The Impact of Online Electronic Games on the Moral Development of Middle School Students

Liang Xu[1], Xiuzhen Wang[2]

[1]Graduate School, Nanchang University, Nanchang, 330000, China
[2]School of Continuing Education, Nanchang University, Nanchang, 330000, China

Abstract: Online electronic games have become a major form of entertainment for adolescents, and the behavioral patterns and value orientations in these games subtly influence the moral development of adolescents. To investigate the impact of online electronic games on the moral development of middle school students, this study employed a questionnaire survey method to survey 189 middle school students who play online electronic games in Jiangxi Province. The conclusions of the study are as follows: (1) Middle school students have a relatively low level of exposure to online electronic games and a high level of moral development, but their levels of moral emotion and moral will are relatively low. (2) There are significant gender differences in exposure to online electronic games. (3) There is a significant negative correlation between exposure to online electronic games and the level of moral development. In light of these findings, this paper provides corresponding suggestions from three levels: social, school and family, and individual.

Keywords: middle school students; electronic games; moral development

1. Research Background

With the development of Internet technology, while facilitating communication and information sharing among people, it has also brought some negative impacts. The Internet delivers social information to primary and secondary school students in a multi-angle, all-round, and three-dimensional manner, affecting their ideological consciousness, moral qualities, knowledge, and behavior habits. According to the "2020 China's Research Report on Minors' Internet Behavior," the usage rate of online games among teenagers is as high as 62.5%. However, 95% of online games are designed with violent or even extremely violent elements, affecting the healthy development of teenagers and leading to a series of social problems such as truancy, campus violence, and juvenile delinquency. Based on the characteristics of adolescent physical and mental development, they are good at imitation and have strong information acceptance abilities, but they have poor self-control and screening abilities. Research shows that violent behaviors and images in online games can cause some students to experience insomnia, irritability, and even neurological disorders, which may lead to neurasthenia in the long run. Scholars such as Desi Sentana Gek Diah and Nerta I Wayan point out that online games may influence children's personalities, and games full of violent elements may make children aggressive, depressed, and lonely, leading to tense family relationships, and more seriously, resulting in children having low sociability. Most online electronic games contain violence such as attacks and shootings. Players who are addicted to virtual violence for a long time may have significant negative impacts on their academic performance and even psychological well-being.[1] Therefore, a thorough analysis of the impact of online electronic games on teenagers and the correct guidance for teenagers in using online information resources are conducive to the positive development of teenagers' morality.

2. Theoretical Basis

2.1 Kohlberg's Cognitive Development Theory

The Western moral cognitive research began to mature with Kohlberg's theory of moral development. Kohlberg believed that the development of moral cognition is a sign of moral maturity. A person's character consists of four parts: moral cognition, moral emotion, moral will, and moral behavior. Moral cognition is the premise of moral emotion, moral behavior, and moral will, and it is the

main source of moral judgment and moral behavior.[2] According to the nature of moral judgment structure, Kohlberg divides individual moral development into three levels and six stages. Kohlberg believes that the stage model of moral development reflects the general trend of individual moral cognition from low to high levels of development, which is true in all cultures. Culture and education cannot change the sequence of developmental stages, but they can accelerate, delay, or prevent individual moral development.[3]

2.2 Bandura's Social Cognitive Theory

Social cognitive theory originates from Bandura's social learning theory. According to social learning theory, individuals imitate and observe the behaviors and actions of game characters. If there are violent behaviors in online electronic games, it will increase the individual's observation and imitation, and strengthen the opportunity for violent behavior in the game. In most cases, players obtain rewards by defeating enemies, which reinforces violent behavior in players.[4] Subsequently, Bandura (2001) further advanced this theory, emphasizing the process of social information processing, which is between the environment, individual personality, and behavioral outcomes. It also emphasizes the impact of some experiences and related knowledge structures acquired through observational learning on information processing, rather than just the relationship between broad stimuli and responses. Teenagers learn specific knowledge from online electronic games, and this knowledge forms a fixed structure, which influences their information processing and moral cognition.[5]

3. Research Subjects and Methods

3.1 Research Subjects

Data Source. The subjects of this study were junior high school students from grades 7 to 9 in Jiangxi Province who play online video games. A total of 250 questionnaires were distributed for this survey. After excluding students who do not play online video games, 189 responses were collected, resulting in an effective response rate of 75.6%, including 89 males and 100 females. The specifics are as shown in Table 1.

Table 1: Basic Information of Participants (N=189)

Variable	Category	Number of People	Effective Percentage
Gender	Male	89	47.1%
	Female	100	52.9%
Grade	Seventh Grade	47	25%
	Eighth Grade	91	48%
	Ninth Grade	51	27%
Whether an Only Child	Yes	72	38%
	No	117	62%

3.2 Research Methods

This study employed a questionnaire survey method, distributing the "Online Video Game Exposure Scale" and the "Junior High School Students' Moral Development Level Scale" offline. The questionnaire data were organized, and SPSS 23.0 was used to analyze the results, exploring the connection between the extent of online video game exposure and the moral development level of junior high school students.[6]

Online Video Game Exposure Scale. Anderson & Dill (2000) developed a scale for exposure to violent video games, [7] which has been widely applied domestically after continuous translation and revision, demonstrating high reliability and validity. [8-9] Inspired by Anderson & Dill's scale, this paper developed its own Online Video Game Exposure Scale, utilizing a favorite listing method for assessment, which includes frequency and duration among its evaluated content. The scale has been tested for internal consistency with an alpha coefficient value of 0.918 and a KMO value of 0.842, indicating high reliability and validity. Higher scores indicate greater exposure to online video games by the subject.

