

## **Analysis on the Mechanism of Family Factors in Adolescent Internet Addiction Disorder**

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### **Abstract**

**Using authoritative questionnaires and models, widely collecting representative data for analysis, and completely analyzing the mechanism of family factors in adolescents' Internet addiction, especially the two-stage intermediary role of bad dating and social sensitivity, has great practical value.**

### **Keywords**

**Mechanisms of Teenagers' Internet Addiction; Bad Dating; Internet Addiction; Family Functions; Social Sensitivity.**

### **1. Introduction**

In recent years, the Internet has been developing rapidly. However, despite the rapid growth in the number of Internet users among young people in the past years, the research on Internet addiction among young people is still in its infancy. Internet addiction is still lack of authoritative definition and judgment criteria, and adolescent Internet addiction has not received enough attention and comprehensive research. However, as we all know, Internet addiction among adolescents has a huge negative impact, which has gradually caused many social problems and needs to be paid attention to. At present, teenagers' Internet addiction has been widely concerned by many national government departments and researchers. In order to prevent and intervene teenagers' Internet addiction scientifically, it is necessary to conduct more in-depth research on the risk factors and mechanisms of teenagers' Internet addiction.

### **2. Research Basis**

According to the ecological model of Bronfenbrenner, the family is the closest and most influential ecosystem affecting human development. Poor family environment may lead to non adaptive development results. Inspired by this theory, many researchers have investigated the role of family factors in adolescent Internet addiction. Among these factors, the role of family function is particularly important. It has been noticed and studied by many researchers. The harmonious family function has an important function: emotional warmth. Families with bad functions are difficult to provide emotional warmth for children, so individuals may seek emotional support from other environments such as cyberspace. Although previous studies have established a direct relationship between family function and adolescents' Internet addiction disorder, the mediating and regulating mechanisms behind this relationship can still be discussed. According to the ecological model, one ecological factor may affect another ecological factor, and then be related to the problem behavior. Under the guidance of this theory, this paper aims to investigate whether family function can increase bad dating, which is related to adolescent Internet addiction. This paper will also examine whether the mediation process is regulated by social sensitivity. This integrated mediation model with regulation can more comprehensively describe the phenomena in real life than the simple mediation and regulation model.

## 2.1. Mediation of Bad Dating

Bad dating refers to make lovers with people with bad habits. In adolescence, individuals are particularly vulnerable to partner influence. Many studies have shown that making bad companions is a robust predictor of adolescent problem behaviors. Recently, researchers began to explore the relationship between bad dating and adolescent Internet addiction. According to social learning theory, teenagers may become addicted to the Internet due to partner influence. Specifically, partners may provide more opportunities for teenagers to access the Internet and play games. Teenagers may also follow partner norms due to partner pressure. Consistent with these theoretical views, a large number of empirical studies have shown that teenagers who make bad lovers are more likely to indulge in the Internet.

In addition, poor family function may promote teenagers to make lovers with partners. As mentioned above, a well functioning family has the function of emotional warmth. When teenagers can not get warm support from their families or meet their basic psychological needs, they may turn to their partners to seek support or obtain a sense of belonging. However, as far as we know, there is still a lack of research on the mediating role of bad dating between family function and adolescents' Internet addiction. Based on the above literature review, we propose hypothesis : the relationship between family function and adolescent Internet addiction can be at least partially mediated by bad dating.

## 2.2. Adjustment of Social Sensitivity

Although poor family function may increase the risk of Internet addiction through the mediation of poor dating, not all adolescents who have bad dating are addicted to the Internet. According to the ecological model, the impact of ecological environment may vary with individual characteristics. This paper examines whether the mediating process of family function influencing Internet addiction through bad dating is regulated by adolescents' social sensitivity.

Social sensitivity refers to the sensitivity of individuals to the views and evaluations of others about their abilities and behaviors. Individuals with high social sensitivity have higher emotional reactivity when processing information about social acceptance and exclusion. Previous studies have shown that social sensitivity is a risk factor for non adaptive outcomes, including Internet addiction. Teenagers with high social sensitivity are more likely to speculate on their partners' views and feelings, and more likely to seek and reflect on partner feedback and evaluation. This can explain why partner factors have a significant impact on the behavior of these adolescents. Specifically, the important feature of social sensitivity is the fear of social exclusion (as with rejection), which is likely to affect teenagers' personal feelings and sense of self-worth, leading to negative emotions, thus increasing the possibility of Internet addiction. In addition, adolescents who are more sensitive to partner evaluation are more likely to seek partner acceptance, which may make them more compliant with the norms of partner groups and indulge in the network.

