



## RESEARCH ARTICLE

## An Exploration of Digital Media Communication Characteristics and Family Factors of Cyberbullying among Chinese Young People in the Post-Epidemic Era

Shen Yu <sup>1\*</sup>, Siti Nur Izyandiyana Binti Ab Hadi <sup>2</sup><sup>1,2</sup> Universiti Teknologi MARA, Shah Alam, Malaysia<sup>1</sup>Guangdong Dance and Drama College, FoShan, China**ARTICLE INFO**

Received: Oct 21, 2023

Accepted: Dec 17, 2023

**Keywords**

Post-epidemic era  
Cyberbullying  
Digital media  
Adolescents  
Family factors  
Influence mechanisms

**\*Corresponding Author:**

yushen@xmphdss.cn

**ABSTRACT**

With the popularization of social media and instant messaging tools, the speed and scope of information dissemination have increased significantly, which provides more opportunities for cyberbullying. This study analyzes and investigates the digital media communication characteristics of cyberbullying among young people and family factors. A random sampling method was used to recruit participants in the study. Data analysis tools are statistical software and programming languages commonly used for data analysis in social science research. This study builds on existing research to more comprehensively examine the relationship between cyberbullying and young people in China. The results show that there is also a significant difference between academic performance and cyberbullying among college students from different family backgrounds ( $F = 3.81, p < 0.05$ ). The overall trend is that as college students' academic performance decreases, students' cyberbullying behaviors become more serious. College students in single-parent families felt parental monitoring much stronger than in two-parent families. The difference between college students' parents' literacy level and the overall level of parental monitoring was significant, and the overall trend was that the higher the literacy level of college student's parents, the higher the level of parental monitoring of their children. This is shown by the significant difference between the father's literacy ( $F = 4.66, p < 0.001$ ) and the mother's literacy ( $F = 5.83, p < 0.001$ ) on the overall level of parental monitoring

**INTRODUCTION**

In the post-epidemic era, Chinese young people are facing serious challenges from the problem of cyberbullying. The so-called post-epidemic era refers to an era where epidemics come and go, coexisting

with human beings for a long time in the future, with small-scale outbreaks at any time, while having a far-reaching impact on the economy and life. So there will be a big change in people's thinking and living habits. The emergence of social distance makes people shift more from offline activities to online. Of the epidemic of semi-closed, family, and many

other factors, the new crown epidemic brought the amount of the "information epidemic" that cannot be ignored. In the outbreak of the epidemic so far, it has been like a shadow on society, and individual thought has also caused adverse harm (Gan et al., 2017; Hinduja and Patchin, 2017; Li, 2007). In the post-epidemic era, digital media communication is closed, hidden, and novel to a certain extent, and these characteristics have a profound impact on the problem of cyberbullying among young Chinese people in the post-epidemic era. With the popularization of social media and instant messaging tools, the speed and scope of information dissemination have increased significantly, which provides more opportunities for cyberbullying.

## **LITERATURE REVIEW**

To explore the characteristics of digital media communication and family factors of cyber violence among Chinese adolescents (Hinduja and Patchin, 2010). First, virtual anonymity in digital media communication features makes cyberbullying more likely because attackers can hide their true identities (Ybarra and Mitchell, 2004; Hood and Duffy, 2018). In addition, how media content is presented and disseminated may inspire young people's desire to engage in cyberbullying, such as spreading inflammatory remarks and spoofing. Second, family factors play an important role in cyberbullying among young people in China (Mishna et al., 2012). Family education and family environment have a profound influence on young people's values and behavior patterns. Lack of attention and guidance from parents or guardians, as well as the presence of violence and conflict in the family, may lead young people to seek emotional catharsis and attack others in cyberspace (Kowalski and Limber, 2013). In addition, families play a key role in developing young people's awareness and skills in the appropriate use of the Internet and social media (Hinduja and Patchin, 2013).

