

Cyberbullying and Depression among Chinese Youth

Yike Li^{1,a,*}

¹ *Maple Glory United School, Xiamen, Fujian, China*

a. yike0608@outlook.com

**corresponding author*

Abstract: Cyberbullying is the use of electronic communication to harass, insult, or cause harm to a person via the Internet. Cyberbullying has become more prevalent in today's society, and young people who experience it frequently feel isolated and helpless, potentially contributing to the rising rate of depression. However, little research has been conducted on the depression caused by cyberbullying among Chinese high school students. Therefore, this study focuses on the current state of depression among Chinese high school students and its correlation with age, gender, and city level. The questionnaire used was a modified Chinese version of the CES-D scale and was distributed via social media to 184 current Chinese high school students from various regions. After conducting a pilot study, the language of the Chinese version of the CES-D scale has been adjusted to become more understandable for students. Participants filled out an online questionnaire, and SPSS was used to analyse the data. Male students have a slightly lower average total depression score ($M = 62.74$) than female students ($M = 65.71$). There was no correlation between gender and student depression. Furthermore, there is no significant correlation between school location and depression levels ($p = 0.084$, $p > 0.05$). In addition, the overall Pearson correlation score indicates that depression and age are correlated with a weak association of 0.178 and a significance of 0.016 ($p = 0.016$, $p < 0.05$).

Keywords: cyberbullying, depression, behavioural science

1. Introduction

Bullying raises wide concerns nowadays. Such repeatedly aggressive behaviour leads an individual to unfavorable actions when someone seeks to inflict pain or distress upon another [1]. According to UNICEF [2], half of the world's 13 to 15-year-old adolescents (about 150 million) reported experiencing peer violence in and out of school. These prevalent bullying behaviours can be conducted in physical, social, and verbal forms [3].

Cyberbullying is widespread, occurring via the internet, online platforms, mobile devices, and numerous other digital devices [4]. Smith et al. [5] define it as a series of harmful and intentional acts committed by an individual or group through electronic devices against victims who have no means to defend themselves. Those adolescents who are victims of cyberbullying are at a greater risk of acquiring mental and psychological symptoms and engaging in harmful behaviours [6]. Also, people who are bullied online may experience long-term psychological damage [7].

According to Schenk and Fremouw [8], the most common responses to cyberbullying are anger and crying, followed by feelings of sadness, sorrow, anxiety, depression, embarrassment, fear, and

blaming oneself for the situation. These adverse psychological consequences of cyberbullying can even be related to extreme incidents of victimisation, including death by suicide [9].

Furthermore, within all the psychological consequences of cyberbullying, significant connections were identified between cyberbullying victimisation and depression as a prevalent internalising condition [10]. Specifically, cyberbullying victims in schools have significantly higher degrees of loneliness and depression than students who have no experience of cyber victimisation in school [11].

In addition, the number of children and adolescents using the Internet has increased significantly over the past few years in China as children and adolescents begin to access and use the Internet at an earlier age [12]. The person who engages online can access various settings and technologies, including messages, mobile applications, social media, and gaming platforms [13]. 31.4% of the teenagers surveyed in 3774 questionnaires across China's various provinces were the victims of cyberbullying, while 16.6% were the bullies themselves [14]. During the pandemic, a greater number of people have increased the time spent in front of screens, and the total amount of time spent in front of screens has increased [15]. As a result, people who engage with social media more frequently can be at a greatly increased risk of experiencing cyberbullying and depression [16].

Given the growing number of young netizens and the severity of cyberbullying during the pandemic, it is necessary to examine how cyberbullying influences students' psychological status [16]. In addition, Yuan and Liu [17] state that there is still much debate regarding depression and the long-term and significant consequences that can result from the involvement of cyberbullying in a school environment. Therefore, this research investigates the association between cyberbullying and depression among Chinese mainland high school students during the COVID-19 pandemic.

2. Literature Review

2.1. Cyberbullying

2.1.1. Definitions

Cyberbullying is a frequent reality in the digital age [18]. Cyberbullying includes using digital and communication technology to perform various actions in the context of direct or indirect cyberbullying to harass another person (the victim of cyberbullying) who is unable to defend themselves properly [18]. Another commonly accepted definition of cyberbullying is the aggressive, persistent, and purposeful communication via electronic devices by a group or an individual against a victim who cannot defend themselves [5]. However, a consistent and universal definition of cyberbullying is still necessary to maintain pace with the rapid development of technology [19].

