

The Relationship between Forms of Cyberbullying and Similarities in Personal Attributes among Chinese Adolescents

Huiyi Gao¹, Shuyi Wang², Ruoling Wang³, Liqing Qi^{4,a,*}

¹Shanghai United International School (Gubei Secondary Campus), Shanghai, 201103, China

²Changjun High School International Department, Changsha, 410000, China

³Nanjing Foreign Language School Int'l Dept, Nanjing, 210008, China

⁴No.2 High School of East China Normal University, Shanghai, 201203, China

a. lily_qiliqing@163.com

*corresponding author

Abstract: The popularization of access to the internet has led cyberbullying become the major cause of severe physical and psychological illnesses among Chinese adolescents. This research aims to find out how the similarity in personal attributes between the participants and the potential victim of cyberbullying correlates with different forms of cyberbullying. Questionnaires are filled out by participants, which included detailed stories or statements and personal attribute scales, aiming to find out their acceptance of cyberbullying behavior in different situations towards different misbehaving victims. According to correlational analysis, ANOVA, and descriptive analysis, results are found that male participants are overall more likely to argue with or insult someone on the internet when others harmed them than their female counterparts. Additionally, overall, the more similarity our participants had with the victim, the more agreement they had toward cyberbullying behaviors. Future studies can be done on more potential factors of cyberbullying based on the data we have collected.

Keywords: cyberbullying, personal attributes, Chinese adolescents, forms of cyberbullying, victims of cyberbullying.

1. Introduction

Cyberbullying has become a widespread issue since the early years of this century saw the introduction of easily accessible personal computers. Studies in this area have shown that cyberbullying is one of the leading causes of suicidal thoughts among youth [1]. Additionally, researchers have found that cyberbullying damages the psychological and physical health of helpless victims, as well as creates psychosocial issues such as behavior issues and alcohol usage [2-4].

Thus far, previous studies have investigated motives and negative effects of cyber victimization, age and gender disparities, coping mechanisms, avoidance and intervention measures [5-9]. Also, several lines of evidence suggest that there is a lot of overlap between cyberbullies and traditional bullies, as well as between cyber victims and traditional victims [7, 10-12]. On the other hand, face-to-face bullying and cyberbullying are slightly different in the aspect of anonymity and threats [12 - 15].

Cyberbullying is the use of modern communication technologies to harass, humiliate, threaten, or expose others. Four different types of cyberbullying have been identified by researchers. These four forms are outing and trickery (sharing someone's secrets or embarrassing information or pictures online), denigration (defamation, spreading of rumors), flaming (insulting, verbal abuse, and harassment), and exclusion (excluding someone from a social media group) [16, 17]. The APA definition defines an attribute as a quality or characteristic of a person. In social psychology, one of the factors of attraction is similarity [18]. It has been noted that people favor those who are similar to them [19]. Similarly, one study found a positive relationship between personality similarity and attractiveness [20].

However, there is little published information on whether similarities in personal attributes influence forms of cyberbullying in young people. The primary aim of this paper is to explore the relationship between forms of cyberbullying and similarities in personality attributes among Chinese young people. This work will generate fresh insight into factors that influence young people's behavior or attitudes toward cyberbullying.

Research question:

Are the forms of cyberbullying related to the similarity in personality attributes between people who might conduct cyberbullying and the victim? Our hypothesis is that similarities in personal attributes between victims and those who may engage in cyberbullying are related to the form of cyberbullying.

2. Methodology

2.1. Participants

With the increasing network population in low age groups, teenagers are gradually becoming the main body of cyberbullying. The survey done in 2019 showed that 28.89% of teenagers had encountered violent and abusive information while surfing the Internet, and "treating them as not seeing and ignoring" was the most commonly used way for teenagers to respond to violent and abusive information, accounting for 60.17% [21]. As the circumstance of Chinese cyberbullying has been serious, exploring this problem is necessary. However, there are few studies on whether the similarity of personal characteristics will affect the form of cyberbullying among young people, thus Chinese adolescents aged from 15 to 19 are recruited from social media to complete this research.