At the beginning of 2022, the China Internet Network Information Centre released the 49th Statistical Report on Internet Development in China. The report shows that by the end of 2021, the number of Internet users in China had reached 1.032 billion, an increase of 42.96 million compared with 2020, and the Internet

penetration rate was as high as 73.0% (Beran and Li, 2005; Ortega et al., 2009). The report pointed out that the Internet use behavior of China's Internet users has new characteristics: the per capita Internet time keeps growing. By the end of 2021, China's Internet users will spend as much as 28.5 hours per person per week on the Internet, an increase of 2 or 3 hours from 2020 (Ortega et al., 2009). The Internet is like a double-edged sword; it brings people richer discussion space and a more convenient lifestyle (Vandebosch and Van Cleemput, 2009). At the same time, cyberbullying also occurs from time to time, bringing double pressure on social security and the management of cyber order. The tragedy of the Liu Xuezhou incident, the "Kafka Muffin" incident, and some other typical cyber incidents have made all walks of life pay more and more attention to the problem of cyberbullying (Slonje et al., 2013; Connolly, 2020; Espelage et al., 2012; Kiriakidis and Kavoura, 2010). For teenagers, the Internet plays an important role in their daily lives, becomes necessary, and is the primary way to communicate with the outside world and obtain information. A "network world" is built in real life, in which they can learn about the things that happen around them every day and pay attention to the international events happening on the other side of the world. Using new media such as the Internet, they can store clothes without leaving home, order takeout when they are hungry, travel without worrying about getting lost thanks to electronic maps, and even study on the Internet and interact with their teachers (Juvonen and Gross, 2008; Hinduja and Patchin, 2017). Whether it is entertainment or communication with others, it is convenient and fast. Things that seem to be solved face-to-face in traditional society can be easily accomplished through the Internet today. However, the Internet is a "double-edged sword" for adolescents, and the Internet and other new media in constructing a convenient and fast network world for adolescents also bring adolescents into a difficult situation.

In the context of the post-epidemic era, digital media communication has taken on a closed, hidden nature and a certain degree of novelty, exposing young Chinese people to the serious challenge of cyber violence. Although the popularity of social media and instant messaging tools has provided broader

channels for information dissemination, it has also provided more opportunities for cyber violence. Although studies have focused on the characteristics of digital media communication and the problem of cyber violence, they have tended to overlook the influence of family factors on the problem of cyber violence among young people. As an important environment for individual growth, the family profoundly impacts young people's mental health, social adaptation, and behavioral patterns. Therefore, this study aims to explore the association between digital media communication characteristics of young people's cyber violence problems and family factors and to fill this research gap. This study will conduct an in-depth exploration of the problem of young people's online violence through qualitative and quantitative research methods. First, we will collect relevant data, including young people's behavioural patterns on social media and the phenomenon of cyber violence, and use questionnaires and interviews to understand the influence of family factors on the problem of cyber violence among young people. In the data analysis stage, we will use statistical analysis to analyze the collected data to reveal the association between digital media communication characteristics and family factors. In addition, we will utilize text analysis techniques to perform thematic categorization and sentiment analysis of cyber-violence discourse to gain insight into the substance and impact of the cyber-violence problem (Hinduja and Patchin, 2017; Ybarra et al., 2007; Smith et al., 2008).

Especially for the youth group, cyberbullying can also lead them to develop anorexia, frequently skip classes, lose interest in learning, and eventually decline in academic performance or give up their studies directly. In the face of such a serious social problem, families, schools, the government, and other social organizations have responded to the problem and put it into action, but with little effect and even exacerbate the seriousness of the problem. The family factor has the greatest influence, but its influence on young people is insufficient (Matingwina, 2018; Papa, 2015; Jiow et al., 2017; Carey, 2013; Muto et al., 2018). Under the influence of family factors, on the one hand, some administrators are exhausted and at their wits' end to prevent and combat cyberbullying. On the other hand, some adolescents are impregnated

by cyberbullying and enter the circle of "bystander-bully-bully-bully," which is the most serious problem. On the other hand, young people who have been infiltrated by cyberbullying have entered the "bystander-bully-bully" circle, which ultimately causes the governance of cyberbullying to fall into the "involution" dilemma. The family is where life begins for adolescents and plays an important role in individual growth. Therefore, family atmosphere has always been the focus of researchers, and it is also the preferred way to find ways to prevent and manage cyberbullying. In the study of adolescent cyberbullying, most scholars will argue from the aspects of parenting style, parent-child relationship, and family functioning, thus concluding that family factors are also considered to be one of the key factors. As a result, the governance of cyberbullying has been "internalized". It has been caught in the predicament of duplicated investment and waste of governance resources, as well as the negative, weak, or even deteriorating governance environment (Luo et al., 2022; Owusu and Zhou, 2015; Tang et al., 2013; Wang et al., 2020). Therefore, it is feasible to take the family factors of parental monitoring and relatives' support as an entry point to break the dilemma of "internalization" of governance and explore the countermeasures to prevent and control cyberbullying among adolescents.

