

The Effect of Parenting Styles on Adolescent Internet Addiction: The Chain Mediating Role of Rejection Sensitivity and Peer Alienation

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Abstract

Objective: This study aimed to investigate the chain mediating effect of rejection sensitivity and peer alienation between parenting styles and internet addiction, thereby further elucidating the influencing factors of internet addiction.

Methods: Participants were 373 seventh and eighth grade students from a middle school in Quanzhou City, Fujian Province. A questionnaire survey was conducted, with measurement instruments including the Brief Family Parenting Style Scale, Rejection Sensitivity Scale, the peer alienation dimension of the Parent-Peer Attachment Scale, and the Chen Internet Addiction Scale. Data were analyzed using SPSS 25.0.

Results: (1) Positive parenting styles showed significant negative correlations with rejection sensitivity, peer alienation, and internet addiction. (2) Negative parenting styles showed significant positive correlations with rejection sensitivity, peer alienation, and internet addiction. (3) Gender differences were observed in positive parenting styles, rejection sensitivity, and peer alienation, such that boys scored higher on parental positive parenting styles, while girls scored higher on rejection sensitivity and peer alienation. (4) Rejection sensitivity and peer alienation played a chain mediating role in the influence of negative parenting styles on internet addiction. (5) Rejection sensitivity and peer alienation played a chain mediating role in the influence of positive parenting styles on internet addiction.

Conclusion: Adolescents' rejection sensitivity and peer alienation play a partial mediating role in the influence of parenting styles on internet addiction. Specifically, when parents adopt positive parenting styles, adolescents' rejection sensitivity decreases, thereby reducing peer alienation and ultimately decreasing internet addiction severity; when parents adopt negative parenting styles,

adolescents' rejection sensitivity increases, leading to more peer alienation and ultimately increasing internet addiction severity.

Full Text

Preamble

The Influence of Parenting Styles on Adolescent Internet Addiction: The Chain Mediating Role of Rejection Sensitivity and Peer Alienation

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Objective: This study aims to further reveal the influencing factors of Internet addiction by examining the chain mediating effect of rejection sensitivity and peer alienation in the relationship between parenting styles and Internet addiction.

Methods: The subjects were 373 students in Grade 7 and Grade 8 from a middle school in Quanzhou, Fujian Province. A questionnaire survey method was adopted, employing the simplified Family Parenting Style Scale (S-EMBU), the Rejection Sensitivity Scale, the peer alienation dimension of the Parent-Child Peer Attachment Scale (IPPA), and the Chen Internet Addiction Scale (CIAS). SPSS 25.0 was used to analyze the collected data.

Results: (1) Positive parenting style was significantly negatively correlated with rejection sensitivity, peer alienation, and Internet addiction. (2) Negative parenting style was significantly positively correlated with rejection sensitivity, peer alienation, and Internet addiction. (3) Significant gender differences existed in positive parenting style, rejection sensitivity, and peer alienation, with boys scoring higher on positive parenting style and girls scoring higher on rejection sensitivity and peer alienation. (4) Rejection sensitivity and peer alienation played a chain mediating role in the influence of negative parenting style on Internet addiction. (5) Rejection sensitivity and peer alienation played a chain mediating role in the influence of positive parenting style on Internet addiction.

Conclusion: Adolescents' rejection sensitivity and peer alienation play a partial mediating role in the relationship between parental rearing style and Internet addiction. Specifically, when parents adopt positive parenting styles, adolescents' rejection sensitivity decreases, which in turn reduces peer alienation and ultimately lowers the degree of Internet addiction. Conversely, when parents adopt negative parenting styles, adolescents' rejection sensitivity increases, leading to greater peer alienation and ultimately higher levels of Internet addiction.

Keywords: adolescents, Internet addiction, parenting style, rejection sensitivity, peer alienation

1.1 Concepts of Internet Addiction

Different scholars hold varying perspectives on the concept of Internet addiction, though most view it negatively, believing it causes varying degrees of harm to individuals' physical and psychological health. The term "Internet addiction" was first introduced by Goldberg in 1995, who characterized it as excessive preoccupation with and inability to extricate oneself from the Internet.

Subsequently, Young (1996) and colleagues proposed four types of Internet addiction, defining it as a behavior in which individuals cannot control their Internet use, leading to loss of self in the absence of objective addictive substances, with consequent impairment of physical and social functioning due to excessive Internet use.

Domestic scholar Chen Shuhui (2003) argued that the formation of Internet addiction involves three core symptoms: compulsive use, withdrawal reactions, and tolerance; along with two related problems concerning interpersonal and health issues and time management. Given that this study's participants are Chinese adolescents, Chen Shuhui's perspective is adopted as the definition of "Internet addiction" in this research.

Early studies primarily focused on the typical characteristics, prevalence, and negative impacts of Internet addiction, while recent research has increasingly examined risk factors, explored mediating variables, and established psychological models to investigate the pathways leading to Internet addiction.

Risk factors in epidemiology refer to causes that contribute to the onset of specific diseases or mortality, which may be related to environment or individuals (Ma Weifen et al., 2013). Regarding risk factors for Internet addiction, scholars hold different views, but they can generally be divided into internal and external sources. Internal factors include low self-esteem, neuroticism, hostility, and impulsivity; external factors include poor family functioning, peer alienation, and academic pressure (Wang Zhihong, 2016, 2019; Wang Zhihong et al., 2019; National Development Council, 2015).

1.2 Measurement of Internet Addiction

Young (1988), noting the similarity between pathological gambling diagnostic criteria and Internet addiction manifestations, developed a self-designed diagnostic scale comprising eight questions similar to the pathological features of Internet addiction. Individuals responding affirmatively to five or more items are judged as having Internet addiction.

Based on a cognitive-behavioral model, Davis et al. (2002) developed the Davis Online Cognition Scale, which includes five dimensions. A total score exceeding 100 or any dimension score exceeding 23 indicates Internet addiction. This scale demonstrates good reliability and validity.

Chen Shuhui (2003) developed a Chinese version of the Internet addiction scale

based on Chinese cultural context and national conditions. This study employs this scale as the research instrument.

2.1 Definition and Types of Parenting Styles

Sun Lei et al. (2016) contend that the family environment is one of the earliest, most enduring, and most direct factors influencing individual development. While definitions of parenting style vary among scholars, the core content is consistent, with all conceptualizing parenting style as the relatively stable parenting style formed during parent-child interactions.

Darling and Steinberg (1993) define parenting style as the attitudes and behaviors parents convey to children, encompassing both parenting attitudes and behaviors. Symonds (1939) proposed two fundamental dimensions—“acceptance-rejection” and “dominance-submission”—to comprehensively analyze parenting styles and infer how different patterns affect children’s psychophysiological development, particularly in shaping personality traits. Specifically, parental recognition and support foster emotional stability, kindness, acceptance of others, and empathy; conversely, children experiencing parental rejection may exhibit emotional instability and strong rebellious emotions. Children raised under parental control often show low self-confidence, timidity, and overly accommodating traits, while those who can make parents comply with their ideas and behaviors typically demonstrate strong aggressiveness. Based on this theoretical analysis, Baumrind (1991) classified parenting styles into four types: authoritative, authoritarian, permissive, and neglectful.

Some scholars, examining specific parenting behaviors, identified 15 concrete practices including punishment, rejection, overprotection, tolerance, and favoritism.