2.1.2. Types

There are many forms of cyberbullying, providing cyberbullies with abundant tools, and each form of cyberbullying could produce different impacts on victims [20]. Sometimes, these cyberbullying tools are combined to produce additional effects. According to Bauman [20], cyberbullying can be categorised into seven categories. Flaming is electronic communication about another person with hostile, obscene, or aggressive content. Flaming can occur in various contexts, including online discussion boards and forums, chat rooms, email, and instant messaging on social media. Harassment is aggressive behaviour based on an individual's gender, ethnicity, age, sexual preference, etc. The advancement and pervasiveness of technology have made online harassment easier and more sustainable for perpetrators.

Since bullies are not constrained by time or distance, they can send repetitive messages that intimidate, disturb, or discredit their victims. Although individuals or victims of cyberbullying can reject emails and messages if they recognise the source, persistent harassers can utilise other methods

to remain anonymous, continuing harassment behaviour. Denigration is often conducted in a public forum with insulting and harmful statements directed at the target. Some cyberbullies, for instance, will construct websites or group chats to broadcast harmful information and images about a victim.

Masquerading is the act of pretending to be someone else, and one method is to gain access to (i.e. hack into) someone's social media account and send personal messages. Masquerading requires the perpetrator to be extremely skilled. The perpetrators of masquerading may discover alternative methods (for example, systematically attempting different passwords) and send negative messages from that victim's account, inflicting harm on the victim. Outing involves leaking private information or material via email, text message, social media, or a website. This cyberbullying approach intentionally gathers information to make it harmful and public.

Frequently, the fraudster will lie to the victim, claiming to keep the information confidential, and then maliciously publish the information online. Social exclusion is a form of dissociation that involves making it apparent to someone that they are not a part of the group and that their presence is not welcome. This is purposeful and pointed conduct. It is not uncommon for individuals to be excluded from participation in chat rooms when using the internet. When communicating with others through instant messengers, you can exclude a person from conversations and remove them from your friends list. Cyberstalking is the frequent use of electronic communications to irritate, harass, or threaten an individual to stalk the victim. This type of behaviour is considered to fall under the category of stalking. The victim of cyberstalking may also experience feelings of distress and dread as a result of the behaviour.

2.1.3. Bullying: Different from the Past

Scholars have demonstrated that traditional bullying and cyberbullying share key characteristics, as specified by their respective definitions [21]. Although cyberbullying occurs more often in anonymous situations, traditional bullying and cyberbullying involve aggressive behaviour designed to cause harm or distress, often repeated to reflect an imbalance of power between the parties involved [20].

However, Giumetti and Kowalski [21] indicated that cyberbullying explains more unique differences than traditional bullying, with cyberbullying more frequently causing low self-esteem, anxiety, depression, disengagement, poor performance at school, health issues, and early withdrawal from school due to illness. At the same time, cyberbullying not only predicts anxious thoughts related to victimisation, but negative self-perceptions and even depressive symptoms are also prevalent compared to traditional bullying, as most bullying is limited to a specific time, person, and location. In contrast, cyberbullying can take place at any time and at any location [22]. Therefore, the emphasis of emotional effects, mental effects, and behavioural effects of cyberbullying is considered in the research.

2.2. Depression

Depression is a prevalent psychological disorder. Depression is identified as persistent sadness, sleep, and appetite disturbances, which can frequently cause fatigue and lack of concentration. [16] Depression can have long-lasting or recurrent consequences on an individual's functionality and capacity to lead a meaningful life [23]. According to the Report on National Mental Health Development in China, 24.6% of adolescents in China are depressed, with 7.4% being severely depressed and 17.2% being mildly depressed, which is 0.4 % higher than in 2009 [24].

In addition, the rate of depression identification seems to increase with grade level. The depression detection rate at the elementary school level was approximately 10%. In junior high school, the prevalence of depression is approximately 30%, while the prevalence of severe depression is between

7.6% and 8.6%. At the high school level, the detection rate for depression was close to 40%, whereas the detection rate for severe depression ranged from 10.9% to 12.5%.

2.3. Internet Usage in China

According to China Internet Network Information Center, by June 2021, the number of Chinese Internet users reached 1.011 billion, an increase of 21.75 million from December 2020, and the Internet penetration rate reached 71.6%, an increase of 1.2 percentage points from December 2020. Internet users spent 26.9 hours online per week per capita, an increase of 0.7 hours compared with December 2020. Moreover, the community is concerned about the negative effects of the Internet on young people among these Internet users. The number of Internet users aged 6 to 19 in China reached 158 million, accounting for 15.7% of the total number of Internet users.