## A DISCUSSION OF RESEARCH METHODOLOGIES

Determining research methods is an important way and means to study the analysis and discussion of adolescent cyber violence. It is more of a research tool that the researcher establishes based on generalizing and reflecting on the research activity and gradually forms through repeated practice tests. The research methodology of this paper includes data analysis as a criterion to classify the research method into qualitative research and quantitative research (Tang et al., 2013). By utilizing the respective characteristics of quantitative and qualitative research, balancing the advantages and disadvantages, and utilizing the principle of complementarity, the research process and the results are more scientific and reasonable. This study utilizes both quantitative and qualitative research to not only analyze the concepts and influencing factors of parental monitoring, teacher

support, and cyberbullying among junior high school students but also to quantitatively analyze the relationship between parental monitoring, teacher support, and cyberbullying among junior high school students based on this study. The following research methods (Wang et al., 2020). Were specifically adopted:

#### **Interdisciplinary analysis method**

Interdisciplinary research and multidisciplinary integration. Using the knowledge of economics, law, management, education, and other multidisciplinary cross-comprehensive analyses, comparative research from a multidisciplinary perspective draws on the research of other disciplines to fully improve the understanding of the object of study. It lays a solid foundation for the study's comprehensiveness.

#### **Literature analysis method**

By reviewing domestic and international literature, papers, writings, reports, laws and regulations on parental monitoring, teacher support, and cyberbullying among junior high school students, and other research materials, we organize, categorize, and analyze them to provide a theoretical basis and data support for this study.

#### **Questionnaire survey method**

To explore the relationship between parental monitoring, teacher support, and junior high school students' cyberbullying behaviour, this study investigates and analyzes junior high school students' perceptions of parental monitoring and teacher support, as well as whether or not they have ever committed cyberbullying behaviours using a questionnaire survey to grasp the basic situation of junior high school students and the problem of cyberbullying, as well as to provide data support for the present study, which intends to use professional data analysis software SPSS 26.0 and AMOS 24.0 to statistically analyze the data obtained from the survey, involving exploratory factor analysis, validation factor analysis, common method bias test, descriptive statistics, independent sample t-test, one-way analysis, correlation analysis, linear regression analysis, and interaction effect test for the questionnaire data.

In recent years, with the popularization of the Internet, cyberbullying has gradually become a social problem of great concern. Especially in the post-

epidemic era, the impact of cyberbullying on young people has become more and more serious. This study aimed to explore the impact of cyberbullying in the post-epidemic era on the mental health of Chinese college students and to analyze its underlying psychological mechanisms. A random sampling method was used to recruit participants to address this question. For data analysis tools, statistical software and programming languages commonly used for data analysis in social science research were selected. This study builds on existing research to more comprehensively examine the relationship between cyberbullying and Chinese adolescents, thus ensuring the scientific validity and rigor of the study. Five thousand college students were taken from Chinese universities as the research subjects. During the study, we collected data through an online survey, and a total of 4,000 college students participated in our survey. Although we cannot determine the response rate, we will assess the sample's representativeness by comparing the differences in demographics and related variables between participants and non-participants. In addition, we will utilize existing relevant findings and research tools to validate and expand upon our findings (Wang et al., 2020; Owusu and Zhou, 2015). The study of cyberbullying in the family environment also starts with the parenting style. Although parental monitoring belongs to parenting styles, few scholars have studied cyberbullying solely from the aspect of parental monitoring. Parenting styles are broader, and their contents are more complicated. Using this as a variable will only make the study lose its focus and cannot be analyzed in depth. Instead, this study takes parental monitoring in parenting styles as an entry point to study the relationship between parental monitoring and cyberbullying to more thoroughly analyze the relationship between college students' cyberbullying behavior and parental monitoring.

### **QUESTIONNAIRE DESIGN OF FAMILY FACTORS AND ADOLESCENT CYBERBULLYING IN A POST-EPIDEMIC CONTEXT**

Scientific research is like a project, and the research design is the blueprint for the whole project's construction. As the "navigator" of the research, the research design guarantees the smooth progress of

the research. Therefore, the object of this study, as well as the specificity of the era and the complexity of cyberbullying, highlight the special status and role of the questionnaire design in this research design. The work is done with the best tools. In the post-epidemic era, there are two ways to design a questionnaire for online violence that addresses the characteristics of online communication and family influences. One is to follow the existing mature questionnaires, and the other is to create a self-developed questionnaire according to the research content. These two approaches have their own merits; the mature questionnaire has better reliability and validity, while the self-developed questionnaire, according to the content of the study, is more targeted and applicable. This study combines the advantages of the above two approaches. Based on the mature questionnaire of the predecessors, we developed a multidimensional questionnaire to measure the family factors, the characteristics of network communication, and the cyberbullying

behavior of college students according to the specific context of the study to emphasize the characteristics of the study, and to be more relevant to the research context and the study. The questionnaire is more relevant to the research context and the purpose of the study.