2.2 Influencing Factors of Parenting Styles

Sources influencing parenting styles can be divided into internal and external factors. Internal factors include parents’ personality traits and emotional states. Research shows that when parents are more extroverted and experience more positive emotions, they are more sensitive to children’s needs and express more warmth; however, if parents exhibit significant neurotic traits and experience more negative emotions, they may tend to focus excessively on themselves, inevitably neglecting their children and even treating them with punishment and overcontrol (Aken et al., 2007). Meanwhile, parents’ long-term high stress generates anxiety, irritability, depression, and other negative emotions that cause them to neglect emotional warmth and understanding in child-rearing, instead employing more scolding, blaming, and punitive educational methods (Phillips et al., 2017).

External factors primarily involve sociocultural background, family income, and parental education level. Markus and Kitayama (1991) propose that culture

can be divided into individualism and collectivism. Parents in individualistic cultural contexts show more respect for children's ideas and support their autonomous choices; in collectivistic cultures, parents often demand that children respect authority, obey others, and maintain interpersonal relationships. Moreover, parents with higher education levels participate more in children's learning activities (Bae & Wickrama, 2015). Parents with higher socioeconomic status tend to use autonomy-supportive approaches, while those with lower status exhibit stronger behavioral control and harsh punishment, providing less emotional warmth and support (Miller et al., 1997).

3.1 Definition of Rejection Sensitivity

Downey and Feldman (1996) define rejection sensitivity as the degree to which individuals anxiously anticipate the negativity of information, readily perceive rejection cues, and tend to overreact. They proposed a social-cognitive model of rejection sensitivity, analyzing how individuals who have experienced rejection in the past continuously lower their threshold for perceiving rejection cues in daily life, thereby affecting their cognition, emotion, and behavior during interpersonal interactions. Since Downey's definition represents an integrative concept built upon previous work and is the most widely recognized and used, this study adopts Downey's definition of rejection sensitivity.

Mehrabian (1970) first defined rejection sensitivity, viewing excessive sensitivity to rejection as a personality trait manifested differently in each individual. He conceptualized rejection sensitivity as deep anxiety or fear about potential rejection in social interaction contexts, which shifts attention toward negative expectations and events. Boyce and Parker (1989) considered rejection sensitivity as overemphasis on others' evaluations during interpersonal interactions. Other researchers view rejection sensitivity as an internal processing mechanism of the organism that operates in constant flux rather than remaining static. The intensity of individuals' reactions to others' rejection depends on their level of rejection sensitivity (Mischel & Shoda, 1995).

3.2 Influencing Factors of Rejection Sensitivity

Factors influencing rejection sensitivity can be broadly divided into individual and environmental aspects. Individual factors include but are not limited to gender, physical appearance, and personality traits, while environmental factors involve early traumatic experiences, attachment, authoritarian parenting, peer bullying, friendship, and cultural differences. Moreover, individual and environmental factors complement each other: individual factors influence specific attentional, perceptual, and cognitive processing styles, while the environment, as a crucial factor in individual growth and development, further strengthens and shapes these processing styles. Consequently, they interact to jointly affect individuals' rejection sensitivity levels (Zheng Qinyi et al., 2022).

4.1 Definition of Peer Attachment

Adolescence is also known as the “psychological weaning period,” during which individuals’ psychology transitions from immaturity to maturity, shifting from family dependence to gradual independence, with social relationships transitioning from family to peers, making peer connections more intimate (Brown & Larson, 2009). For adolescents, peers play an indispensable role in healthy development and social adaptation across cognitive, emotional, personality, and behavioral dimensions. Peer relationships hold irreplaceable value in meeting adolescents’ social needs, obtaining social support, and experiencing security and intimacy.

Peer attachment refers to the intimate feelings and mutually warm and supportive relationships established between adolescents and their peers (Buhrmester, 1990). When individuals are in adolescence, their relationships with peers show a stable upward trend. This enhanced intimacy not only alleviates anxiety and fear brought by rapid changes during adolescence but also promotes the healthy development of individuals’ sense of security. Since adolescents spend most of their time at school, peer relationships are particularly important for them.

4.2 Definition of Peer Alienation

Alienation, “Alienation,” was first understood as separation and alienation. Marx initially introduced this concept in philosophy. Some scholars consider alienation a comprehensive concept encompassing both subjective self-alienation and objective alienation from nature. The objective level primarily manifests as individuals’ sense of losing control over their external environment, while the subjective level covers factors such as social separation and loss of individuality (Li Chao, 2018). Some scholars believe alienation is the experience of adversity or discomfort in relationships with others, difficulty in normally coping with interpersonal relationships, and a resulting sense of separation—feeling increasingly distant from social groups (such as family, school, peer groups) and lacking supportive or meaningful connections with them, which generalizes to negative feelings of helplessness and meaninglessness about life, manifesting psychologically as closure and alienation from the external world, emphasizing unmet psychological feelings and experiences. The basis involves alienation, detachment, and disharmony with objects and weak collective consciousness (Suarez-Mendoza & Zoghbi-Manrique-de-Lara, 2007). Peer alienation refers to the experience and state of individuals isolating themselves from peer groups, directly reflecting whether adolescents can establish effective connections with peers (Mcginley, 2018).

5.1 Research on Parenting Styles, Rejection Sensitivity, and Internet Addiction

Family parenting styles influence individuals’ rejection sensitivity. Rejection sensitivity is often associated with individuals frequently experiencing caregiver

rejection and domestic violence during childhood or adolescence (Downey, Feldman, 1996). Ibrahim (2015) and colleagues conducted a self-report survey of 271 undergraduates, finding that adults' memories of parental acceptance and rejection in childhood significantly correlated with current rejection sensitivity levels, with acceptance or rejection from same-gender parents better explaining differences in rejection sensitivity. This occurs because children more easily learn and accept same-gender parents' beliefs and behaviors during parent-child interactions (Rohner, 2014). Authoritarian parenting style significantly impacts rejection sensitivity (Zheng Qinyi et al., 2020). Erozkan et al. (2009) also found that individuals experiencing authoritarian parenting showed the most prominent rejection sensitivity during development. Cardak, Sarçam, and Onur (2012) reached similar conclusions: authoritarian parenting tends to produce higher rejection sensitivity in children, while more democratic parenting makes such maladaptive characteristics less likely. Individuals raised under authoritarian parenting not only exhibit high rejection sensitivity but also develop negative emotions such as inferiority and depression, leading to behavioral and adaptation problems like Internet addiction.

Current research on the relationship between rejection sensitivity and Internet addiction is limited. Hu Le and Yu Lin (2006) suggested that individuals with high interpersonal sensitivity are prone to Internet addiction. Rejection sensitivity can positively predict pathological Internet use among left-behind middle school students (Wang Jiangyang, Wang Mengge, 2022). Weinstein A et al. (2016) and Zheng Zhihui (2019) found that rejection sensitivity is an important self-regulation ability that plays a significant role in preventing pathological Internet use. It can also mediate between self-esteem and loneliness, thereby influencing pathological Internet use. Notably, it has a significant positive predictive effect on pathological Internet use. He Wenting (2022) also confirmed that rejection sensitivity is significantly positively correlated with problematic Internet use.