3. Method

This study adopted a survey method to investigate the situation of cyberbullying in Chinese high schools. A survey is a research method used by social scientists (such as economists, political scientists, psychologists, and sociologists) to objectively and scientifically assess and gather data on individuals and societal phenomena. It can be employed to discover the thoughts, beliefs, and behaviours of individuals contacted to participate in a survey. Additionally, extra factual information about a group of people can be gathered through a survey [25].

3.1. Participants

The participants consisted of high school students in China. A questionnaire was delivered between August 4 and August 6, 2022. A total of 184 questionnaires were collected, of which 87 respondents were male and 97 were female. Participants' ages range from 14 to 19 years old ($M=15.99 \pm 1.16$). Participants attended school in different cities and regions. According to the China City Tier System, Chinese cities where schools are located are divided into six tiers: first-tier, new first-tier, second-tier, third-tier, fourth-tier, and fifth-tier based on the concentration of economic resources, pivotability, civic vitality, lifestyle variability, and future adaptability [26]. Although indicators such as 'lifestyle diversity' and 'future flexibility' have been criticised as vague and difficult to quantify, such city classification is common in China's commercial, educational, and real estate sectors [27]. In this survey, 52 participants' schools were in first-tier cities, 19 were from new first-tier cities, 47 were second-tier, and 66 were third-tier and below.

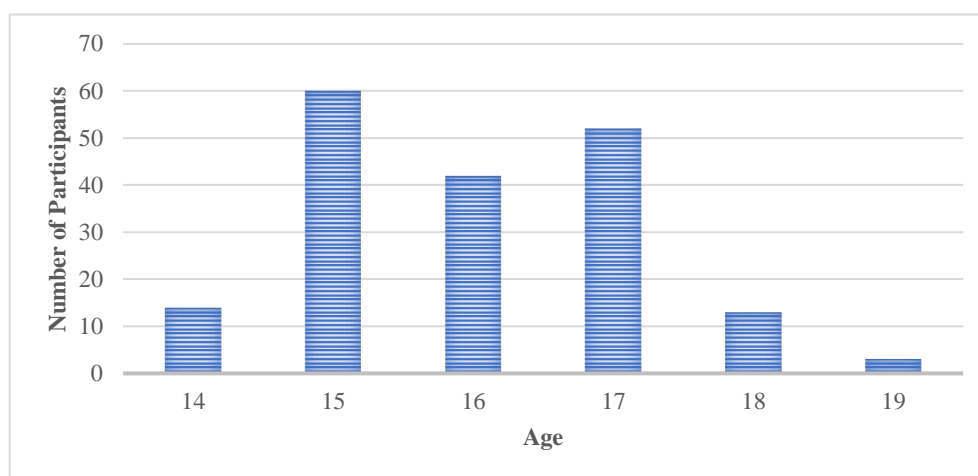


Figure 1: Age distribution.

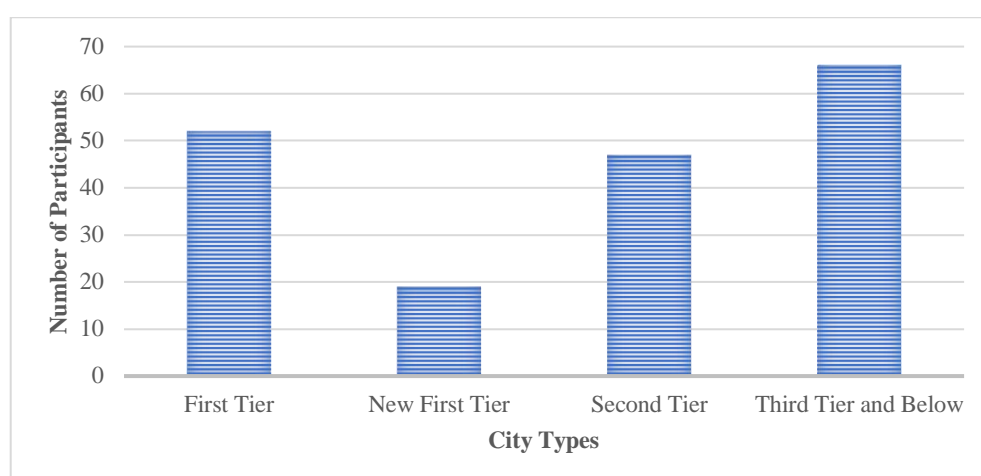


Figure 2: School location.

