

Original Research Article

The influence of parental rearing on junior high school students' mental health in the digital era: The mediating role of self-control

Xu Li, Seungjin Lee^(Corresponding author)

Sehan University, Mokpo, Jeollanam-do, 58613, South Korea

Abstract: To explore the internal mediating mechanism through which parental rearing affects junior high school students' mental health in digital contexts, questionnaires were distributed to 500 students, with 470 valid responses collected. Scales measuring parental rearing, self-control and mental health were adopted for measurement. The results show that positive rearing significantly alleviates depression, anxiety and other psychological disturbances, while negative rearing exacerbates maladjustment problems. Self-control partially mediates the relationship between parental rearing and adolescents' mental health. Online exposure amplifies this mediating effect: High self-control buffers psychological losses caused by negative online information, whereas negative parenting continuously depletes self-control resources and triggers multiple psychological issues among teenagers. This study provides empirical evidence for psychological intervention in digital family education.

Keywords: parental rearing; junior high school students; mental health; self-control; digital environment

1. Introduction

Mobile internet has been deeply integrated into adolescents' daily lives. Short-video platforms, online social media and online games have reshaped the growth environment of junior high school students. Internet addiction, online interpersonal conflicts and persistent emotional burnout have become core triggers of psychological problems during adolescence. The junior high school stage is a critical transitional period for the development of self-perception and emotion regulation. As the core micro-system environment, consistent parental rearing patterns directly shape individuals' capacities for impulse inhibition and emotion management—Namely self-control—And further determine teenagers' psychological resilience when confronted with diverse digital risks.

Existing empirical studies have verified that warm and supportive positive parenting fosters individuals' positive psychological resources, while two types of negative parenting (rejection and overprotection) continuously impair emotion regulation capacity. As a core intrinsic psychological trait, self-control is shaped by long-term family rearing environments and exerts direct impacts on mental health indicators such as depression, interpersonal sensitivity and school adjustment. Zhang et al. (2025). confirmed the chain transmission path between parenting and adolescent adaptation mediated by self-control^[1]. Wang et al.(2024) indicated that paternal emotional support significantly reduces the detection rate of depression among junior high students^[2]. Zhao et al. (2022) verified that parenting styles exert indirect effects on academic performance via mental status^[3]. Nevertheless, few existing studies interpret the mediating logic combined with digital usage scenarios, failing to clarify how online environments amplify psychological differentiation brought by divergent parenting patterns.

Based on Bronfenbrenner's Ecological Systems Theory and Baumeister's Strength Model of Self-Control, this study puts forward core hypotheses: Parental rearing styles can significantly predict junior high school students' mental health; self-control acts as a mediator between parental rearing and adolescents' mental health; daily online duration moderates this mediating path. With 470 valid samples, this study empirically tests the internal correlations among the three variables, reveals how family nurturing shapes teenagers' psychology in digital contexts, and provides data support for home-school collaborative psychological counseling and digital family education guidance.

2. Research methods

2.1. Participants

Stratified cluster sampling was adopted to recruit Grade 7 to Grade 9 students from three urban and rural public junior high schools. Paper questionnaires were distributed to 500 students in class units. Thirty invalid questionnaires (with repetitive responses, extensive missing items or contradictory answers) were excluded, leaving 47 valid responses, with an effective recovery rate of 94%. The demographic distribution of participants is displayed in **Table 1**.

Table 1. Demographic characteristics of participants (N=470).

Variable	Category	Number	Percentage (%)
Gender	Male	248	52.8
	Female	222	47.2
Grade	Grade 7	146	31.1
	Grade 8	245	52.1
	Grade 9	79	16.8
Daily Online Duration	Less than 1 hour	154	32.8
	1-3 hours	239	50.9
	Over 3 hours	77	16.4

2.2. Research instruments

Short-form Eigna Minnen Beträffande Uppfostran for Chinese (S-EMBU-C): The scale divides parenting into two dimensions: Positive rearing (emotional warmth) and negative rearing (rejection, overprotection), scored on a 4-point Likert scale. In this study, the Cronbach's α of the full scale is 0.786; the α values for positive and negative rearing subscales are 0.902 and 0.883 respectively, indicating acceptable reliability.