2.2. Design and Procedure

2.2.1. Method of Data Collection

The questionnaire is chosen as the method of data collection, with random rewards ranging from 1 RMB to 3 RMB. Under the context of the pandemic, face-to-face interviews or offline experiments are not available, but the method of questionnaire enables us to collect enough data in a relatively short time. Furthermore, online questionnaires ensure the efficiency of data collection, as they can be easily spread and retrieved on the internet. Additionally, more objective responses can be obtained. Since the questionnaires are completed anonymously, participants will be more willing to express their true feeling.

2.2.2. Design

The independent variables are gender and personal attributes, and the dependent variables are different forms of cyberbullying. The relationship between the form of cyberbullying and the similarity in personal attributes of the participants and the potential victims are explored. Therefore,

the respondents are required to evaluate both the protagonists' and their attributes and gender. Also, different forms of cyberbullying under different circumstances are described, and the participants are asked to assess those statements based on their attitudes and actual behaviors.

The complete questionnaire consists of three parts. The first part is the participants' demographic information, including age, gender, the experience of studying abroad, and the experience of cyberbullying others or being cyberbullied. Also, a personal attribute scale is included for measuring the relationship between the similarity of personal attributes and agreement towards forms of cyberbullying. The scale includes the participants' self-assessment of how emotional, kind, aware of others' feelings, and feeling better than others they are. Participants were asked to self-assess their personal attributes from A to E, with A indicating "not at all emotional/ kind/ aware of other's feelings/ feeling better than others" and E indicating "very emotional/ kind/ aware of other's feelings/ feeling better than others". The second part consists of 4 stories, which aim to answer the research question (Table 1). The protagonist in each story did something that may evoke cyberbullying, and the participants were asked to evaluate the acceptable forms of cyberbullying they may choose to act on those protagonists, with 1 point indicating "strongly disagree" to 5 points indicating "strongly agree". In this experiment, the participants are considered as who may conduct the cyberbullying, and the protagonists are the referees to the potential victims. Also, the participants were asked to evaluate the personal attributes of each protagonist. The third part is the general evaluations. The participants were asked to evaluate several statements based on what they agree with and what they will actually do in real life (Table 2). The scale ranges from 1 point to 5 points, with 1 point indicating that "I am strongly not likely to do those things in real life" or "I strongly disagree with the statement" to 5 points indicating that "I am strongly likely to do those things in real life" or "I strongly agree with the statement". These statements include different forms of cyberbullying under different circumstances.

2.2.3. Tool

The platform Questionnaire Star(Wen Juan Xing) was used to create and spreading our questionnaires on the social media. This platform can do some simple data analysis, including categorizing different kinds of data such as mean, medium, and mode and making graphs like pie charts and bar charts, so it's useful for showing the results clearly and directly.

2.2.4. Source

The scale of personal attributes was extracted and modified from the Personal Attributes Questionnaire and some other questionnaires such as the Moral Foundations Questionnaire [22, 23]. Furthermore, the forms of cyberbullying and different circumstances included into the statements were extracted and modified from Biedermann, Nagel, and Oser and Sabella [16, 17].

Table 1: Table 1 includes the questions in the second part of the questionnaire, where we asked the participants to evaluate the acceptable forms of cyberbullying.

1.	It is okay to exclude XXX from those online social groups and activities that you share with him/her.
2.	I think it is okay to gossip about XXX on the Internet.
3.	I think spreading the rumors about XXX is okay under this situation.
4.	It is okay for me to share XXX's secrets or embarrassing information or images on the internet.

Table 2: Table 2 includes the questions in the third part of the questionnaire, where we asked the participants to evaluate several statements based on what they agree with and what they will actually do in real life.