Some studies (Wang Shuaiqing, 2013) consider interpersonal relationships important factors affecting mobile phone addiction, which is highly correlated with Internet addiction. Moreover, research (Shi Yingzhu, 2011; Chen Huiling, 2011) suggests that greater peer alienation correlates with higher Internet addiction. Zhang Guohua et al. (2008) demonstrated that peer alienation significantly correlates with pathological Internet use—adolescents with high peer alienation are often unwilling to seek help from friends due to fear of ridicule, instead choosing online social interaction to obtain friendship and support. Luo Yanrui (2022) also showed that peer alienation can significantly directly predict Internet addiction formation among rural middle school students.

The “uses and gratifications theory” in Internet addiction models well explains the close connection between peer alienation and Internet addiction. This theory posits that psychological needs and motivations are the primary internal drivers of individual behavior. When certain needs are unmet, motivation drives individuals to compensate. According to Suler (1999), six psychological needs relate

to Internet addiction, with interpersonal communication being one. If individuals experience peer alienation in reality, they may use the Internet to satisfy their interpersonal needs, leading to Internet addiction. However, this theory only explores the relationship between peer alienation and Internet addiction without establishing a detailed model, which motivates further investigation in this study.

5.3 Relationships Among Parenting Styles, Rejection Sensitivity, Peer Alienation, and Internet Addiction

Young' s ACE model proposed in 1997 also well explains relationships among these four variables. The letters A, C, and E represent three characteristics leading to Internet addiction: A stands for Anonymity, meaning people can protect their real identity through various measures in Internet environments, allowing them to express opinions anonymously without constraints and reduce potential harm; C stands for Convenience, as the Internet provides convenience in many aspects, enabling people to quickly obtain first-hand information from various regions; E stands for Escape, as the online world differs from real life, allowing people to communicate freely and seek emotional outlets.

Furthermore, parenting styles affect individuals' rejection sensitivity levels, with negative parenting leading to higher rejection sensitivity. Individuals with high rejection sensitivity experience high anxiety about potential rejection in real-life interpersonal interactions and can utilize the Internet' s anonymity to reduce possible rejection in interactions with others. Moreover, if individuals experience peer alienation in reality, they can also use the Internet' s convenience to make new friends online and its escapist nature to satisfy self-needs.

In summary, existing research has explored pairwise relationships among parenting styles, rejection sensitivity, peer alienation, and Internet addiction but has not established a definitive model, which motivates further exploration in this study.

Individuals growing up in harsh family environments experience weakened supportive systems that cannot provide timely, effective, intangible help, reducing the beneficial buffering function of support systems for stressed adolescents (Xiao Yujuan, 2022). When problems arise, adolescents limited by their own abilities and raised in negative family environments may choose to avoid parental help. However, without family understanding and assistance, individuals may adopt other methods to vent accumulated distress. The Internet, as an effortless way to seek emotional release and avoid reality, provides convenience for this population. If estrangement exists between adolescents and their families, they may become more dependent on the Internet to escape reality, leading to Internet addiction (Diao Shengfu, 2003).

1 Limitations of Previous Research

Analysis of previous research reveals that although existing studies are relatively comprehensive, they have not simultaneously examined rejection sensitivity and peer alienation as mediating variables in the relationship between parenting styles and Internet addiction to verify chain mediation effects, leaving some deficiencies. Therefore, this study improves upon previous research limitations in its design.

2 Purpose of This Study

By reviewing and organizing domestic and foreign literature, this study explores the influence of adolescent parenting styles on Internet addiction and the chain mediating role of rejection sensitivity and peer alienation, conducting more precise variable relationship research and establishing a mediation model.

3 Significance of This Study

(1) Theoretical significance: While domestic research on parenting styles and Internet addiction is abundant, no study has simultaneously examined the relationship between parenting styles and Internet addiction from the perspectives of rejection sensitivity and peer alienation. By exploring the current status and connections among parenting styles, rejection sensitivity, peer alienation, and Internet addiction among adolescents in a Quanzhou middle school, this study further enriches theoretical research and data in the Internet addiction field.

(2) Practical significance: Through investigating parenting styles, rejection sensitivity, peer alienation, and Internet addiction, this study raises awareness about parenting styles and Internet addiction, helps understand underlying mechanisms, and better promotes healthy adolescent physical and psychological development.

4 Research Hypotheses

H1: Positive parenting style is significantly negatively correlated with rejection sensitivity, peer alienation, and Internet addiction.

H2: Negative parenting style is significantly positively correlated with rejection sensitivity, peer alienation, and Internet addiction.

H3: Adolescents' parenting styles, rejection sensitivity, peer alienation, and Internet addiction show significant differences across gender demographics.

H4: Adolescents' parenting styles, rejection sensitivity, peer alienation, and Internet addiction show significant differences across only-child status demographics.

H5: Rejection sensitivity and peer alienation play a chain mediating role in the influence of negative parenting style on Internet addiction.

H6: Rejection sensitivity and peer alienation play a chain mediating role in the influence of positive parenting style on Internet addiction.

Based on these hypotheses, the proposed chain mediation model is shown in Figure 1 [Figure 1: see original paper].

Part III: Research Methods

2.1 Simplified Family Parenting Style Scale

Based on Arrindell et al. (1999), this study uses the version revised by Chinese scholars Jiang Jiang, Lu Zhengrong, and Jiang Bijing. Adapted to China's national conditions, researchers revised this questionnaire into a Chinese scale containing three core dimensions: parental rejection, emotional warmth, and overprotection. The scale comprises father and mother sections, each with 21 items (42 items total), using a 4-point rating scale with Item 15 reverse-scored. The scale demonstrates good reliability and validity. Following previous research, analysis was conducted from positive and negative parenting style perspectives (Li Yongzhan, 2018), with the parental emotional warmth dimension assessing positive parenting style and parental rejection and overprotection dimensions assessing negative parenting style. Higher scores indicate stronger tendencies to use that parenting style. In this study, the internal consistency Cronbach's α coefficient was 0.82.

2.2 Rejection Sensitivity Scale

This study used the version translated and revised by Li Xia based on the Expectation of Rejection Tendency Scale, comprising 18 items with Items 1, 2, 4, 9, 10, and 17 reverse-scored. Using a 5-point rating scale from 1 ("strongly disagree") to 5 ("strongly agree"), higher scores indicate higher rejection sensitivity. In this study, the internal consistency Cronbach's α coefficient was 0.81.

2.3 Parent-Child Peer Attachment Scale (IPPA)

The IPPA (Armsden & Greenberg, 1987) assesses adolescents' intimate relationships with fathers, mothers, and peers. Each of the three subscales contains 25 items that can be used independently. Using a Likert 5-point scale from 1 ("completely inconsistent") to 5 ("completely consistent"), each subscale includes trust, communication, and alienation dimensions. The alienation dimension measures perceived interpersonal isolation, with higher scores indicating greater perceived peer alienation. Following previous research, only the alienation dimension of the peer attachment scale was administered (Wang Yujie et al., 2022). In this study, the internal consistency Cronbach's α coefficient was 0.82.

2.4 Chen Internet Addiction Scale (CIAS)

Developed by Chen Shuhui et al., this scale comprises five dimensions: compulsive Internet use symptoms (5 items), tolerance symptoms (4 items), withdrawal reactions (5 items), interpersonal and health problems (7 items), and time management problems (5 items), totaling 26 items using a 4-point rating scale from “completely inconsistent” to “completely consistent” with increasing scores. Total scores range from 26-104, with higher scores indicating more severe Internet addiction. Scores below 42 indicate normal Internet use; 42-59 indicate mild addiction; scores above 59 indicate severe addiction. In this study, the internal consistency Cronbach’s α coefficient was 0.93.