Brief Self-Control Scale (BSCS): The 7-item scale consists of two dimensions (self-discipline, impulse control) with a 5-point Likert scoring system; higher total scores represent stronger self-control. The Cronbach's α in this study is 0.704.

Middle School Students Mental Health Scale (MSSMHS): Covering 10 dimensions including depression, anxiety, interpersonal sensitivity and maladjustment, the scale adopts a 5-point scoring rule; higher total scores reflect more severe psychological symptoms. The Cronbach's α of this study reaches 0.917.

2.3. Data collection and analysis

Head teachers received unified training and served as on-site researchers, who read standardized anonymous instructions before students filled out questionnaires independently, with all forms collected on the spot. EpiData 3.1 was used for double-entry data recording. SPSS 26.0 was applied to conduct descriptive statistics, Pearson correlation analysis and hierarchical regression, while the PROCESS 3.5 plug-in completed Bootstrap mediation tests. Harman's single-factor test was adopted to examine common method bias; the first factor only explained 19.47% of total variance, below the critical threshold of 40%, suggesting no severe homologous bias.

3. Research results

3.1. Descriptive statistics and correlation analysis of variables

Table 2. Means, standard deviations and pearson correlation matrix of variables (N=470).

Variable	M	SD	1	2	3	4
1 Positive Parenting	38.76	9.04	1			
2 Negative Parenting	52.81	12.15	-0.35***	1		
3 Self-Control	23.29	5.08	0.31***	-0.34***	1	
4 Total Mental Health Score	109.13	17.62	-0.38***	0.39***	-0.45***	1

Notes. *** $p < 0.001$; higher total mental health scores indicate more severe depressive, anxious and other psychological symptoms.

Correlation results show that positive parenting is significantly positively correlated with self-control and significantly negatively correlated with psychological distress scores. Negative parenting presents a

significant negative correlation with self-control and a significant positive correlation with psychological distress scores. Higher self-control corresponds to fewer psychological symptoms among junior high students, and all variable correlations are consistent with theoretical expectations.

3.2. Hierarchical regression and mediation effect test

A three-layer regression model was constructed with gender, grade and daily online duration as covariates. In Layer 1, only parenting styles were included to predict mental health. In Layer 2, parenting styles predicted self-control. In Layer 3, both parenting styles and self-control were incorporated to predict mental health. Regression outcomes are shown in **Table 3**.

Table 3. Hierarchical regression results for the mediating effect of self-control (N=470).

Predictor	Model 1 (Mental Health) β	Model 2 (Self-Control) β	Model 3 (Mental Health) β
Positive Parenting	-0.36***	0.31***	-0.13***
Negative Parenting	0.34***	-0.29***	0.11***
Self-Control	—	—	-0.39***
R ²	0.20	0.17	0.34
F	46.18***	41.53***	68.72***

The Bootstrap method with 5,000 repeated samplings was used to test confidence intervals of mediating paths: The indirect effect of positive parenting $\rightarrow$ self-control $\rightarrow$ mental health = -0.12, 95% CI [-0.16, -0.08]; the indirect effect of negative parenting $\rightarrow$ self-control $\rightarrow$ mental health = 0.10, 95% CI [0.06, 0.14]. Neither confidence interval contains zero, proving significant mediation. After self-control was added into the model, the direct effects of parenting styles decreased markedly, demonstrating that self-control plays a partial mediating role.

Stratified comparison by online duration reveals that the mediating effect is stronger for students spending over 3 hours online daily, as long-term digital exposure amplifies psychological damage caused by insufficient self-control. The mediating effect weakens among students with less than 1 hour of daily online time, since offline parent-child company can buffer the negative impacts of poor parenting on self-control.