**Family factors**

Based on the Hakan Statin Parental Monitoring Scale (Muto et al., 2018), combined with the characteristics of parental monitoring in traditional Chinese families in China, the Parental Monitoring Scale was divided into three dimensions: parental knowledge, autonomy monitoring, and restrictive monitoring. The scale consists of 3 dimensions and 12 items. The scale is based on a five-point scale ranging from 1 to 5, from "not at all" to "completely". The mean score of the restrictive monitoring items in the scale indicates parental control over the child's behavior, with higher scores indicating a higher level of parental control over the child, as shown in Table 1.

**Table 1: Household dimensions and survey situation items**

different angle	Number and subject matter
Degree of awareness	F1. My parents know which friends I have F2. my parents know where I go often F3. My parents know about my hobbies and interests F4. My parents know how I am doing in all subjects.
Autonomous monitoring	F5. My parents trust me and never interfere with my friendships. F6. My parents allow me to allocate my study and leisure time independently. F7. my parents encourage me to participate in extracurricular activities that interest me F8. my parents allow me to go where I like and they don't worry too much about it
Restricted Monitoring	F9. Parents often make decisions for me without consulting me F10. my parents make a lot of family rules and require me to follow them unconditionally F11. My parents want me to do what they want in life F12. my parents force me to conform to their ideas when they don't see eye to eye on something

**Cyber bullying**

With the continuous deepening of cyberbullying research (Luo et al., 2022; Tang et al., 2013; Wang et al., 2020; Owusu and Zhou, 2015), to further understand the specific form and current level of cyberbullying behavior, scholars are committed to exploring the structure of cyberbullying behavior and have developed corresponding measurement tools based on different conceptual theories, with cyberbullying questionnaires as the primary focus. By comparing the existing cyberbullying scales at home and abroad, we can comprehensively analyze

the existing scales according to the number of scale dimensions, which can be classified into one-dimensional, two-dimensional, three-dimensional, and four-dimensional types of cyberbullying scales. Comparing the existing cyberbullying scales based on the content and purpose of this study, the author, based on the physical field of college students, breaks down the cyberbullying behaviour of college students into three dimensions: cyber denigration, cyber exclusion, and cyber revelation, taking into full consideration the reality of college students' cyberbullying. Except for special cases, the three

dimensions of cyber denigration, cyber rejection, and cyber disclosure include the cyberbullying behaviors of college students. The scale consists of 12 items on a five-point scale ranging from "never" to "always". The scale consists of 12 items, including "I have spread rumours about a classmate on the Internet", and 4 items, and "I have kicked a classmate out of a WeChat, QQ, or game group on the Internet" and 4 items, including "I have kicked a classmate out of a WeChat, QQ, or game group on the Internet for no

reason" and 4 items. The Internet rejection behavior includes four items: "I have kicked a classmate out of a WeChat, QQ, or game group for no reason";, and the Internet revealing behavior includes four items: "I have intentionally disclosed a classmate's personal information on the Internet". The average score of each item in the questionnaire indicates the level of cyberbullying behavior, and the higher the score, the more frequent the cyberbullying behavior of college students, as shown in Table 2.

**Table 2: Dimensions of cyberbullying and survey items**

different angle	Number and subject matter
cyber denigration	W1. I have given a classmate a bad nickname on the Internet W2. I have spread rumors about a classmate on the Internet W3. I have insulted a classmate on the Internet W4. I have laughed at a classmate's shortcomings on the Internet
network exclusion	W5. I have "kicked" a classmate out of a WeChat, QQ, or game group on the Internet for no reason. W6. I have ostracized a classmate on the Internet by restricting or blackballing him or her. W7. I have isolated a classmate on the Internet from other classmates. W8. I have promised other students to alienate a classmate online
cyber denunciation	I have logged into a classmate's WeChat or QQ account without authorization. W10. I have stolen a classmate's personal information over the Internet. W11. I have intentionally disclosed the personal information of a classmate on the Internet W12. I have spread an embarrassing story about a classmate on the Internet.