As far as we know, there is a lack of research to investigate whether social sensitivity can regulate the relationship between bad dating and adolescent Internet addiction. Based on the above literature review, we propose hypothesis : social sensitivity can regulate the second stage of the mediation process in which family functions affect adolescents' Internet addiction. The relationship between bad dating and Internet addiction is stronger in individuals with higher social sensitivity.

## 3. Research Process

Students from junior high schools and senior high schools in Jiangxi Province of China were recruited for this study. According to the "2022 China Development Index" and the network

penetration rate, Jiangxi Province is at a medium level nationwide, so the target audience is representative. A total of 1183 adolescents agreed to participate in the study by cluster sampling. The average age is 14.34 years old. 45% of them are male students and 46% of them are senior high school students. The family situation also conforms to the normal distribution. The scales used in the research are the most advanced achievements in the world at present, including Professor Li Dongping's "Family Function Scale", "Bad dating Questionnaire", adapted from Young's "Internet Addiction Diagnosis Questionnaire", and the change from previous research projects to evaluate the social sensitivity of adolescents.

## 4. Result Analysis

### 4.1. Preliminary Analysis

According to the diagnostic criteria for Internet addiction proposed by Young, the incidence of Internet addiction in this survey is 5.1%. In addition, Table below lists the mean value, standard deviation and correlation coefficient of each variable (boys and girls are presented separately). In general, the pairwise correlation between the variables in boys and girls is consistent with expectations. Specifically, good family function is negatively correlated with IAD, while bad dating is positively correlated with IAD. In addition, family function was negatively correlated with deviant dating. Finally, social sensitivity is positively correlated with Internet addiction.

**Table 1.** Average value, standard deviation and correlation coefficient of each variable (boys and girls are listed separately)

Variate	Female	Male	1	2	3	4	5	6	7
1.Age	14.38(1.67)	14.32(1.65)	—	0.07	-0.10*	0.04	0.37***	-0.04	0.16**
2.Family structure	0.90(0.31)	0.90(0.30)	-0.03	—	-0.01		0.00	0.00	0.04
3.SES	-0.06(0.95)	0.08(0.96)		0.05	—	0.15**	-0.03	0.05	-0.07
4.Family functions	4.75(0.92)	4.69(0.90)				—		-0.10	-0.27***
5.Bad dating	1.49(0.52)	1.68(0.58)		-0.09	-0.11*		—	0.18***	0.32***
6.Social sensitivity	3.76(1.04)	3.65(1.11)	0.04	-0.09	0.08	-0.12**	0.15***	—	0.20**
7.Internet Addiction	2.07(0.99)	2.40(1.04)	0.30***	-0.10*	-0.12*				—

Note:N=1114.The Upper triangle is the correlation matrix for boys, and the lower triangle is the correlation matrix for girls.

In addition, independent sample t-test was used to analyze the gender differences at the mean level of each variable. Compared with girls, boys have significantly more deviant dating,  $t(1112)=4.33$ ,  $p<0.001$ ,  $d=0.15$ , higher level of Internet addiction,  $t(1112)=4.42$ ,  $p<0.001$ ,  $d=0.31$ , lower level of social sensitivity,  $t(1112)=-2.19$ ,  $p=0.029$ ,  $d=0.16$ . There was no significant gender difference in family function ( $p=0.355$ ).

As mentioned above, suppose expects that bad dating plays a mediating role between family function and Internet addiction of adolescent boys and girls, and suppose expects that social sensitivity regulates the second stage of the mediating process. We use the PROCESS macro developed by Hayes to test this mediated effect model of male students. Specifically, the model examines whether social sensitivity can regulate the relationship between bad dating and Internet addiction.

Here we only take male students as an example. After controlling the relevant demographic covariates, family function can significantly predict bad dating ( $b=-0.18$ ,  $t=-5.88$ ,  $p<0.001$ ). All predictive variables can jointly explain 20% of the variance in poor dating ( $R^2 = 0.20$ ). After

controlling the demographic covariates and family functions, the relationship between bad dating and Internet addiction was significant ( $b=0.39$ ,  $t=4.04$ ,  $p<0.001$ ). In addition, social sensitivity was positively correlated with Internet addiction ( $b=0.14$ ,  $t=3.20$ ,  $p=0.002$ ). However, the interaction between poor dating and social sensitivity was not significant ( $b=-0.12$ ,  $t=-1.74$ ,  $p=0.083$ ). The whole model can explain 18% variation of Internet addiction disorder ( $R^2=0.18$ ).