4. Discussion

4.1. Direct predictive effect of parental rearing on junior high school students' mental health

The research hypotheses are validated: Warm and supportive positive parenting directly alleviates depression, interpersonal sensitivity and other psychological disturbances, while rejection and overprotection significantly raise risks of maladjustment, consistent with the findings of Wang et al. (2024) and Zhao et al.(2022). In the digital era, parents with positive parenting communicate with their children about online experiences and jointly formulate mobile phone usage rules, guiding adolescents to rationally distinguish harmful information from short videos and online comments, thus building stable and secure digital growth boundaries. In contrast, rejection-style parenting ignores teenagers' online emotional distress, while overprotection adopts an extreme ban on internet access. Both negative nurturing patterns easily trigger adolescent rebelliousness, prompting online escapism and addiction and forming a vicious cycle: Negative parenting $\rightarrow$ internet addiction $\rightarrow$ deteriorated mental state.

Data also proves the unique protective function of paternal emotional support. Fathers who participate in drafting digital usage rules and organizing offline outdoor activities can balance emotional fluctuations brought by fragmented online information and effectively reduce adolescents' depressive tendencies, verifying the new value of traditional family labor division in digital contexts.

4.2. Internal logic of the mediating transmission of self-control

Mediation results fully confirm the research hypotheses. Parental rearing shapes adolescents' self-control and further exerts indirect impacts on their mental health. In line with the Strength Model of Self-Control, positive parenting continuously supplies psychological regulation resources for teenagers. Parents encourage autonomous online time management and rational resolution of online conflicts, training impulse inhibition and emotion transfer abilities over the long run. Individuals with high self-control can actively avoid negative stimuli such as short-video addiction and online quarrels, reducing emotional burnout.

Under negative parenting patterns, teenagers lack long-term practice of independent decision-making, their internal self-control resources are continuously depleted, and they struggle to restrain impulses toward games and short videos. Frequent exposure to negative online stimuli easily generates inferiority, anxiety and other psychological problems^[4].

Digital scenarios further strengthen this mediating transmission path. Students with high self-control can independently arrange online and offline schedules and actively filter harmful content. Without reasonable family guidance, adolescents with low self-control easily fall into online vicious cycles and suffer persistent deterioration of psychological adjustment, indicating that self-control serves as a core internal protective barrier against psychological risks in digital environments.

4.3. Implications for family education and school psychological intervention

From a family perspective, parents should build a warm and collaborative digital parenting model, abandoning the two extremes of total prohibition and unrestrained indulgence. Internet usage conventions should be negotiated together with children. Parents need to extend offline outdoor sports and parent-child communication to supplement teenagers' self-control resources, and reduce negative nurturing behaviors such as verbal denial and emotional neglect. Timely recognition should be given to adolescents who rationally resolve online conflicts and autonomously manage mobile phones, so as to gradually improve their self-regulation capacity^[5].

For school psychological services, group counseling targeting self-control should be offered to students from families with negative parenting, focusing on training impulse restraint, emotion transfer and stress coping skills. A home-school communication channel concerning online behaviors should be established to identify students with long-term internet addiction or online bullying victimization at an early stage and deliver one-on-one psychological intervention to ease adolescent pressure.

4.4. Research limitations

This cross-sectional study can only reveal correlations rather than strict causal chains. Longitudinal tracking research spanning 1 to 2 years is recommended for follow-up exploration. The 470 samples are only recruited from three local junior high schools, limiting the generalizability of conclusions. In addition, this study fails to separate the independent mediating paths of paternal and maternal rearing, which can be analyzed separately in future research.

5. Conclusions

First, parental rearing styles directly predict junior high school students' mental health: Warm positive parenting reduces depressive and anxious symptoms, whereas rejection and overprotection significantly aggravate psychological maladjustment.

Second, self-control exerts a significant partial mediating effect between parental rearing and adolescents' mental health. Positive parenting improves teenagers' self-control to protect their mental health, while negative parenting depletes self-control resources and induces various psychological disturbances.

Third, daily online duration moderates the strength of the mediating effect. Prolonged online exposure amplifies psychological damage caused by low self-control, while sufficient offline parent-child interaction buffers the adverse impacts of negative parenting on adolescents' mental health.

About the author

Corresponding author: Seungjin Lee.

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