3.2. Questionnaire Design

The questionnaire was designed based on The Center for Epidemiologic Studies Depression Scale (CES-D Scale) by Lenore Sawyer Radloff [28]. The CES-D is a self-reported measure containing 20 items designed to assess depression symptoms in community-based settings. Specifically, the purpose was to evaluate the current state of depression symptoms, emphasising the emotional component in broad population surveys. Furthermore, the scale was developed to research the links between depression and other factors while examining different segments of the population [28]. In addition, the CES-D scale has been shown to have strong reliability and validity for measuring depression in Chinese students in relation to their social functioning.

Therefore, the questionnaire based on the CES-D scale was selected due to its high level of compatibility with the topic of cyberbullying among youth, as well as its strong validity and reliability. However, the CES-D scale was derived from research conducted in the USA in the 1970s. Therefore, whether the original demarcation scores need to be adjusted due to time and cultural context differences should be considered. Furthermore, based on previous research, the CES-D scale had only 3 levels, which might not be distinctive enough to distinguish the performance of each individual. Therefore, this study modifies the 1-5 scale; an average score of more than 3 is a more appropriate demarcation to define depression. The research also contains 3 demographic questions (i.e., gender, age, and school location) and 20 questions on a 5-point Likert scale (“1”= strongly disagree to “5” strongly agree). Questions are composed of one or two sentences that describe psychological feelings. The 20-item CES-D scale assesses depression in nine areas: sadness, loss of interest, appetite, sleep, concentration, guilt, fatigue, movement, and suicidal ideation.

The questionnaire was widely used in China, yet scholars have different versions of translation errors and mistakes. For example, the question “I couldn’t get going” is wrongly translated into “I am working slowly” in Chinese. Therefore, the questions are adapted to the CES-D scale in the Chinese version ($\alpha=0.86$), where a small number of inaccuracies in the presentation of items have been revised and fixed [29].

3.3. Procedure

The author used So Jump (a popular questionnaire design website in China) to form the online questionnaire. It was randomly sent to students in different high schools through social media platforms (e.g. WeChat, QQ). Participants were also encouraged to forward it to their school’s student

union and clubs to disseminate the questionnaire. Specifically, participants were informed about the correlation between cyberbullying and the pandemic.

3.4. Ethical Concerns

Before filling out the questionnaire, participants were informed that this questionnaire would only be used to analyse data for academic research; the information will only be seen by the author and the author's supervisor. The content of the questionnaire is voluntary, and the participants can withdraw from the completion screen if they feel uncomfortable while completing the questionnaire; there are no mandatory options to answer. After completing the questionnaire, it will be collected anonymously for further analysis.

3.5. Pilot Study

After designing the initial questionnaire, the researcher sent the electronic version to two students via WeChat to validate the content of the questionnaires. These two students have cross-cultural experience and speak both English and Chinese fluently. They were asked to give feedback on any difficulties they encountered in completing the questionnaire and to suggest any changes.

The feedback revealed that the Chinese translation of item 17, "I had crying spells", did not clearly indicate whether the crying was due to negative emotions. It is possible to cry because of anxiety. Still, if participants are just displayed with the question "I had crying spells", participants might relate to crying at moments such as watching a film or listening to a song and get emotional. So to better relate to negative anxiety, this question was changed to "I had crying spells due to negative emotions".

Another change made in the pilot study was that the questionnaire's intent, purpose, and privacy were placed at the beginning of the questionnaire. The questionnaire was also made reminiscent of cyberbullying during the epidemic. This ensures that the questionnaire is completed with the understanding that the content of the questionnaire is for academic research only and that the questionnaire is anonymous to ensure the participants' privacy. After these changes, the questionnaire was again checked for language use on the scale by the two students. After they were satisfied, the questionnaire was distributed on social media software.

4. Results and Discussion

4.1. Descriptive Statistics

The average score of 20 items is 2.42, with a standard deviation of 1.442. Therefore, it can be deduced that depression varies very much from student to student, resulting in an average score in the middle, or students might be confused about their mental status as the CES-D scale is based on self-evaluation. Moreover, with an average score of 2.42 for the 184 Chinese high school students who completed the questionnaire, there was no significant depression.