1.	If someone does harm to me, it's acceptable for me to exclude the person from an online social group.
2.	I can exclude someone out of an online social group, if there is no other way for me to argue with him/her by reasoning.
3.	If someone does harm to me, it's acceptable for me to argue with him/her in insulting and harassing words online.
4.	I can argue with someone online in insulting and harassing words, if I cannot reason with the person.
5.	If someone does harm to me, it's okay to spread the person's rumors online.
6.	I can spread rumors online, if I cannot argue against the person simply by reasoning.
7.	If someone does harm to me, it's acceptable for me to share his/her embarrassing information without permission on the Internet.
8.	I can share someone's embarrassing information without permission, if I cannot argue against the person by reasoning.

3. Data Analysis

Overall, 150 samples are collected through data collection, including 102 females, 40 males, and 8 participants preferring not to say their gender. During the data outlier treatment, samples which were handed in in less than 2 minutes (120 seconds) were removed. 9 samples were excluded from the data after the outlier treatment, which included 7 male samples, 1 female sample, and 1 sample from the gender type "prefer not to say". Therefore, there were 141 effective samples, including 101 females, 33 males, and 7 preferring not to answer their gender. All the data analyses were done and supported by the SPSS pro website (<https://spsspro.com/>).

3.1. Correlation Analysis

The second part of the questionnaire aimed to draw a correlational conclusion of the relationship between the similarity of participants' and potential cyberbullying victims' four personal attributes (the extent to which one is emotional, kind, aware of others' feelings, and thinking oneself as better than others) and the forms of cyberbullying that participants considered acceptable. In the questionnaire, the participants were asked to assess the level of those four personal attributes of both participants' and potential victims of cyberbullying. To compare the similarity between participants' and victims' attributes, the difference between the scores of each participant's assessment of themselves and the victims was calculated and marked by the name of the potential victim and the corresponding attributes, for example, "Li-emotional". The larger the difference, the less the similarity between the personal attributes of participants' (who are the potential cyberbullies) and the cyberbullying victims. The correlation coefficient was calculated for each of the differences and statements describing different forms of cyberbullying.

3.2. Descriptive Analysis

The descriptive analysis for Part3 aims to draw a general view of participants' attitudes and behaviors towards different forms of cyberbullying under two different circumstances.

3.3. ANOVA

The third part of the questionnaire aimed to draw the gender differences in the attitudes and behaviors toward four kinds of cyberbullying (exclusion, flaming, denigration, and outing and trickery) under two circumstances (“If someone does harm to me” and “if I cannot argue against the person simply by reasoning”) [16-17]. The circumstances described in each form of cyberbullying was extracted from the circumstances described in Biedermann, Nagel, and Oser’s paper.[16]

4. Results

4.1. Results of the Correlation Analysis

In story 1, the correlation coefficients of the relationship between each personal attribute and each form of cyberbullying are completely listed in the tables included in the appendix. The p values for the relationship between “Li-emotional” and “It is okay for me to share Li’s secrets or embarrassing information or images on the internet.” and between “Li-aware of others” are both less than 0.05, which means that the differences are significant and the null hypothesis can be rejected. Also, it indicates that when the potential victim is a female student who confided in her friend’s secret, the larger the difference between attributes scores (the less the similarity), the more disagreement toward the denigration form of cyberbullying.

Similarly, the results are shown by the correlation coefficient and p-value of the following three stories. In story 2, when the potential victim is a male student who didn’t pay back the money he borrowed from his friend, the less the difference between attributes scores (the higher the similarity), the more disagreement toward the exclusion form of cyberbullying, and the larger the difference between attributes scores (the less the similarity), the more the disagreement toward flaming, denigration, and outing and trickery. In story 3, when the potential victim is a female student who followed her monitoring duties and damaged one’s comic book, the less the difference between attributes scores (the higher the similarity), the more the disagreement toward the exclusion form of cyberbullying, and the larger the difference between attributes scores (the less the similarity), the more disagreement toward flaming, denigration, and outing and trickery. In story 4, when the potential victim is a boy who broke one’s possession without apology, the less the difference between the “better than others” and “kind” attributes (the higher the similarity), respectively, the less the disagreement toward exclusion and the other three forms.