3 Research Procedure

This study employed a questionnaire survey method, integrating and refining the four scales—Simplified Family Parenting Style Scale, Rejection Sensitivity Scale, peer alienation dimension of IPPA, and CIAS—into a single questionnaire suitable for Chinese adolescents. Using Wenjuanxing for offline distribution, the study administered the questionnaire to Grade 7 and Grade 8 students from a Quanzhou, Fujian middle school. Three trained administrators provided unified instructions, explained completion requirements in detail, emphasized confidentiality principles, collected completed questionnaires, and distributed small gifts.

4 Data Processing

After questionnaire distribution and data collection, SPSS 25.0 software was used for data extraction, screening, and statistical analysis. Descriptive statistics, independent samples t-tests, correlation analysis, and multiple regression analysis were employed to examine variables. The SPSS Process plugin was used for mediation analysis to explore the chain mediating role of rejection sensitivity and peer alienation in the influence of parenting styles on adolescent Internet addiction.

Part IV: Results Analysis

1 Common Method Bias Control and Testing

Harman’s single-factor test was used to assess common method bias. Unrotated exploratory factor analysis extracted 27 factors with eigenvalues greater than 1, with the largest factor explaining 17.83% of variance, below the 40% critical standard, indicating no serious common method bias in this study.

2 Descriptive Statistics of Variables

Descriptive statistics for adolescent parenting styles, rejection sensitivity, peer alienation, and Internet addiction are shown in Table 2 .

According to Table 3 , 81 participants (21.7%) were normal Internet users; 176 (47.2%) had mild Internet addiction; and 116 (31.1%) had severe Internet addiction.

3.1 Gender Difference Testing

Independent samples t-tests on gender differences in parenting styles, rejection sensitivity, peer alienation, and Internet addiction scores are shown in Table 4 .

As shown in Table 4, independent samples t-test results revealed significant gender differences in positive parenting style ($p < 0.05$), with boys scoring higher than girls. Rejection sensitivity and peer alienation showed highly significant gender differences ($p < 0.01$), with girls scoring significantly higher than boys, indicating that girls experience higher rejection sensitivity and peer alienation.

3.2 Only-Child Difference Testing

Independent samples t-tests on differences in parenting styles, rejection sensitivity, peer alienation, and Internet addiction scores based on only-child status are shown in Table 5 .

Results showed no significant differences in adolescents' Internet addiction, peer alienation, rejection sensitivity, or parenting styles based on only-child status ($p > 0.05$).

4 Correlation Analysis of Variables

Pearson product-moment correlation analysis of total scores for parenting styles, rejection sensitivity, peer alienation, and Internet addiction revealed that all variables were significantly intercorrelated. Specifically, negative parenting style was significantly positively correlated with Internet addiction, peer alienation, and rejection sensitivity, while positive parenting style was significantly negatively correlated with Internet addiction, peer alienation, and rejection sensitivity. These correlation results support proceeding with regression analysis and mediation model testing.

5.1 Chain Mediation Analysis of Rejection Sensitivity and Peer Alienation Between Positive Parenting Style and Internet Addiction

Path regression coefficients are shown in Table 7 . Positive parenting style significantly negatively predicted rejection sensitivity ($\beta = -0.19$, $p < 0.001$) and peer alienation ($\beta = -0.95$, $p < 0.05$). Rejection sensitivity significantly positively predicted peer alienation ($\beta = 0.49$, $p < 0.001$). Positive parenting style significantly negatively predicted Internet addiction ($\beta = -0.16$, $p < 0.01$), while rejection sensitivity and peer alienation significantly positively predicted Internet addiction ($\beta = 0.14$, $p < 0.01$; $\beta = 0.39$, $p < 0.001$).

Using Hayes' (2013) SPSS macro program Process with Model 6, 5000 bootstrap samples, and 95% confidence intervals, with gender as a control variable, the chain mediating role of rejection sensitivity and peer alienation was tested.

Results indicated that positive parenting style influenced Internet addiction through four pathways: direct path: positive parenting style \rightarrow Internet addiction; indirect path 1: positive parenting style \rightarrow rejection sensitivity \rightarrow Internet addiction; indirect path 2: positive parenting style \rightarrow peer alienation \rightarrow Internet addiction; indirect path 3: positive parenting style \rightarrow rejection sensitivity \rightarrow peer alienation \rightarrow Internet addiction.

As shown in Table 8, the direct path of positive parenting style \rightarrow Internet addiction was significant (effect = -0.16, 95% bias-corrected CI [-0.25, -0.07]), indicating a direct effect. Indirect path 1 was significant (effect = -0.03, 95% CI [-0.06, -0.004]), showing that positive parenting style negatively predicted rejection sensitivity, which positively predicted Internet addiction—rejection sensitivity mediated the effect. Indirect path 2 was significant (effect = -0.04, 95% CI [-0.08, -0.04]), showing that positive parenting style negatively predicted peer alienation, which positively predicted Internet addiction—peer alienation mediated the effect. Indirect path 3 was significant (effect = -0.04, 95% CI [-0.06, -0.02]), indicating that rejection sensitivity and peer alienation chain-mediated the relationship between positive parenting style and Internet addiction. When parents adopt positive parenting styles, adolescents' rejection sensitivity does not increase, reducing peer alienation and ultimately decreasing Internet addiction.

In summary, rejection sensitivity and peer alienation partially mediate the relationship between positive parenting style and Internet addiction. The detailed path model is shown in Figure 2 [Figure 2: see original paper].

5.2 Chain Mediation Analysis of Rejection Sensitivity and Peer Alienation Between Negative Parenting Style and Internet Addiction

As shown in Table 9, negative parenting style significantly positively predicted rejection sensitivity ($\beta = 0.41$, $p < 0.001$). Negative parenting style and rejection sensitivity significantly positively predicted peer alienation ($\beta = 0.27$, $p < 0.001$; $\beta = 0.39$, $p < 0.001$). Negative parenting style, rejection sensitivity, and peer alienation significantly positively predicted Internet addiction ($\beta = 0.14$, $p < 0.01$; $\beta = 0.13$, $p < 0.01$; $\beta = 0.37$, $p < 0.001$).

Testing the chain mediating role of rejection sensitivity and peer alienation with gender as a control variable revealed that negative parenting style influenced Internet addiction through four pathways: direct effect path: negative parenting style \rightarrow Internet addiction; indirect path 1: negative parenting style \rightarrow rejection sensitivity \rightarrow Internet addiction; indirect path 2: negative parenting style \rightarrow peer alienation \rightarrow Internet addiction; indirect path 3: negative parenting style \rightarrow rejection sensitivity \rightarrow peer alienation \rightarrow Internet addiction.

As shown in Table 10, the direct path of negative parenting style \rightarrow Internet

addiction was significant (effect = 0.14, 95% bias-corrected CI [0.04, 0.24]), indicating a direct effect. Indirect path 1 was significant (effect = 0.06, 95% CI [0.01, 0.11]), showing that negative parenting style predicted rejection sensitivity, which predicted Internet addiction—rejection sensitivity mediated the effect. Indirect path 2 was significant (effect = 0.10, 95% CI [0.05, 0.15]), showing that negative parenting style predicted peer alienation, which predicted Internet addiction—peer alienation mediated the effect. Indirect path 3 was significant (effect = 0.06, 95% CI [0.03, 0.09]), indicating that rejection sensitivity and peer alienation chain-mediated the relationship between negative parenting style and Internet addiction. When parents adopt negative parenting styles, adolescents' rejection sensitivity increases, leading to peer alienation and ultimately intensifying Internet addiction tendencies.