People may link depression with protracted spells of sadness and sorrow, loss of energy and interest in activities once enjoyed, and excessive or insufficient sleep. However, depression can also alter people's cognitive abilities [30]. Of these 20 items, the item with the highest score was "I had trouble keeping my mind on what I was doing" ($M=3.16$, $SD=1.546$). This might be because depression affects attention, memory, information processing, decision-making skills, cognitive flexibility, and executive function [22]. Furthermore, the significance of this data on lack of attention is perhaps linked to the development of the internet and the popularity of online streaming. Some students are addicted to the internet to varying degrees, perhaps leading to a certain degree of lack of concentration in their studies [22].

Table 1: Results of 20 questions (mean and standard deviation).

Question	M	SD
1. I was bothered by things that usually don't bother me.	2.74	1.405
2. I did not feel like eating; my appetite was poor.	2.31	1.428
3. I felt that I could not shake off the blues even with help from my family or friends.	2.30	1.427
4. I did not feel I was just as good as other people.	2.74	1.466
5. I had trouble keeping my mind on what I was doing.	3.16	1.546
6. I felt depressed.	2.70	1.509
7. I did not feel that everything I did was an effort.	2.51	1.426
8. I felt hopeful about the future.	2.22	1.410
9. I thought my life had been a failure.	2.27	1.452
10. I felt fearful.	2.34	1.459
11. My sleep was restless.	2.49	1.533
12. I was not happy.	2.24	1.399
13. I talked less than usual.	2.36	1.445
14. I felt lonely.	2.36	1.435
15. People were unfriendly.	1.92	1.271
16. I did not enjoy life.	2.24	1.391
17. I had crying spells due to negative emotions	2.20	1.439
18. I felt sad.	2.33	1.461
19. I felt that people dislike me.	2.29	1.425
20. I could not get going.	2.59	1.509
Overall Average	2.42	1.442

4.2. Gender and Depression

The T-test results showed no significant differences in gender in the overall score of depression ($F = 0.129$, $p = 0.353$, $p > 0.05$). However, items of “I did not feel I was just as good as other people” ($F = 0.699$, $p = 0.019$, $p < 0.05$) and “I had trouble keeping my mind on what I was doing” ($F = 0.010$, $p = 0.043$, $p < 0.05$) show difference in significance between genders. In addition, the total average scoring for males ($M=62.74$, $SD=21.86$) is very similar to females ($M=65.71$, $SD=21.428$).

The result indicates that the total average depression scoring for male students ($M=62.74$) is slightly lower than for female students ($M=65.71$). This difference can be explained by the fact that girls internalise cyberbullying-related negative emotions such as sadness and anxiety more than boys [31]. Except for questions 4 and 5, there are no significant differences between the genders in their responses to the questionnaire items. In question 4, girls tend to feel not as good as other people and have trouble keeping their minds on what was doing in question 5. This phenomenon can be attributed to the fact that children and adolescents, particularly girls, are more likely to experience feelings of low self-esteem, which, if untreated, can persist into adulthood [32].

This phenomenon can be caused by the increasing emphasis on appearance, success, and the pressure to look, act and feel a certain way in contemporary society. These pressures can come from

friends, family, work, and society as a whole, as well as the media and cyberbullying, which are gaining popularity. Girls are more conscious of perfection and are encouraged to compare their lives to those of others on the internet due to the rise of social media [33].

The gender difference is also shown in previous research that adopted the CES-D scale, and Stommel [34] recommended removing questions 9, 13, 15, 17, and 19 to form a 15-item scale to reduce gender biases. However, these questions did not properly explain the meaning of the options. For example, men were likelier to talk less when depression was present in both men and women [34]. In this study, the language of the items that might lead to gender biases was slightly embellished by doing a pilot study and reviewing the Chinese version of the CES-D scale. This made the options more relevant to the students' lives and allowed them to understand the examples of the options better so that only two items showed significant gender differences.

Table 2: Results of T-test of gender and depression.

Question	Male (N=)	Female (N=)	T	P
1	2.72	2.76	-0.186	0.852
2	2.17	2.43	-1.246	0.218
3	2.17	2.41	-1.140	0.256
4	2.47	2.98	-2.376	0.019
5	2.92	3.38	-2.041	0.043
6	2.57	2.81	-1.077	0.283
7	2.40	2.60	-0.929	0.354
8	2.17	2.27	-0.458	0.647
9	2.10	2.41	-1.453	0.150
10	2.14	2.53	-1.812	0.072
11	2.45	2.53	-0.342	0.733
12	2.28	2.22	0.287	0.775
13	2.48	2.25	1.096	0.271
14	2.45	2.29	0.753	0.453
15	1.97	1.88	0.474	0.636
16	2.18	2.30	-0.559	0.577
17	2.07	2.31	-1.14	0.259
18	2.20	2.44	-1.150	0.251
19	2.32	2.26	0.304	0.762
20	2.51	2.66	-0.690	0.491
Overall	62.74	65.71	-0.932	0.353