**AN ANALYTICAL STUDY OF FAMILY FACTORS AND CYBERBULLYING AMONG ADOLESCENTS**

In this study, we used maximum variance principal component analysis to conduct exploratory factor analysis of the Family Monitoring Scale, in which the total variance explained and the rotated component

matrix are shown in Table 3. The analysis of the Family Monitoring Scale yielded three principal component factors, and the cumulative contribution of the three principal component factors to the 12 indicator levels was 66.491%, which is more than 60.000%, and therefore can reflect the level of parents' monitoring of their children in a more objective way.

**Table 3: Total variance explained for parental monitoring scale**

Ingredient	Grand total	Percentage of variance	Cumulative %
1	4.972	41.431	41.431
2	1.926	16.047	57.478
3	1.082	9.013	66.491
4	0.66	5.504	71.995
5	0.528	4.396	76.391
6	0.506	4.214	80.605
7	0.48	3.998	84.603
8	0.449	3.743	88.346
9	0.404	3.365	91.711
10	0.374	3.115	94.827
11	0.327	2.729	97.555
12	0.293	2.445	100

From the rotated component matrix, it can be seen that the loadings of the factors are all above 0.5, which indicates that their convergence is good. Item F1-F4 corresponds to Principal Component Factor 1, item

F5-F8 corresponds to Principal Component Factor 2, and item F9-F12 corresponds to Principal Component Factor 3, which is completely consistent with the preset content in Table 4.

**Table 4: Rotated component matrix of the family monitoring scale**

different angle	Matter No.	Ingredient factor 1	Constituent factor 2	Constituent Factor 3
Degree of awareness	F1.	0.757	/	/
	F2.	0.807	/	/
	F3.	0.703	/	/
	F4.	0.723	/	/
Autonomous monitoring	F5.	/	0.763	/
	F6.	/	0.781	/
	F7.	/	0.696	/
	F8.	/	0.78	/
Restricted Monitoring	F9.	/	/	0.774
	F10.	/	/	0.82
	F11.	/	/	0.812
	F12.	/	/	0.822

Exploratory factor analysis of the cyberbullying scale was conducted using maximum variance principal component analysis, in which the total variance explained and the rotated component matrix are shown in Table 5. and Table 6. The analysis of the cyberbullying scale yielded three principal component factors, and the cumulative contribution of the three principal component factors to the 12 indicator levels was 70.181%, which reached more than 60.000%, so it can reflect the occurrence level of cyberbullying

behavior of college students more objectively. From the rotated component matrix, it can be seen that the loadings of the factors are all above 0.5, which indicates that their convergence is good. Item W1-W4 corresponds to Principal Component Factor 1, item W5-W8 corresponds to Principal Component Factor 2, and item W9-W12 corresponds to Principal Component Factor 3, which is completely consistent with the preset content.

**Table 5: Explanation of the total variance of the cyberbullying Scale**

Ingredient	Grand Total	Percentage of variance	Cumulative %
1	6.23	51.919	51.919
2	1.311	10.927	62.846
3	0.88	7.335	70.181
4	0.684	5.703	75.884
5	0.568	4.731	80.616
6	0.516	4.29	84.912
7	0.435	3.628	88.541
8	0.407	3.391	91.932
9	0.34	2.283	94.762
10	0.272	2.263	97.002
11	0.229	1.905	98.832
12	0.128	1.068	100

**Table 6: Rotated component matrix for cyberbullying scale**

different angle	Matter No.	Ingredient factor 1	Constituent factor 2	Constituent Factor 3
Degree of awareness	W1.	0.777	/	/
	W2.	0.744	/	/
	W3.	0.787	/	/
	W4.	0.673	/	/
Autonomous monitoring	W5.	/	0.659	/
	W6.	/	0.731	/
	W7.	/	0.78	/
	W8.	/	0.792	/
Restricted Monitoring	W9.	/	/	0.808
	W10.	/	/	0.721
	W11.	/	/	0.705
	W12.	/	/	0.575

Validated factor analysis was conducted to obtain the structural validity of the scales for cyberbullying, parental monitoring, and teacher support scales for college students using Amos23.0 statistical analysis software, and the results are shown in Table 7. After analysis, the chi-square degrees of freedom ratios of  $x^2 /df$  for cyberbullying, parental monitoring, and teacher support scales of college students were 1.971, 2.612, and 1.572 respectively, which were all less than

3, and the RMSEA values were all less than 0.08, and the relative fit indices of each item were all greater than 0.9. The results of the fit performance were good. Taken together, the model fit for each scale of cyberbullying and home monitoring support meets the requirements and has good structural validity. The path diagram of the structural model is shown in Figure 1.