4.2. Results of the Descriptive Analysis

According to the descriptive analysis before the ANOVA, the mean and medium scores for every assessment of statements describing the participants’ attitudes and behaviors toward cyberbullying are both lower than 4, which indicates that participants didn’t hold agreement toward any form of cyberbullying. The full results of the descriptive analysis were included in Table 5 in the Appendix B.

4.3. Results of the ANOVA

To analyze the data collected by the scale in the third part of the questionnaire, a one-way ANOVA method was used, with participants’ gender (male, female, and prefer not to say) as between-subjects and target kinds of cyberbullying and circumstances as within-subjects to measure the relationship between the factors. All of the results from the analysis were included in the appendix part with their p-value. The p-value for “If someone harms me, I will argue with him/her in insulting and harassing words online.” is 0.032(<0.05), which means that there is a significant difference between different

gender types. According to Post Hoc Tests measured by LSD, the mean score of male($SD=1.366$) is 2.325, the mean score of female($SD=1.081$) is 1.804, and the mean score of the gender of “prefer not to say”($SD=0.756$) is 1.500. This means that comparatively, males are more likely to apply flaming when someone harms them in real life. However, remarkably, all genders have little possibility of flaming in real life. Furthermore, the mean score for the circumstance of “if someone harms me” is always greater than “if there is no way for me to argue against him/him by reasoning”. It indicates that when someone does harm to the person in real life, he/she is more likely to have attitudes and behaviors of cyberbullying compared to when the person cannot argue against someone by reasoning.

5. Conclusions

The research is completed with conclusions, that overall any type of cyberbullying was not favored under all circumstances. The survey, which aimed to present correlations between the potential victim of cyberbullying versus the participants, indicates results that varied from the hypothesis at the beginning. The hypothesis states that the higher the similarity the participants value themselves with the potential victim, the less agreement there is in cyberbullying behaviors toward that potential victim. The final results in some way disproved the hypothesis.

In the first story, where a female student Li at the average age of our participants intentionally spreads other's secrets, the lower the overall similarity of the personal attributes between our participant and this potential victim, the higher disagreement they have with the behavior of sharing secrets and embarrassing information of this victim. This opposes the hypothesis, but at the same time is highly reasonable, as the more people separate themselves from Li, the less they would like to conduct similar misbehaviors. For example, 76% of all the participants rated Li towards the unkind part of the personality rating scale, and of these 114 participants, 73.69% of them rated themselves towards the kind part of the scale. Thus it may be inferred, that most of the participants believed Li is unkind due to her behavior, whereas they themselves are kind. Spreading Li's secrets does give them revenge, however at the same time they might be rated as unkind by themselves and others. Thus, the results of this story conclude that possibly the less similarity the participants had with the potential victim Li, the more they disagreed with Li's misbehavior and thus the less they agree to conduct the same misbehavior towards Li.

However, when it comes to the second story, the results changed. The former conclusion of lesser similarity may lead to lesser cyberbullying is confirmed by all provided forms of cyberbullying except "excluding the victim from their social circle." The potential victim Han, a male student who borrowed another's money and then refused to pay it back, did not conduct other misbehavior similar to our given forms of cyberbullying. This result proved our original hypothesis, where a negative correlation is shown between similarity with the potential victim and the agreement on potential cyberbullying. This is true only when "excluding the victim from their social circle", however, which may indicate that when judging friendship-related questions, participants may be less rational when making decisions. The higher the similarity they have with the potential victim, the more they relate to him in some way, and thus the more they oppose the form of "excluding the victim from their social circle," because of fear of getting excluded by friends themselves. This proved parts of the hypothesis, that when the participants rate the potential victim as similar to themselves, it may indicate they to some extent might conduct similar misbehavior just like the potential victim, thus leading to less possibility of agreement on cyberbullying towards the victim.