In summary, rejection sensitivity and peer alienation partially mediate the relationship between negative parenting style and Internet addiction. The detailed path model is shown in Figure 3 [Figure 3: see original paper].

Discussion

1 Analysis of Internet Addiction and Rejection Sensitivity Survey Results

According to Chen Shuhui' s scale and scoring criteria, this study found a high prevalence of Internet addiction among participants, higher than the 14.1% reported in the “2022 Adolescent Internet Addiction Survey Report” and the 14.44% detection rate in Zhong Yiwen' s (2021) study. Possible reasons for the high rate include: first, the post-pandemic era requiring adolescents to attend online classes, with some lacking self-control and developing Internet addiction; second, adolescents' strong curiosity providing a platform for world exploration through Internet information searching; third, adolescents in rebellious periods with psychologically closed characteristics gradually closing their inner selves, lacking communication with parents and teachers, and preferring to express their feelings online, thus spending more time on the Internet. Different detection rates may result from: (1) researchers using different diagnostic tools, and (2) different participant groups being selected.

The average rejection sensitivity score was higher than Guo Yuhua' s (2022) study result of 52.5. High rejection sensitivity may result from: first, adolescents being in a psychological turbulence period, paying special attention to surrounding interpersonal relationships and being sensitive to rejection cues in the environment; second, adolescents spending considerable time at school entering a “mini-society” with more interpersonal interactions.

2 Analysis of Gender and Only-Child Differences Across Variables

Gender differences: Results revealed significant gender differences in positive parenting style, peer alienation, and rejection sensitivity. Specifically, parents

used more positive parenting with boys than girls, possibly due to traditional Chinese concepts and gender stereotypes where families and society value boys' growth and achievements more, providing boys with richer family resources. Alternatively, girls' earlier maturity may lead to behavior and thinking more aligned with parental expectations, making parents more reassured and reducing emotional warmth toward girls (Song Linlin, 2020). Regarding rejection sensitivity and peer alienation, girls scored higher than boys, consistent with previous research (Li Jie, 2013; Li Xia, 2007; Wang Dapeng, 2012). This may be explained by Eastern cultural influences making females more emotionally sensitive and refined, more likely to perceive rejection in interpersonal interactions with accompanying worry and anxiety. Under Eastern traditional culture, females are encouraged to express negative emotions, while males expressing such emotions are considered weak and incompetent, creating barriers for males to express genuine feelings. Regarding peer alienation, females are more delicate and sensitive in attachment relationships and typically lack security, making them more likely to alienate peers over small conflicts or misunderstandings and more attentive to subtle details, resulting in significantly lower peer alienation scores for males (Zhang Shaohua, 2021).

Only-child differences: No significant differences existed across variables based on only-child status, possibly because contemporary living conditions are more affluent with adequate resources. With two-child and three-child policies and dissemination of scientific parenting methods, parental attitudes have shifted, providing similar attention and resources regardless of only-child status, thus eliminating significant differences.

3 Mediation Model of Parenting Styles on Internet Addiction

3.1 Chain Mediation of Rejection Sensitivity and Peer Alienation Between Positive Parenting Style and Internet Addiction This study found that rejection sensitivity and peer alienation chain-mediated the relationship between positive parenting style and Internet addiction. Possible reasons include: First, positive parenting benefits children's physical and mental health development. Growing up in a warm family environment enhances self-confidence, enabling positive responses to others' words and behaviors in interpersonal interactions with less sensitivity to rejection cues. Second, individuals with low rejection sensitivity do not show excessive anger, irritability, or other negative emotions toward neutral cues in peer interactions, allowing peers to interact more easily without worrying about causing misunderstandings, thus maintaining good peer relationships. Finally, individuals with better interpersonal relationships are more willing to seek peer help when encountering difficulties and must invest energy in interactions, reducing time and energy available for Internet use.

If adolescents' parents adopt positive parenting styles, they can create a safe, warm environment where individuals are not overly sensitive to real-life rejection cues, can establish positive, healthy peer relationships, have their needs met

through these relationships, and reduce Internet addiction behaviors.

3.2 Chain Mediation of Rejection Sensitivity and Peer Alienation Between Negative Parenting Style and Internet Addiction This study found that rejection sensitivity and peer alienation chain-mediated the relationship between negative parenting style and Internet addiction. Possible reasons include: First, negative parenting places adolescents in environments of frequent rejection, coldness, neglect, and control. According to parental acceptance-rejection theory (Erozkan A, 2004), parents and significant others can be placed on a continuum from acceptance to rejection based on warmth expressed: warm, emotional parents are accepting, while hostile, cold parents are rejecting. If individuals perceive rejection from mothers or fathers during interactions, they may experience negative effects such as psychological maladjustment, low self-esteem, and hostility, creating insecurity and expectations of rejection that make them cautious and hypervigilant to social cues in interactions. Second, high rejection sensitivity leads individuals to interpret neutral cues as negative rejection information in interpersonal interactions, causing overreactions that make others feel tense and confused, gradually reducing others' willingness to interact and causing peer alienation. Adolescents are in Erikson's adolescence stage, needing to establish self-identity. High rejection sensitivity and peer alienation focus attention on searching for rejection cues in life, and the "self-fulfilling prophecy" in interpersonal interactions hinders development and self-identity formation. Finally, adolescents' psychological contradiction between adult-like feelings and immaturity, combined with desire to integrate into peer groups but inability to meet self-needs or express genuine emotions in family and peer relationships, leads them to seek other social resources. The widespread availability and convenience of the Internet provide an excellent platform for such adolescents, who may spend considerable time online, resulting in Internet addiction.

Previous research supports these findings. Li Jiying et al. (2023) found that parental rejection positively predicts rejection sensitivity—more parental rejection leads to higher rejection sensitivity among college students. According to attachment theory, children who experience parental rejection in early childhood develop insecure attachment relationships, feeling unworthy of love and doubting others' acceptance, habitually expecting rejection in social interactions and forming rejection sensitivity. Research on Chinese college students found that various negative parenting styles (authoritarian, permissive, neglectful) generally lead to higher rejection sensitivity, while trust, encouragement, and emotional support can reduce rejection reactions. Additionally, parenting styles partially influence rejection sensitivity through effects on children's personality (Gao Yanchun, 2014).

Negative parenting styles that demand unconditional compliance or habitually ignore needs provide a frustrating environment that hinders development of self-efficacy and self-esteem (Liu Z, 2019), prevents good peer interaction (Guo B, 2004), and causes peer alienation. If parents use negative parenting styles,

children learn rejection and confrontation patterns, increasing peer alienation. Highly rejection-sensitive individuals, overly sensitive to potential rejection, are more vulnerable and have negative thoughts about interpersonal interactions, showing overreactions of anger, agitation, avoidance, or depression that intensify interpersonal distress (Chen Yonglin, 2021). Zhang Guohua and Lei Li (2008) showed that peer alienation significantly positively correlates with adolescent Internet addiction. Zhang Yaoqian (2021) demonstrated that rejection-sensitive individuals, fearing rejection when seeking help from significant others, turn to alternative ways to meet relational needs when actually rejected. As a social medium, the Internet can reduce negative experiences from unsatisfactory interpersonal relationships, leading to Internet addiction.