Junior High School Students' Moral Development Level Scale. The moral development of adolescents is a dynamic process. Moral development involves an individual's understanding of social

ethical rules and norms, forming moral cognition, moral emotions, and moral behaviors, [10] and is the result of the harmonious development of knowledge, affection, intention, and action. The moral development of any individual involves these four aspects. The "Junior High School Students' Moral Development Level Questionnaire" developed for this paper is divided into four dimensions: moral cognition, moral emotion, moral will, and moral behavior, to study the impact of online video games on these four aspects of junior high school students. The questionnaire contains 16 questions, uses a Likert-type 5-point scoring method, and higher scores indicate a higher level of moral development. After testing, the scale's internal consistency alpha coefficient value is 0.824, and the KMO value is 0.774, indicating good reliability and validity, suitable for analyzing the moral development level of junior high school students.

4. Analysis of the Current Situation of Junior High School Students' Exposure to Online Video Games and Their Moral Development Level

4.1 Current Status of Junior High School Students' Exposure to Online Video Games and Their Moral Development Level

A descriptive statistical analysis was conducted on the scores of junior high school students' exposure to online video games. The results show that the average score of exposure to online video games is 2.89, which is below the overall average level. The overall average score of junior high school students' moral development level is 3.73, which is above the overall average level. The dimensions of moral development from high to low are moral cognition, moral behavior, moral emotion, and moral will, with moral emotion and moral will significantly lower than the other dimensions. Among the games reported by the 189 participants, junior high school students frequently play games like Honor of Kings, Peace Elite, and Genshin Impact. These games all involve violent behavior.As shown in Table 2:

Table 2: Descriptive Analysis of Junior High School Students' Exposure to Online Video Games and Their Moral Development Level

	N	Minimum Value	Maximum Value	M±SD
Exposure to Video Games	189	1	5	2.89±0.74
Moral Development	189	1	5	3.73±0.47
Moral Cognition	189	1	5	3.82±0.61
Moral Emotion	189	1	5	3.69±0.64
Moral Will	189	1	5	3.60±0.69
Moral Behavior	189	1	5	3.79±0.57

4.2 Analysis of Gender Differences in Junior High School Students' Exposure to Online Video Games Index

Using gender as the independent variable and the scores of exposure to online video games as the dependent variable, an independent samples T-test was conducted to compare the mean scores of online video game exposure between male and female groups. The results showed that there is a significant difference in online video game exposure between genders (p=0.001<0.01), with males having a significantly higher exposure index score than females, indicating that boys are more inclined to play online video games than girls(Table 3).

Table 3: Sex difference analysis of online video game exposure index for junior high school students

	Gender	M±SD	t-value	Significance Level
Exposure to Video Games	Male	3.15±0.65	3.461**	0.01
	Female	2.66±0.75		
**. At the 0.01 level (two-tailed), the correlation is significant.				
*. At the 0.05 level (two-tailed), the correlation is significant.				

4.3 Analysis of the Relationship Between Junior High School Students' Exposure to Online Video Games and Their Level of Moral Development

As shown in Table 4 , there is a highly significant negative correlation between the degree of exposure to online video games and the level of moral development, moral cognition, moral emotion, and moral will ($p<0.01$), and a significant negative correlation with moral behavior ($p<0.05$). This indicates that there is a close relationship between junior high school students' exposure to online video games and their level of moral development.

Table 4: Correlation Analysis Between the Degree of Exposure to Online Video Games and Moral Development

	Moral Cognition	Moral Emotion	Moral Will	Moral Behavior	Level of Moral Development
Exposure to Video Games	-0.268**	-0.434**	-0.294**	-0.252*	-0.418**
**. At the 0.01 level (two-tailed), the correlation is significant.					
*. At the 0.05 level (two-tailed), the correlation is significant.					

5. Conclusions and Recommendations

5.1 Conclusions

General status of junior high school students' online video games and moral development level. The study found that the average score for junior high school students' exposure to online video games is 2.89, which is below the overall average level. The overall average score of moral development is 3.73, which is above the average level, but moral emotion and moral will are significantly lower than other dimensions. The results indicate that a considerable number of students are indifferent in moral emotion, lack empathy, and have poor ability to empathize with others in pain. Furthermore, the average score for moral will is the lowest, indicating that some junior high school students have poor self-control and weak moral will, making it difficult for them to persevere and remain determined in the face of challenges.