Similar results were found in the third story when female student Xu tore up her classmate's property because they disobeyed the class rule. Only the form "excluding Xu from their social circle" presented a negative correlation with the degree of similarity between participants and Xu. This result further proved our conclusion from the previous story, increasing the likelihood of more irrational decisions made regarding this particular form of cyberbullying. 66.3% of all participants rated Xu

towards the "emotional" side of the scale, the highest among all potential victims from 4 stories. 18% of all participants highly disagreed to exclude Xu from the social circles, which is also the highest in all stories. Perhaps this situation is closer to participants' daily life, and thus more of them relate to the story. Participants who rated themselves as having similar personal attributes to Xu might actually get angry as a class monitor when fellow students disobeyed the rules. In conclusion, it is highly possible that when sharing similar personal attributes with the potential victim, the less likely participants would agree to exclude the victim from their social circle.

Finally, the fourth story indicates completely different results. The 11 years old boy Huang who ruined his cousin's lipsticks and then refused to apologize, did not provide any positive link between overall participant-victim similarity in personal attributions with the agreement of different forms of cyberbullying. However, small correlations can indeed be made. For example, the higher the similarity our participants rate themselves with Huang in "feeling better than others," the less they disagree with the form of "excluding Huang from their social circle." This might be because, due to the age difference, the exclusion does not lead to possible negative effects. The possible relation between the factor "feeling better than others" with this result isn't clear. The higher the similarity participants have with Huang in the "kind" factor, however, the less they disagree with the forms of cyberbullying "insulting Huang" and "spreading Huang's rumors." As 64.66% of all participants find Huang unkind, and 85.72% of all 7 participants who rate themselves as unkind find Huang unkind, the conclusion can be made that the less kind the participants find themselves, the more likely they revenge on potential victim's misbehavior. This conclusion is however not supported by previous results, and thus might be coincidental or inaccurate.

Overall, the hypothesis has been proven by the results in gender differences. Male participants are overall more likely to argue with or insult someone on the internet when others harmed them than their female counterparts. According to Giammanco[25], males are generally more aggressive than females, due to larger influences of testosterone. The conclusion can be supported by biological facts, that males generally would be more aggressive than females.[24] Despite that difference, no matter the participants' gender, participants are more likely to commit cyberbullying behaviors when the person actually harmed them. In this survey, all the forms of cyberbullying are listed as possible revenge tools, thus it could be seen that all participants tend to be more self-protective and aggressive when harm is actually done.

5.1. Limitations

In the future, this topic can certainly be studied more professionally and deeply. In this experiment, the participants are limited to mainly Chinese adolescents, due to the inability of getting a wider participant range. Therefore, all the results and conclusions given previously only presented the possible attitudes and actions of the younger Chinese generation. In the future, experiments could aim for a wider participant range in both age groups and nationalities. Gender limitation is also a problem in this study. Only 26.67% of males attended this study, compared to 68% of females. Limited to the small sample size, there would be a high possibility of error when using our results to analyze the wider group of male Chinese adolescents. This should be improved in future studies as well.

Throughout the study, a fair number of samples are collected, measuring the possible relationship between forms of cyberbullying and similarities in personality traits among Chinese adolescents. Our final results are analyzed and lead to conclusions when compared to our initial hypothesis. However, there are still many problems that were not considered, which lead to slightly misleading results. For example, the purpose of each story wasn't clarified. It was not considered thoroughly, that exactly which factors each of the stories measure and in which way. There should have been clearer independent variables, dependent variables, and control variables in these stories, to reach a more focused and accurate result. Now, the results of the four stories all seem independent with less in

common, so it is difficult to reach a final overall conclusion. In the future, this problem should be targeted and improved to get more analyzable data and a more accurate conclusion.