4.3. School Location and Depression

Only three out of the twenty questions through the one-way ANOVA analysis show a significant relationship between the school's location and psychological depression. These three questions are "I was fearful" ($p = 0.039$, $p < 0.05$), "I had trouble keeping my mind on what I was doing" ($p = 0.010$, $p < 0.05$), and "I was bothered by things that usually don't bother me" ($p = 0.003$, $p < 0.05$). Overall, there is no significant correlation between the school's location and levels of depression ($p = 0.084$, $p > 0.05$).

Table 3: Results of ANOVA of school location and depression.

Question	Tier 1	New Tier 1	Tier 2	Tier 3 and below	F	P
1	2.98	2.84	3.15	2.24	1.446	0.003
2	2.31	2.26	2.30	2.33	2.467	0.998
3	2.42	2.74	2.34	2.05	3.882	0.231
4	3.00	2.74	2.98	2.36	2.258	0.064
5	3.60	3.21	3.34	2.68	2.271	0.010
6	2.96	2.58	2.96	2.35	1.827	0.083
7	2.79	2.63	2.64	2.15	0.971	0.082
8	2.29	1.95	2.57	2.00	2.842	0.144
9	2.29	1.95	2.53	2.15	1.429	0.408
10	2.42	2.79	2.62	1.95	1.418	0.039
11	2.69	2.42	2.70	2.20	0.161	0.236
12	2.35	2.63	2.34	1.98	0.326	0.239
13	2.46	2.21	2.34	2.33	0.388	0.922
14	2.50	2.21	2.40	2.27	0.850	0.807
15	1.94	1.68	2.04	1.88	0.514	0.762
16	2.19	2.47	2.45	2.08	0.619	0.468
17	2.15	2.32	2.38	2.06	0.812	0.673
18	2.48	2.05	2.43	2.32	1.144	0.604
19	2.38	2.05	2.49	2.14	1.446	0.489
20	2.79	2.63	2.72	2.32	2.467	0.333

In all three questions where the prop was significant for the city level, students in Tier 1 cities were significantly larger than those in Tier 3 cities and below in Q4 and Q8. In addition, students' responses from Tier 2 cities were greater than students from Tier 3 cities in Q4 and Q13. Regarding average results, students from Tier 1, New First Tier 1 and Tier 2 cities all have higher average scores than those in Tier 3 and Below. Although some groups do not form a significant difference, it is reasonable to assume that when more data is included, significant results may also be obtained.

Table 4: Results of Post hoc (LSD).

	Q4	Q8	Q13
Tier 1	2.98±1.350	3.60±1.512	2.42±1.564
New Tier 1	2.84±1.259	3.21±1.512	2.79±1.475
Tier 2	3.15±1.503	3.34±1.449	2.62±1.453
Tier 3 and below	2.24±1.290	2.68±1.551	1.95±1.306
F	4.93	3.882	2.842
P	0.003	0.01	0.039
Post hoc	Tier 1> Tier 3 and below* Tier 2> Tier 3 and below*	Tier 1> Tier 3 and below*	New Tier 1> Tier 3 and below* Tier 2> Tier 3 and below*

* p < 0.05

4.4. Age and Depression

According to the overall score in Pearson correlation, depression and age are correlated, with a weak association of 0.178 and a significance of 0.016 ($p=0.016$, $p<0.05$). Therefore, it can be concluded that as age increases, high school students experience more worry and stress about schoolwork. And through the increased hours of mobile phone use, cyberbullying, and other annoyances given by the internet may further lead to an increase in depression [12]. Moreover, the research collects digital questionnaires from high school students located in different cities in China, which brings current research certain limitations. For instance, this study utilised a small sample of urban high school students and was distributed exclusively online via social media.

Table 5: Results of Pearson Correlation of age and depression

		Age
Overall Score	Pearson Coefficient	0.178
	Significance	0.016

Consequently, only students with mobile phones completed the questionnaire. Therefore, the findings may not apply to all Chinese adolescents, particularly those from rural China. Furthermore, although this study has embellished the translated CES-D scale to make the content more accurate and easier for high school students to understand, respondents could still be limited in their responses as each item is self-evaluated on the 1-5 scale, which may omit more detailed, in-depth information to analyse depression among Chinese high school students.