According to Adler's compensation mechanism theory from psychoanalytic perspectives, compensation is a restorative behavior for deviations occurring during social adaptation. This restoration is a "displacement" compensation—surpassing others by leveraging strengths in other areas to compensate for deficiencies. When adolescents experience negative parenting and peer alienation in daily life, feeling less companionship and communication, their basic psychological needs remain unmet. The Internet's anonymity and escapist characteristics provide a platform for adolescents to find confidants and interaction objects, compensating for lost peer attachment in reality through positive self-presentation. However, the decompensation theory assumes that normal-purpose Internet use represents healthy interaction between individuals and the Internet that can be autonomously controlled. When individuals use the Internet with compensatory, retaliatory purposes, other resources cannot flow orderly in addicts' hands, and the Internet becomes a "lifeline" for addicts, leading to self-repair failure, pathological compensation dominance, and ultimately "decompensation" consequences (Luo Tingrui, 2022), resulting in Internet addiction.

4 Innovations of This Study

This study establishes a new research model among variables. Previous research examined relationships among adolescent parenting styles, rejection sensitivity, peer alienation, and Internet addiction but did not establish specific models. This study attempts to build a chain mediation model among these four variables to clarify relationships and provide clear understanding of Internet addiction development pathways.

5 Limitations and Future Directions

This study has several limitations. First, the questionnaire method can only verify correlations between variables, making causal interpretation difficult. Future research should consider other methods for deeper exploration of variable relationships. Second, limited by sampling scope and method, sample representativeness is insufficient. Participants came from one ordinary middle school in Quanzhou, Fujian, with significant limitations, and Grade 9 students preparing for high school entrance exams were excluded. Future research should collect

data from different regions, schools, and levels to improve generalizability. Finally, the large number of items may cause participant fatigue, potentially affecting result persuasiveness and scientific rigor. Future studies could combine interviews with questionnaires.

Although this study explored how parenting styles influence adolescent Internet addiction and demonstrated mediating pathways, whether other mediating variables simultaneously function remains to be discussed.

Part VI: Conclusion

Based on investigating adolescents' Internet addiction status and relationships among parenting styles, rejection sensitivity, peer alienation, and Internet addiction, this study tested and discussed all hypotheses, reaching the following conclusions:

1. Positive parenting style is significantly negatively correlated with rejection sensitivity, peer alienation, and Internet addiction.
2. Negative parenting style is significantly positively correlated with rejection sensitivity, peer alienation, and Internet addiction.
3. Positive parenting style, rejection sensitivity, and peer alienation differ by gender, with boys scoring higher on positive parenting style and girls scoring higher on rejection sensitivity and peer alienation.
4. Rejection sensitivity and peer alienation chain-mediate the influence of negative parenting style on Internet addiction.
5. Rejection sensitivity and peer alienation chain-mediate the influence of positive parenting style on Internet addiction.

Based on findings, the following recommendations are proposed to help adolescents reduce Internet addiction and achieve healthy development:

1. **Parenting styles matter:** Parents should emphasize scientific parenting methods, adopt more positive parenting styles, and create an equal, democratic, warm, and intimate family atmosphere to foster self-confidence and good interpersonal skills. If children show high rejection sensitivity, parents should reflect on and adjust their parenting to establish good parent-child relationships, reducing overreactions to rejection cues and promoting correct, positive attitudes.
2. **Focus on peer relationships:** For adolescents in puberty, peer relationships are highly valued, and peer evaluations and behaviors affect adolescent development, including self-concept and behavior. Based on observational learning theory, children learn and imitate parents' interaction styles, so parents should be role models, helping children master good interpersonal skills.
3. **Address psychological needs:** Parents should pay attention to children's psychological needs. According to Maslow's hierarchy of needs, basic needs include belongingness and love. For adolescents, social resources and support mainly come from family and peers. If they cannot seek help

when encountering difficulties, they may use the Internet as a solution. Parents should help children meet these needs within the family, creating strong belongingness and a warm, supportive environment for personal growth and adequate social support.

4. **Learn interpersonal skills:** Adolescents need to learn correct interpersonal methods and skills, accept rejection calmly, and cultivate positive, optimistic mindsets. Rejection is inevitable in interpersonal interactions, and individuals need to view it correctly, attribute it scientifically, and develop some “insensitivity.”
5. **Utilize social resources:** Adolescents should effectively use available social resources and support, establish good peer relationships and intimate parent-child relationships, and learn to seek help from others when encountering difficulties. They should have clear understanding of the Internet as a convenient tool that can also be addictive and affect normal social functioning.

References

Chen Huiling. (2011). A preliminary study on the assessment model of adolescent Internet addiction. Master’ s thesis. National Changhua University of Education, Graduate Institute of Guidance and Counseling.

Chen Shuhui. (2003). Development and psychometric properties of the Chinese Internet Addiction Scale. *Chinese Psychology*, 45(3), 279-294.

Chen Yonglin. (2021). The relationship between rejection sensitivity and interpersonal relationship distress: The mediating role of resilience and self-acceptance. Master’ s thesis. Fujian Normal University.

Diao Shengfu. (2003). On the causes and countermeasures of Internet addiction. *Science, Technology and Dialectics*(06), 50-53.

Gao Yanchun. (2014). A study on the correlation between parenting styles and rejection sensitivity among college students. Master’ s thesis. Southwest University.

Guo Yuhua. (2022). The relationship between family parenting styles and adolescent social anxiety: The role of rejection sensitivity and loneliness. Master’ s thesis. Central China Normal University.

He Wenting. (2022). The relationship between college students’ rejection sensitivity and problematic Internet use and group intervention research. Master’ s thesis. Qinghai Normal University.

Hu Le, Yu Lin. (2006). Theoretical models and multi-factor research on the mechanism of Internet addiction formation. *Chinese Journal of Clinical Rehabilitation*(26), 126-129.

Jiang Jiang, Lu Zhengrong, Jiang Bijing, Xu Yan. (2010). Preliminary revision of the Chinese version of the Short-form Parenting Style Questionnaire.

Psychological Development and Education, 26(1), 94-99.

Jiang Lijie, Wang Xin. (2001). A study on college students' self-concept and parenting styles. Chinese Journal of Mental Health, 442-444.

Jin Cancan, Zou Hong. (2013). The relationship between parental monitoring and adolescents' deviant online behavior: The moderating role of personality types. Chinese Journal of Special Education, (06), 63-68.

Li Chao. (2018). A study on the relationship between college students' mobile phone dependence, alienation, and resilience. Master' s thesis. Southwest University.

Li Jiying, Liu Xiaoqun, Wang Zheng. The relationship between parental rejection and college students' psychotic experiences: The chain mediating role of rejection sensitivity and social anxiety. China Journal of Health Psychology.

Li Jie. (2013). A correlational study on self-esteem, rejection sensitivity, and interpersonal relationships among master' s students. Master' s thesis. Fujian Normal University.

Li Tao, Zhang Lanjun. (2004). A study on the relationship between college students' Internet addiction tendency and parenting styles. Psychological Science, 27(3), 662-663.

Li Wenfu, Jia Xuqing, Li Gongying, Zhang Qinglin. (2021). Parenting styles and college students' mobile phone dependence: The chain mediating role of self-control and sensation seeking. Psychological Development and Education, 37(5), 8.

Li Xia. (2007). A correlational study on rejection sensitivity. Master' s thesis. Jiangxi Normal University.