Group differences in exposure to online video games among junior high school students. The study shows significant gender differences in exposure to online video games, with boys having significantly higher scores than girls, indicating that boys play online video games more frequently. Some girls surveyed do not play online video games at all. From a biological and hormonal perspective, there are differences in the way boys and girls are raised in families, with parents more likely to let boys choose toys with aggressive and competitive gender characteristics (such as toy guns), hence boys' preference for online video games.

The relationship between online video games and moral development levels among junior high school students. There is a significant negative correlation between exposure to online video games and moral development levels among junior high school students. The study shows that the more frequently students are exposed to online video games, the lower their moral level, and vice versa, indicating that online video games have a negative impact on adolescents' moral views.

5.2 Recommendations

5.2.1 Strengthen legislation and strict enforcement, and industry compliance

The conclusion indicates that more exposure to online video games has a significant negative impact on the moral development level of junior high school students. During this critical period of life development, their worldviews, outlooks on life, and value systems are constantly forming and evolving. Frequent exposure to online video games can lead to addiction, potentially leading to emulation and learning of undesirable behaviors from the virtual world into the real world. Therefore, relevant departments should strengthen supervision over online games from the aspects of social morality and responsibility, establish and improve relevant laws and regulations, strengthen the review and screening of the gaming industry, clarify its duties and requirements, especially resolutely resist or ban vulgar, bloody, and violent online games. On one hand, new online violent games should be strictly prohibited from being launched, and on the other hand, game developers and operators should be given deadlines for rectification, taking down games with vulgar, bloody, and violent content. Moreover, the time provided to minors for online gaming services should be strictly limited. The online gaming

industry should comply with social moral norms, actively self-correct and self-inspect, consciously abide by laws and regulations, and assume corresponding social responsibilities.

5.2.2 School and family education management

Schools should keep pace with the times and strengthen moral education. They should actively change traditional educational concepts, adopt flexible and varied teaching methods, actively engage students, encourage participation in group activities, design moral education content within activities, strengthen education on socialist core values, and subtly influence students to enhance their moral qualities. Cultivate students' self-control and enhance moral willpower. Junior high school students, due to their not yet fully developed personality systems, are easily influenced by external factors. Educators should strengthen the exercise of students' moral willpower, cultivate stable emotions, enhance moral emotion education, and guide students to care for, trust, and respect each other, considering others' perspectives in real-life situations. Parents should act as role models, continuously learn knowledge, establish correct moral concepts, create a harmonious and democratic family environment, learn to communicate with their children, provide moral education, and offer guidance when children face problems. In summary, schools and families should focus on adolescents' online literacy and moral development, educate, supervise, and guide students to reasonably control their gaming time, and stay away from online video games with violent content.

5.2.3 Individuals should strengthen self-control abilities

Students initially engage with games out of curiosity and for entertainment, but most junior high school students have poor self-control and may unknowingly become addicted, negatively affecting their studies and physical and mental health over time. However, external factors only play a supporting role; the decisive factor is the individual's subjective initiative. Therefore, individuals should resist temptation, strive to cultivate strong willpower, strengthen their moral behavior, learn to correctly identify the pros and cons of online games, control their gaming time, seriously study legal knowledge, establish correct internet concepts, surf the internet responsibly, enhance self-protection awareness, develop personal interests, actively participate in social activities, cultivate good behavior habits, read more, think more, continuously improve their moral qualities and cultural accomplishments, and establish correct views on life, the world, and values.

Acknowledgement

References

[1] Luo Yun, Chen Wenbin. The Impact of Online Violent Games on Adolescents' Moral Sensitivity - The Moderating Role of Self-Control [J]. Journal of Changchun Education Institute, 2021(11):20.
[2] Xu Yawen. The Impact of Online Violent Games on the Moral Development of Juveniles and Countermeasures [D]. Nanchang University, 2018.
[3] He Huali, Li Jiyang. The Dissolution of Adolescents' Subjectivity by Online Violent Games and Countermeasures [J]. Contemporary Youth Research, 2019(358):103.
[4] Wang Xin, Li Hanbing. Discussing the Impact of Online Games on College Students' Health from the Perspective of Traditional Chinese Medicine [J]. Science Education Article Collects, 2021(14):131.
[5] Desi Sentana Gek Diah, Nerta I Wayan,Suwindia I Gede, Mahendradatta I Putu Oka Agus. The Impact Of Online Game On The Children's Character Change[J]. Jurnal Penjaminan Mutu, 2019,5(2).
[6] Teng Zhaojun. The Impact of Violent Video Games on Adolescents' Moral Cognition [D]. Southwest University, 2018.
[7] Ma Wenrui. Study on the Relationship Between Children and Adolescents' Exposure to Online Violent Games and Moral Disengagement, Academic Cheating Behavior [D]. Sichuan Normal University, 2020.
[8] Lin Chongde. Dictionary of Psychology [M]. Shanghai: Shanghai Education Publishing House, 2003:194.
[9] Liu Jiliang. Principles of Moral Education [M]. Beijing: Higher Education Press, 2010:129.
[10] Zhang Xiaobing. Regional and Foreign Experiences in Protecting the Rights and Interests of Minors against Harmful Online Information [J]. Study on Prevention of Juvenile Delinquency, 2017(4):29-36.