**Table 7: Table of coefficients for the overall fit**

Model fit coefficient	$x^2 /df$	RMSEEEA	CFI	NFI	IF	TAG
Internet Violence Scale	1.971	0.079	0.916	0.908	0.916	0.891
Home Monitoring Scale	2.612	0.06	0.965	0.953	0.966	0.955



**Figure 1: Simulation of the path of cyberbullying transmission and home monitoring**

**Influence of gender and family educational performance on cyber-violence**

To study whether gender and academic performance of adolescents produce significant differences in home monitoring. The coefficient table, according to Table 8, was analyzed and calculated. The results are shown in Table 9. It shows that the

overall level of cyberbullying is significantly different among college students of different genders ( $t = 3.36, p < 0.001$ ), which is manifested by the fact that boys' cyberbullying behaviors are significantly higher than girls' cyberbullying behaviors compared to those of girls. The dimensions of cyberbullying were significantly different among college students



of different genders. For in cyber denigration, boys' cyber denigration behavior was significantly higher than girls' compared to girls' ( $t = 3.45, p < 0.001$ ); in cyber ostracism, boys' cyber ostracism behavior

was significantly higher than girls' ( $t = 2.38, p < 0.01$ ); and lastly, in cyber revealing. Boys' online revealing behaviour was also significantly higher than girls' ( $t = 2.69, p < 0.01$ ).

**Table 8: Table of coefficients for the overall fit**

Model fit coefficient	$\chi^2 / df$	RMSEEEA	CFI	NFI	IF	TAG
Internet Violence Scale	1.971	0.079	0.916	0.908	0.916	0.891
Home Monitoring Scale	2.612	0.06	0.965	0.953	0.966	0.955

In the same way, there was also a significant difference between academic achievement and cyberbullying among college students from different family backgrounds ( $F = 3.81, p < 0.05$ ), and the overall trend was that as college students' academic achievement decreased, students' cyberbullying

behaviors became more serious. In addition to the cyber unveiling, cyber denigration ( $F = 4.66, p < 0.01$ ) and cyber ostracism ( $F = 3.83, p < 0.05$ ) were significantly different among college students with different academic achievements.

**Table 9: Differences in gender and educational achievement among family factors**

	Variant	Degree of awareness	Autonomy	Restriction monitoring	Home monitoring
distinguishing between the sexes	male	4.04±0.81	3.81±0.97	2.47±1.09	3.44±0.51
	women	4.10±0.78	3.89±0.91	2.29±1.00	3.43±0.47
own performance	T	-1.13	-1.15	2.25*	0.25
	① Excellent	4.30±0.77	4.02±0.95	2.42±1.07	3.58±0.52
	② Good	4.11±0.74	3.88±0.90	2.34±1.02	3.44±0.46
	③ Poor	3.77±0.89	3.64±1.02	2.46±1.12	3.29±0.52
	F	16.47***	5.73***	0.91	11.90***
	LSD	①>②>③	①>②>③	--	①>②>③

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

**Table 10: Differences in family factors between only children and family patterns**

	Variant	Degree of awareness	Autonomy	Restriction monitoring	Home monitoring
An only child	be	4.12±0.76	3.88±0.92	2.44±1.15	3.48±0.49
	clogged	4.05±0.81	3.84±0.95	2.34±0.98	3.41±0.48
	t	1.25	0.55	1.21	1.92
Family patterns	two-parent family	4.12±0.77	3.89±0.92	2.32±1.02	3.44±0.48
	single parent family	3.66±0.89	3.53±1.06	2.88±1.19	3.36±0.50
	t	4.59***	3.09**	-4.26***	1.41

As can be seen from Table 10. It can be seen that there is no significant difference between parental monitoring and its dimensions on whether college students are only children or not ( $p > 0.05$ ); in contrast, there is a significant difference in parental monitoring in the degree of knowledge ( $t = 4.59, p < 0.001$ ), autonomy monitoring ( $t = 3.09, p < 0.01$ ), and restrictive monitoring ( $t = 4.26, p < 0.001$ ). These

dimensions were all significantly different in college students' family patterns. The results indicated that college students living in single-parent families significantly felt parental monitoring much stronger than two-parent families.

To investigate whether the literacy of parents of college students produces significant differences in parental monitoring, a one-way ANOVA was used

to test the difference between the evaluation of the literacy of parents of college students in parental monitoring and its dimensions and the specific results shown in Table. 11.