Li Yan, Wang Qianqian, Liu Dan, Yu Jianping. (2014). The relationship between parenting styles, self-esteem, and college students' Internet addiction. China Journal of Health Psychology(11), 1715-1718.

Li Yongzhan. (2007). Internet addiction status and related factors among urban high school students. Chinese Journal of Tissue Engineering Research and Clinical Rehabilitation(17), 3326-3329.

Li Yongzhan. (2018). The influence of parenting styles on high school students' learning engagement: A chain mediation effect model. Psychological Development and Education(05), 576-585.

Liao Xiaoyan. (2022). The relationship between parenting styles and online deviant behavior among vocational school girls: The moderating role of self-control ability. Master' s thesis. Southwest University.

Liu Danli, Li Dongping. (2017). Parenting styles and adolescent Internet addiction: Testing the mediating and moderating role of ego-resilience. Psychological Science, 40(6), 1385-1391.

- Liu Lei, Li Wenjing. (2013). A review of Kimberly S. Young' s 15-year research on Internet addiction. *Theoretical Observation*(07), 23-27.
- Lu Yao, He Jinbo, Zhu Hong, Wu Siyao, Cai Taisheng, Hu Xian, et al. (2015). The influence of parenting styles on adolescent eating disorders: The mediating role of self-control. *Chinese Journal of Clinical Psychology*, 23(3), 473-476.
- Luo Tingrui. (2022). A study on the mechanism and countermeasures of peer attachment on Internet addiction among rural junior high school students. Master' s thesis. Jiangxi Agricultural University.
- Ma Weifen, Yang Zhijing, Chen Yuxia. (2013). Analysis of screening and prevention issues for high-risk groups in the prodromal phase of severe mental illness. *Journal of Nursing*, 60(3).
- Shi Yingzhu. (2011). The construction and empirical study of a children' s Internet addiction assessment module. Master' s thesis. National Changhua University of Education.
- Song Linlin. (2020). The influence of parenting styles on aggressive behavior among junior high school students. Master' s thesis. Hebei University.
- Sun Lei, Wang Su, Gai Xiaosong. (2016). Theoretical research and educational implications of positive parenting. *Journal of Northeast Normal University (Philosophy and Social Sciences Edition)*(05), 213-217.
- Tian Chuyao. (2022). The relationship between family parenting styles and peer relationships in upper elementary school students: The mediating role of parental mentalization. Master' s thesis. Shaoxing University.
- Wang Dapeng. (2012). A correlational study on rejection sensitivity and social anxiety among college students. *Journal of Huainan Normal University*, 14(05), 102-104.
- Wang Jiangyang, Wang Mengge. (2022). Rejection sensitivity and pathological Internet use among left-behind middle school students: The mediating role of meaning in life and self-stigma. *Psychological and Behavioral Research*, 20(02), 219-225.
- Wang Shuaiqing. (2013). A study on the relationship between interpersonal relationships, self-esteem, and personality among junior high school students. Master' s thesis. Henan Normal University.
- Wang Xiaoping. (2011). A study on the relationship between family parenting styles and Internet addiction among medical students. Master' s thesis. Southwest University.
- Wang Xujiang. (2018). Analysis of the harm and countermeasures of Internet addiction among college students. *Intelligence*(22), 150-152.
- Wang Yujie, Dou Kai, Nie Yangang. (2020). Peer alienation and adolescent social anxiety: The mediating effect of emotion regulation efficacy. *Education*

Herald(07).

Wang Zhihong. (2016). Crisis is opportunity: Discussing risk factors for Internet addiction from crisis intervention. *Taiwan Counseling Quarterly*, 8(1), 6-15.

Wang Zhihong. (2019). Localization exploration of counseling practice: Taking the mental health risk factor checklist as an example. *Journal of Indigenous Counseling Psychology*, 10(3).

Wu Jing. (2016). The relationship between adolescent family parenting styles and Internet addiction: The mediating role of interpersonal trust and loneliness. Master' s thesis. Hubei University.

Wu Yanqin. (2021). The influence of parenting styles on college students' social adaptability: The mediating role of rejection sensitivity. Abstracts of the 23rd National Conference on Psychology (Part 2).

Xiao Tong. (2022). The influence of parental rejection on college students' Internet addiction: The chain mediating role of resilience and depression. *Psychology Monthly*(03), 56-58.

Xiao Yujuan. (2022). Analysis of the causes and countermeasures of adolescent Internet addiction. *Psychology Monthly*, 17(18), 228-231.

Yue Dongmei. (1993). Parenting styles: Preliminary revision of EMBU and its application in neurotic patients. *Chinese Journal of Mental Health*, 7(3).

Zhang Guohua, Lei Li. (2008). The relationship between peer attachment, self-identity, and Internet addiction among adolescents. *Chinese School Health*(05), 454-455.

Zhang Hanbo. (2015). A study on the relationship between family parenting styles, sensation seeking, and Internet addiction among college students. Master' s thesis. Jilin University.

Zhang Mengru, Zhang Wenhua, Guo Ying, Suo Tao. (2021). The influence of family parenting styles on online game addiction among vocational school students: The mediating role of self-control. *China Journal of Health Psychology*, 30(7), 1111-1117.

Zhang Qiyong, Li Shuquan. (2011). Path analysis of family parenting influencing children' s peer relationships. *Chinese Journal of Clinical Psychology*(02), 240-243.

Zhang Shaohua. (2021). The influence of peer attachment and sense of coherence on subjective well-being among junior high school students and intervention research. Master' s thesis. Inner Mongolia Normal University.

Zhang Yaoqian. (2021). The relationship between college students' mobile phone dependence and social anxiety: The chain mediating role of insomnia and rejection sensitivity. Master' s thesis. Hebei University.

- Zhang Yingrui, Li Tao. (2013). Cognitive and neural mechanisms of rejection sensitivity. *Advances in Psychological Science*(11).
- Zhao Yuepeng. (2022). The relationship between parenting styles and smart-phone addiction among junior high school students. Master's thesis. Shandong Normal University.
- Zheng Qinyi, Hu Na, Ding Xuechen. (2020). Influencing factors of rejection sensitivity: Based on the "Person \times Environment Model". *Applied Psychology*, 26(01), 83-96.
- Zheng Zhihuai, Chen Ming, Wang Meng, Yan Jianwen. (2019). The relationship between rejection sensitivity and college students' pathological Internet use: The chain mediating role of self-esteem and loneliness. *China Journal of Health Psychology*(12), 1890-1894.
- Zhong Yiwen. (2021). A study on the relationship between parenting styles, self-efficacy, and mobile phone Internet addiction among adolescents. Master's thesis. Fujian Normal University.
- Aken, C. V., Junger, M., Verhoeven, M., Aken, M., Dekovi, M., & Denissen, J. (2007). Parental personality, parenting and toddlers' externalising behaviours. Attachment: Wiley & Sons, Ltd.(8).
- Armsden, G. C., & Greenberg, M. T. (1987). The Inventory of Parent and Peer Attachment: Individual differences and their relationship to psychological well-being in adolescence. *Journal of Youth and Adolescence*, 16(5), 427-454.
- Bae, D., & Wickrama, K. (2015). Family socioeconomic status and academic achievement among Korean adolescents: linking mechanisms of family processes and adolescents' time use. *The Journal of Early Adolescence*, 35(7), 1014-.
- Barber, B. K., & Erickson, L. D. (2001). Adolescent Social Initiative: Antecedents in the Ecology of Social Connections. *Journal of Adolescent Research*, 16(4), 326-354.
- Baumrind, D. (1991). The Influence of Parenting Style on Adolescent Competence and Substance Use. *The Journal of Early Adolescence*, 11(1).
- Boyce, P., Hickie, I., Parker, G., Mitchell, P., Wilhelm, K., & Brodaty, H. (1993). Specificity of interpersonal sensitivity to non-melancholic depression. *Journal of Affective Disorders*, 27(2), 101-105.
- Brown, B. B., & Larson, J. (2009). Peer relationships in adolescence. *Handbook of Adolescent Psychology*.
- Buhrmester, D. P. (1990). Intimacy of friendship, interpersonal competence, and adjustment during preadolescence and adolescence. *Child Development*, 61(4), 1101-1111.
- Butler, J. C., Doherty, M. S., & Potter, R. M. (2007). Social antecedents and consequences of interpersonal rejection sensitivity. *Personality and Individual*

Differences, 43(6).