5. Conclusion

This research focuses on the depression of Chinese high school students in the context of cyberbullying, as this area of research has received less attention in the post-pandemic period. By designing a questionnaire based on the CES-D scale, 184 students from different provinces in China completed the questionnaire via the internet. Data analysis through SPSS revealed that gender and student depression were not significant. And only some of the options appeared to be significant for the city level. However, this study found that the association between age and depression showed a weak positive correlation. This could be explained by the fact that increasing age in high school is associated with increased academic stress, life stress, and social media use and is more likely to lead to symptoms of depression caused by cyberbullying.

In the future, more large-scale surveys need to be implemented to comprehensively study depression and the experiences of cyberbullying among Chinese students. In addition, more research and advocacy are needed to allow youth to express themselves freely in any environment, both online and offline, to express their ideas and opinions without attacking those who hold different views from theirs. Furthermore, future studies should focus more on the factors that lead to cyberbullying behaviours and interventions that can effectively help students deal with depression.

References

- [1] Olweus, D. (1994). *Bullying at School: Basic Facts and Effects of a School Based Intervention Program*. *The Journal of Child Psychology and Psychiatry*, 35, 1171-1190.
- [2] UNICEF. (2018). *Half of World's Teens Experience Peer Violence in and Around School*. Retrieved from <https://www.unicef.org/press-releases/half-worlds-teens-experience-peer-violence-and-around-school-unicef>
- [3] Cook, C.R., Williams, K.R., Guerra, N.G., Kim, T.E. and Sadek, S. (2010). *Predictors of Bullying and Victimization in Childhood and Adolescence: A Meta-Analytic Investigation*. *School Psychology Quarterly*, 25, 65-83.

