007/s10964-012-9900-6

Zhao F, Liu M, Li S. Paternal coparenting behavior and adolescent prosocial behaviors: Roles of parent-child attachment, peer attachment, and gender. Children and Youth Services Review. 2020; 119: 105629. https://doi.org/10.1016/j.childyouth.2020.105629

Zhijun LI, Jiwei CH. The Impact of parental phubbing on cyberbullying perpetration and victimization among adolescents: chain mediating effects of parent-child closeness and internalizing problems. Studies of Psychology and Behavior. 2023; 21: 79.

Zhou H, Long L. Statistical remedies for common method biases. Advances in Psychological Science. 2004; 12: 942.

Zhou Y, He T, Lin F. The Digital Divide Is Aging: An Intergenerational Investigation of Social Media Engagement in China. International Journal of Environmental Research and Public Health. 2022; 19: 12965. https://doi.org/10.3390/ijerph191912965

Zhou Z, Qu Y, Li X. Parental Collectivism Goals and Chinese Adolescents' Prosocial Behaviors: The Mediating Role of Authoritative Parenting. Journal of Youth and Adolescence. 2022; 51: 766–779. https://doi.org/10.1007/s10964-022-01579-4