Çardak, M., Sarıçam, H., & Onur, M. (2012). Perceived Parenting Styles and Rejection Sensitivity in University Students.

Darling, N., & Steinberg, L. (1993). Parenting Style as Context: An Integrative Model. *Psychological Bulletin*, 113(3), 487-496.

Davis, R.A., Flett, G.L., & Besser, A. (2002). Validation of a new scale for measuring problematic Internet use: Implications for pre-employment screening. *CyberPsychology & Behavior*, 5(4), 331-345.

Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of Personality and Social Psychology*, 70(6), 1327-1343.

Downey, G., Mougios, V., Ayduk, O., London, B. E., & Shoda, Y. (2004). Rejection sensitivity and the defensive motivational system: Insights from the startle response to rejection cues. *Psychological Science*, 15(10), 668-673.

Erozkan, & Atilgan. (2009). Rejection sensitivity levels with respect to attachment styles, gender, and parenting styles: A study with Turkish students. *Social Behavior & Personality: An International Journal*, 37(1), 1-.

G, D., & I, F. S. (1996). Implications of rejection sensitivity for intimate relationships. *Journal of personality and social psychology*, 70(6).

Goldberg, (1996). Internet addiction disorder. *Procedia - Social and Behavioral Sciences*, 191, 1372-1376.

Garbarino, J. (2008). Children and families in communities: Theory, research, policy and practice. *Journal of Child Psychology and Psychiatry*, 49(6).

Hayes, A. (2013). Introduction to mediation, moderation, and conditional process analysis. *Journal of Educational Measurement*, 51(3), 335-337.

Healy, K.L., Sanders, M. R., & Iyer, A. (2015). Parenting practices, children's peer relationships and being bullied at school. *Journal of Child & Family Studies*, 24(1), 127-140.

Ibrahim, D. M., Rohner, R. P., Smith, R. L., & Flannery, K. M. (2015). Adults' remembrances of parental acceptance-rejection in childhood predict current rejection sensitivity in adulthood. *Family and Consumer Sciences Research Journal*, 44(1).

Kardefelt-Winther, D. (2014). Problematizing excessive online gaming and its psychological predictors. *Computers in Human Behavior*, 31(1), 118-122.

Lamb, M. E. (2010). How do fathers influence children's development? Let me count the ways. In M. E. Lamb (Ed.), *The role of the father in child development* (pp. 1-26).

- Liu, Z., Riggio, R. E., Day, D. V., Zheng, C., Dai, S., & Bian, Y. (2019). Leader development begins at home: Overparenting harms adolescent leader emergence. *Journal of Applied Psychology*, 104(10), 1226-1242.
- Luterek, Jane A., Harb, Gerlinde C, Heimberg, Richard G., Marx, Brian P. (2004). Interpersonal rejection sensitivity in childhood sexual abuse survivors: mediator of depressive symptoms and anger suppression. *Journal of Interpersonal Violence*, 19(1).
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224-253.
- Mcginley, M. (2018). Can Hovering Hinder Helping? Examining the Joint Effects of Helicopter Parenting and Attachment on Prosocial Behaviors and Empathy in Emerging Adults. *The Journal of Genetic Psychology*.
- Mehrabian, A. (1970). The development and validation of measures of affiliative tendency and sensitivity to rejection. *Educational and Psychological Measurement*, 30(2), 417-428.
- Miller, Jane, E., Davis, & Diane. (1997). Poverty history, marital history, and quality of children' s home environments. *Journal of Marriage and the Family*.
- Mischel, W, & Shoda, Y. (1995). A cognitive-affective system theory of personality: reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review*, 102, 246-268.
- Perris, C., Jacobsson, L., Linndstr, M. H., Knorrning, L., & Perris, H. (1980). Development of a new inventory for assessing memories of parental rearing behaviour. *Acta Psychiatrica Scandinavica*, 61(4).
- Phillips, B. A., Conners, F., & Curtner-Smith, M. E. (2017). Parenting children with down syndrome: parenting styles, parenting dimensions, and parental stress. *Research in Developmental Disabilities*, 68, 9.
- Phillips, T. M., Wilmoth, J. D., Wall, S. K., Peterson, D. J., Buckley, R., & Phillips, L. E. (2013). Recollected parental care and fear of intimacy in emerging adults. *The Journal of Family*, 21(3), 335-341.
- Rainer Romero-Canyas, Geraldine Downey, Kathy Berenson, Ozlem Ayduk, N Jan Kang. (2010). Rejection sensitivity and the rejection-hostility link in romantic relationships. *Journal of personality*, 78(1), 119-148.
- Rohner, R. P. (2016). Introduction to Interpersonal Acceptance-Rejection Theory (IPARTheory) and Evidence. *Online Readings in Psychology and Culture*, 6, 1-40.
- Rohner, R. P. (2014). Parental Power and Prestige Moderate the Relationship Between Perceived Parental Acceptance and Offspring' s Psychological Adjustment. *Cross-Cultural Research*, 48(3).

Skinner, H., Steinhauer, P., & Sitarenios, G. (2000). Family assessment measure (FAM) and process model of family functioning. *Journal of Family Therapy*, 22(2), 190-210.

Suarez-Mendoza, M.J., & Zoghbi-Manrique-de-Lara, P. (2007). The impact of work alienation on organizational citizenship behavior in the Canary Islands. *International Journal of Organizational Analysis*, 15(1).

Suler, J. R. (1999). To get what you need: healthy and pathological internet use. *CyberPsychology & Behavior*, 5(2), 385-393.

Symonds, P. M. (1939). Research on the interviewing process. *Journal of Educational Psychology*, 30(5).

WeinsteinAviv, Ben, A., TimorAyelet, & MamaYaniv. (2016). Delay discounting, risk-taking, and rejection sensitivity among individuals with Internet and Video Gaming Disorders. *Journal of Behavioral Addictions*, 5(4).

Young, K. S. (1996). Internet addiction: The emergence of a new clinical disorder. Paper presented at the 104th annual meeting of the American Psychological Association, August 11, Toronto, Canada.

Young, K. S. (1997). What makes on-line usage stimulating? Potential explanations for pathological Internet use. Paper presented at the 105th annual meeting of the American Psychological Association, August 15, 1997, Chicago, IL.

Young, K.S. (1998). Internet addiction: The emergence of a new clinical disorder. *CyberPsychology & Behavior*, 1(3), 237-244.

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