Hayes [The adjusted intermediary effect index is not significant ( $\omega=0.02$ ,  $SE=0.01$ , 95%  $CI=[-0.01, 0.05]$ ), indicating that the mediating effect of predictor X (i.e. family function) on outcome variable Y (i.e. internet addiction) through mediator M (i.e. bad dating) is not regulated by the social sensitivity of the moderator. In any case, bad dating has a significant mediating effect between family function and Internet addiction, which does not vary with the level of social sensitivity. Therefore, among adolescent boys, one Hypothesis is supported, while another is not.

Although family function is an important risk factor of Internet addiction in adolescents, little is known about how family function affects Internet addiction. Based on the ecological model, this paper expands the previous literature on the relationship between family function and adolescent Internet addiction. Specifically, we tested a mediated model to examine whether the relationship between family function and adolescent Internet addiction is mediated by bad dating and whether the second stage of the indirect process is regulated by social sensitivity. The findings have deepened our understanding of the risk factors of Internet addiction among adolescents.

#### 4.2. Mediation of Bad Dating

Consistent with our expectations, bad dating is not only caused by bad family functions, but also will further lead to Internet addiction. Our research has further broadened the previous research on how multiple subsystems interact on adolescent Internet addiction.

Specifically, in the first section of the intermediary chain, we found that bad family functions were related to bad dating. This finding is consistent with previous studies, indicating that poor family function is an important contributing factor for adolescents to make bad companions. Those who are difficult to obtain support and warmth in their families are more likely to seek security and sense of belonging from their partners. In addition, teenagers from dysfunctional families are more likely to make bad companions than to make mainstream companions. In the second section of the intermediary chain, we found that a high level of bad dating was related to a high level of Internet addiction. This finding is consistent with the existing literature, which indicates that bad dating is an important risk factor for Internet addiction in adolescents. Adolescence is a critical period when individuals are easily influenced by their partners. Under the influence of bad partners, teenagers are more likely to perceive the benefits of Internet use and have a lower sense of efficacy to reduce Internet use, thus increasing their risk of Internet addiction. In addition, partner pressure and reinforcement may also lead to an increase in Internet addiction.

The direct relationship between family function and Internet addiction is also significant. Consistent with previous studies, the results show that poor family function is associated with higher levels of Internet addiction. When dysfunctional families cannot meet the basic psychological needs of teenagers, they may turn to the Internet to escape the real world. These findings suggest that although adolescents are increasingly interacting with environments outside their families, family factors still play an important role in the development of IAD.

#### 4.3. Adjustment of Social Sensitivity

We also examined whether the second segment of the intermediary chain is regulated by social sensitivity. The results showed that the relationship between bad dating and adolescence was

more significant in individuals with higher social sensitivity. The model emphasizes that individuals with high social sensitivity are more likely to be negatively affected by bad dating. Individuals with high social sensitivity tend to try to avoid social exclusion, which may affect their sense of self-worth. These negative emotions may increase their chances of escaping from real life. In addition, individuals with high social sensitivity pay more attention to partner acceptance, which may increase their likelihood of following deviant partner norms and indulging in the network. On the contrary, those individuals with low social sensitivity do not care much about their partners' opinions and social evaluations. These individuals are more independent in the partner group, and they are less likely to comply with partner norms or imitate the attitude and behavior of lovers. This confirms the role of social sensitivity in enhancing the risk between bad dating and Internet addiction.

#### 4.4. Practical Significance

Our findings have important practical implications. First of all, like other studies, we found that family function is an important risk factor for Internet addiction in adolescents. Therefore, parents should create a warm and loving family environment for teenagers, such as an inclusive family atmosphere, fewer family conflicts and more communication with family members. Improving the family environment plays an important role in alleviating the dependence of teenagers on the Internet. Secondly, considering that bad dating is an important risk factor to link family functions with Internet addiction, reducing bad dating will help prevent teenagers from Internet addiction. Educators and parents should provide parental support and necessary monitoring to reduce the negative dating of adolescents. Finally, young people should be encouraged to form their own views and values, enhance their self-confidence, and reduce the negative impact of the outside world.

### 5. Conclusion

In conclusion, our findings indicate that bad dating interaction is an important intermediary mechanism to link family functions with Internet addiction. Moreover, adolescences with high social sensitivity are particularly affected by bad dating interactions. These findings emphasize the important role of the interaction between family and partners, as well as the interaction between individuals and environmental factors in adolescent Internet addiction. The mediating model with regulation deepens our understanding of how family functions affect adolescents' Internet addiction.

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