- [4] Popović-Čitić, B., Djurić, S. and Cvetković, V. (2011). *The Prevalence of Cyberbullying among Adolescents: A Case Study of Middle Schools in Serbia*. *School Psychology International*, 32, 412-424.
- [5] Smith, P.K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S. and Tippett, N. (2008). *Cyberbullying: Its Nature and Impact in Secondary School Pupils*. *Journal of Child Psychology and Psychiatry*, 49, 376-385.
- [6] Zhou, Z., Tang, H., Tian, Y., Wei, H., Zhang, F. and Morrison, C.M. (2013). *Cyberbullying and its Risk Factors among Chinese High School Students*. *School Psychology International*, 34, 630-647.
- [7] Nixon, C.L. (2014). *Current Perspectives: The Impact of Cyberbullying on Adolescent Health*. *Adolescent Health, Medicine and Therapeutics*, 5, 143-158.
- [8] Schenk, A.M. and Fremouw, W.J. (2012). *Prevalence, Psychological Impact, and Coping of Cyberbully Victims among College Students*. *Journal of School Violence*, 11, 21-37.
- [9] Bauman, S., Toomey, R.B. and Walker, J.L. (2013). *Associations among Bullying, Cyberbullying, and Suicide in High School Students*. *Journal of Adolescence*, 36, 341-350.
- [10] Reed, K.P., Cooper, R.L., Nugent, W.R. and Russell, K. (2015). *Cyberbullying: A Literature Review of its Relationship to Adolescent Depression and Current Intervention Strategies*. *Journal of Human Behavior in the Social Environment*, 26, 37-45.
- [11] Olenik-Shemesh, D., Heiman, T. and Eden, S. (2012). *Cyberbullying Victimization in Adolescence: Relationships with Loneliness and Depressive Mood*. *Emotional and Behavioural Difficulties*, 17, 361-374.
- [12] Li, Y., Zhang, X., Lu, F., Zhang, Q. and Wang, Y. (2014). *Internet Addiction among Elementary and Middle School Students in China: A Nationally Representative Sample Study*. *Cyberpsychology, Behavior, and Social Networking*, 17, 111-116.
- [13] Vismara, M., Girone, N., Conti, D., Nicolini, G. and Dell'Osso, B. (2022). *The Current Status of Cyberbullying Research: A Short Review of the Literature*. *Current Opinion in Behavioral Sciences*, 46, 101152.
- [14] Li, J., Sidibe, A.M., Shen, X. and Hesketh, T. (2019). *Incidence, Risk Factors and Psychosomatic Symptoms for Traditional Bullying and Cyberbullying in Chinese Adolescents*. *Children and Youth Services Review*, 107, 104511.
- [15] Sultana, A., Tasnim, S., Hossain, M.M., Bhattacharya, S. and Purohit, N. (2021). *Digital Screen Time during the COVID-19 Pandemic: A Public Health Concern*. *F1000Research*, 10, 81.
- [16] Yang, F. (2021). *Coping Strategies, Cyberbullying Behaviors, and Depression among Chinese Netizens during the COVID-19 Pandemic: A Web-Based Nationwide Survey*. *Journal of Affective Disorders*, 281, 138-144.
- [17] Yuan, G., & Liu, Z. (2021). *Longitudinal Cross-Lagged Analyses between Cyberbullying Perpetration, Mindfulness and Depression among Chinese High School Students*. *Journal of Health Psychology*, 26, 1872-1881.
- [18] Langos, C. (2012). *Cyberbullying: The Challenge to Define*. *Cyberpsychology, Behavior, and Social Networking*, 15, 285-289.
- [19] Kaluarachchi, C., Sedera, D. and Warren, M. (2021). *A Review of Adult Cyberbullying Research from Multi-disciplinary Archives and Directions for Future Studies*. In *Proceedings of the 32nd Australasian Conference on Information Systems* (pp. 1-11). Atlanta: Association for Information Systems.
- [20] Bauman, S. (2015). *Types of Cyberbullying*. In *Cyberbullying* (pp. 53-58). Alexandria: American Counseling Association.
- [21] Giumetti, G. W., & Kowalski, R. M. (2015). *Cyberbullying Matters: Examining the Incremental Impact of Cyberbullying On Outcomes Over and Above Traditional Bullying in North America*. In R. Navarro, S. Yubero and E. Larrañaga (Eds.), *Cyberbullying Across the Globe* (117-130). Cham: Springer.
- [22] Cole, D.A., Zelkowitz, R.L., Nick, E., Martin, N.C., Roeder, K.M., Sinclair-McBride, K. and Spinelli, T. (2016). *Longitudinal and Incremental Relation of Cybervictimization to Negative Self-Cognitions and Depressive Symptoms in Young Adolescents*. *Journal of Abnormal Child Psychology*, 44, 1321-1332.
- [23] WHO. (2022). *Depression*. Retrieved from <https://www.who.int/health-topics/depression>
- [24] Fu, X., Zhang, K. and Chen, X. (2020). *Report on National Mental Health Development in China (2019-2020)*. Beijing: Social Sciences Academic Press.
- [25] Ballou, J. (2008). *Survey*. In P.J. Lavrakas (Ed.), *Encyclopedia of Survey Research Methods* (p. 861). London: Sage Publications.
- [26] RsA Asia. (2022). *China City Tier System*. Retrieved from <https://www.rsa-tax.com/single-post/china-city-tier-system>
- [27] Wang, D. (2019). *China's City-Tier Classification: How Does it Work?* Retrieved from <https://www.china-briefing.com/news/chinas-city-tier-classification-defined/>
- [28] Radloff, L.S. (1977). *The CES-D Scale*. *Applied Psychological Measurement*, 1, 385-401.
- [29] Zhang, J., Wu, Z.Y., Fang, G., Li, J., Han, B.X. and Chen, Z.Y. (2010). *Development of the Chinese Age Norms of CES-D in Urban Area*. *Chinese Mental Health Journal*, 24, 139-143.
- [30] Carreine, J. (2016). *More than Sad: Depression Affects Your Ability to Think*. Retrieved from <https://www.health.harvard.edu/blog/sad-depression-affects-ability-think-201605069551>

- [31] Chaplin, T.M. and Aldao, A. (2013). *Gender Differences in Emotion Expression in Children: A Meta-Analytic Review*. *Psychological Bulletin*, 139, 735-765.
- [32] Harter, S. (1993). *Causes and Consequences of Low Self-Esteem in Children and Adolescents*. In R.F. Baumeister (Ed.), *Self-Esteem: The Puzzle of Low Self-Regard* (pp. 87-116). Boston: Springer.
- [33] Hosking, M. (2016). 70% of Girls Feel They're "Not Good Enough". Retrieved from https://www.news24.com/parent/Teen_13-18/Development/70-of-girls-feel-theyre-not-good-enough-20160629
- [34] Stommel, M., Given, B.A., Given, C.W., Kalaian, H.A., Schulz, R. and McCorkle, R. (1993). *Gender Bias in the Measurement Properties of the Center for Epidemiologic Studies Depression Scale (CES-D)*. *Psychiatry Research*, 49, 239-250.