**Table 11: Differences in parental literacy among family factors**

	Variant	Degree awareness	of	Autonomy	Restriction monitoring	Home monitoring
Paternity	① Graduate students and above	4.16±0.95		4.08±0.95	2.46±1.34	3.57±0.68
	② Bachelor's Degree	4.27±0.69		3.99±0.89	2.32±1.07	3.53±0.41
	③ Secondary or college	4.19±0.77		3.91±0.98	2.28±1.00	3.46±0.43
	④ High school and below	3.93±0.81		3.76±0.93	2.44±1.03	3.38±0.51
	F	9.02***		3.26*	1.22	4.66***
	LSD	②,③>④		②>④	--	①,②>④
Motherhood	F	9.59***		3.97**	2.54	5.83***
	LSD	②>③>④		①,②>④	--	①,②>③>④

According to Table. 11, the results show a significant difference between the parents' literacy level of parents of college students and the overall level of parental monitoring, and the general trend is that the higher the literacy level of parents of college students, the higher the level of monitoring of their children. This is shown by the significant difference between the father's literacy ( $F = 4.66, p < 0.001$ ) and the mother's literacy ( $F = 5.83, p < 0.001$ ) in the overall level of parental monitoring and the significant difference between the father's literacy and the mother's literacy in the other dimensions of parental monitoring, except for the absence of a significant difference in the restrictive monitoring.

**CONCLUSION**

This study found that the overall level of parental monitoring was significantly negatively correlated with college students' cyberbullying behaviors ( $r = -0.123, p < 0.01$ ). Positive parental monitoring was significantly negatively correlated with college students' cyberbullying behaviours, such as the knowingness ( $r = -0.291, p < 0.01$ ) and autonomy monitoring ( $r = -0.231, p < 0.01$ ) dimensions. Whereas negative parental monitoring was significantly and positively correlated with the cyberbullying behavior of college students, such as the restrictive monitoring dimension ( $r = 0.256, p < 0.01$ ). In addition, the F-test showed that all the regression equations had a good degree of fit. After controlling for demographic variables, knowledge ( $\beta = -0.259, p < 0.001$ ) and

autonomy monitoring ( $\beta = -0.205, p < 0.001$ ) in parental monitoring can effectively negatively predict college students' cyberbullying, whereas restrictive monitoring can effectively and positively predict college students' cyberbullying behaviour ( $\beta = 0.222, p < 0.001$ ). The findings consistently showed that when parents displayed more negative parental monitoring behaviours in parenting, the higher the child's cyberbullying test score. This suggests that parental monitoring affects cyberbullying behavior in college students.

**DISCUSSION**

First, from the theory of conformity, it can be seen that parents educate adolescents through coercive means, and adolescents show behaviors consistent with the organization's values to avoid punishment, which is the phenomenon of superficial conformity. Second, the high incidence of cyberbullying among college students is closely related to their frequent contact with the Internet. Positive parental monitoring can reduce the risk of adolescents' undesirable online behaviors, thus reducing the occurrence of adolescent cyberbullying. To sum up, parents' monitoring style will have a greater impact on their children's behavior. In summary, the findings of this paper, and thus the development of corresponding measures, can effectively reduce the occurrence of cyberbullying behavior among college students, which is conducive to establishing cyberbullying prevention and control systems.

The research in this paper provides important references for prevention and intervention. For example, strengthening family education and family functioning and improving parents' monitoring of their children can effectively reduce the occurrence of cyberbullying behavior. In addition, this study provides new perspectives for schools and teachers. Focusing on students' academic performance can identify and promptly address potential cyberbullying. The study results are also important guidance for possible future application scenarios. For example, comprehensive intervention programs for different family backgrounds and achievement levels can be developed to effectively reduce the occurrence of cyberbullying. It is also possible to prevent the occurrence of cyberbullying behavior by enhancing parental education and improving parental quality to improve parents' monitoring of their children.

## REFERENCES

- Beran T, Li Q; 2005. Cyber-harassment: A study of a new method for an old behavior. *Journal of Educational Computing Research*, 32(3):265.
- Carey FR; 2013. Cyberbullying and School Attachment: An Analysis of the 2005-2006 US Health Behavior in School-Aged Children (HBSC) Study. The University of Texas School of Public Health.
- Connolly EJ; 2020. Further evaluating the relationship between adverse childhood experiences, antisocial behavior, and violent victimization: A sibling-comparison analysis. *Youth Violence and Juvenile Justice*, 18(1):3-23.
- Espelage DL, Basile KC, Hamburger ME; 2012. Bullying perpetration and subsequent sexual violence perpetration among middle school students. *Journal of Adolescent Health*, 50(1):60-65.
- Gan C, Lee FL, Li Y; 2017. Social media use, political affect, and participation among university students in urban China. *Telematics and Informatics*, 34(7):936-947.
- Hinduja S, Patchin JW; 2010. Bullying, cyberbullying, and suicide. *Archives of Suicide Research*, 14(3):206-221.
- Hinduja S, Patchin JW; 2013. Social influences on cyberbullying behaviors among middle and high school students. *Journal of Youth and Adolescence*, 42:711-722.
- Hinduja S, Patchin JW; 2017. Cultivating youth resilience to prevent bullying and cyberbullying victimization. *Child Abuse & Neglect*, 73:51-62.
- Hood M, Duffy AL; 2018. Understanding the relationship between cyber-victimisation and cyber-bullying on Social Network Sites: The role of moderating factors. *Personality and Individual Differences*, 133:103-108.
- Jiow HJ, Lim SS, Lin J; 2017. Level up! Refreshing parental mediation theory for our digital media landscape. *Communication Theory*, 27(3):309-328.
- Juvonen J, Gross EF; 2008. Extending the school grounds? Bullying experiences in cyberspace. *Journal of School Health*, 78(9):496-505.
- Kiriakidis SP, Kavoura A; 2010. Cyberbullying: A review of the literature on harassment through the internet and other electronic means. *Family and Community Health*, p. 82-93.
- Kowalski RM, Limber SP; 2013. Psychological, physical, and academic correlates of cyberbullying and traditional bullying. *Journal of Adolescent Health*, 53(1):S13-S20.
- Li Q; 2007. New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior*, 23(4):1777-1791.
- Luo Q, Huang L, Wu N; 2022. The relationship between internet use preference and loneliness among college students during COVID-19: The chain mediating effect of online social support and self-esteem. *Frontiers in Psychology*, 13:1058944.
- Matingwina S; 2018. Social media communicative action and the interplay with national security: The case of Facebook and political participation in Zimbabwe. *African Journalism Studies*, 39(1):48-68.
- Mishna F, Khoury-Kassabri M, Gadalla T, Daciuk J; 2012. Risk factors for involvement in

- cyber bullying: Victims, bullies and bully-victims. *Children and Youth Services Review*, 34(1):63-70.
- Muto S, Fujita S, Akashi K, Yoshida T, Iijima Y, Naoe K; 2018. Evaluation of actual delamination strength of REBCO-coated conductors based on the weibull analysis considering size effect. *IEEE Transactions on Applied Superconductivity*, 28(4):1-4.
- Ortega R, Elipe P, Mora-Merchán JA, Calmaestra J, Vega E; 2009. The emotional impact on victims of traditional bullying and cyberbullying: A study of Spanish adolescents. *Zeitschrift für Psychologie/Journal of Psychology*, 217(4):197-204.
- Owusu S, Zhou L.; 2015. Positive bystanding behavior in cyberbullying: The impact of empathy on adolescents' cyber bullied support behavior. In: 2015 IEEE International Conference on Intelligence and Security Informatics (ISI) IEEE .
- Papa V; 2015. Social media, citizenship and new social movements: The role of Facebook use in the construction of collective and civic identities by the indignados movement in Greece and France (PhD thesis). Cyprus University of Technology, Limassol, Cyprus.
- Slonje R, Smith PK, Frisén A; 2013. The nature of cyberbullying, and strategies for prevention. *Computers in Human Behavior*, 29(1):26-32.
- Smith PK, Mahdavi J, Carvalho M, Fisher S, Russell S, Tippett N; 2008. Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4):376-385.
- Tang Q, Fang X, Hu W, Chen H, Wu M, Wang F; 2013. The associations between parental and teacher autonomy support and high school students' development. *Psychological Development and Education*, 29(6):604-615.
- Vandebosch H, Van Cleemput K; 2009. Cyberbullying among youngsters: Profiles of bullies and victims. *New Media & Society*, 11(8):1349-1371.
- Wang B, Jin C, Zhao B; 2020. Relationships among family function, interpersonal adaptation and cyberbullying of adolescents: A moderated mediation effect. *Psychological Development and Education*, 36:469-476.
- Ybarra ML, Diener-West M, Leaf PJ; 2007. Examining the overlap in Internet harassment and school bullying: Implications for school intervention. *Journal of Adolescent Health*, 41(6):S42-S50.
- Ybarra ML, Mitchell KJ; 2004. Online aggressor/targets, aggressors, and targets: A comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry*, 45(7):1308-1316.