5.2. Future Directions

In conclusion, this research experiment was overall fairly accurate, and unique conclusions are reached from the result analysis. However, there are still aspects around this topic that were not analyzed and discussed in depth, which can be used as inspirations for future research.

First, this experiment mainly measured how similarities in personal attributions influence cyberbullying agreement but did not mention how actual social identities, such as occupations, influence attitude, and possible behavior. Due to the age group limitation, there is a lack of data from a range of occupations, so thus this aspect is eliminated from this research. In the future, this could be taken into consideration as a possible field of research.

Second, although data on participants' past engagement in cyberbullying was collected, this aspect of their demographic information was not used when analyzing data and concluding results. Initially, the hypothesis was proposed, that if participants had engaged in cyberbullying activities, they would be more likely to agree more on the forms of cyberbullying provided in the questionnaire as a way of revenge; on the other hand, if they had the experience of being cyberbullied, they would disagree more with all forms of cyberbullying behaviors. This hypothesis was found to be proved by Panumaporn's 2020 study, in which he concludes this theory to be true through experiments [25]. For our final result analysis, this factor of the participants was not prioritized due to this finding in the research process, but it is still worth examining as an interesting aspect of participants' background experience.

Finally, the similarity between the participants and the victims of misbehavior in the stories, from whom participants took perspective, was not measured in the questionnaire. This could also be an important influencing factor affecting cyberbullying agreement, as it is initially proposed, the higher similarity between them might lead to a higher agreement in cyberbullying, due to a stronger feeling of empathy. If participants experienced similar incidents in their own past lives, this could also lead to a stronger will for revenge. This is not explored in this experiment, but surely could be a great inspiration for possible future research, which would certainly add more related data and conclusions to the field of psychology.

Furthermore, since the data gained from the 141 effective samples were analyzed, this currently available data might be used to conduct future analysis on the interaction or correlation between different variables such as gender, age, the experience of studying abroad, and experience of being cyberbullied or cyberbullying others. Through a further exploration into those data, deeper conclusions might be drawn on the topic of cyberbullying and the factors influencing cyberbullying.

References

- [1] Hinduja, S., & Patchin, J. W. (2010). *Bullying, Cyberbullying, and Suicide*. *Archives of Suicide Research*, 14(3), 206-221. <https://doi.org/10.1080/13811118.2010.494133>
- [2] Akbulut, Y., & Eristi, B. (2011). *Cyberbullying and victimisation among Turkish university students*. *Australasian Journal of Educational Technology*, 27(7). <https://doi.org/10.14742/ajet.910>
- [3] Ybarra, M. L., & Mitchell, K. J. (2007). *Prevalence and frequency of Internet harassment instigation: Implications for adolescent health*. *Journal of Adolescent Health*, 41(2), 189-195.
- [4] Selkie, E. M., Kota, R., Chan, Y. F., & Moreno, M. (2015). *Cyberbullying, depression, and problem alcohol use in female college students: a multisite study*. *Cyberpsychology, Behavior, and Social Networking*, 18(2), 79-86.
- [5] Varjas, K., Talley, J., Meyers, J., Parris, L., & Cutts, H. (2010). *High school students' perceptions of motivations for cyberbullying: An exploratory study*. *Western Journal of Emergency Medicine*, 11(3), 269.
- [6] Slonje, R., & Smith, P. K. (2008). *Cyberbullying: Another main type of bullying?* *Scandinavian Journal of Psychology*, 49, 147-154. <https://doi.org/10.1111/j.1467-9450.2007.00611.x>

- [7] Tokunaga, R. S. (2010). *Following you home from school: A critical review and synthesis of research on cyberbullying victimization*. *Computers in human behavior*, 26(3), 277-287. doi:10.1016/j.chb.(2009).11.014.
- [8] Aricak, T., Siyahhan, S., Uzunhasanoglu, A., Saribeyoglu, S., Ciplak, S., Yilmaz, N., & Memmedov, C. (2008). *Cyberbullying among Turkish Adolescents*. *CyberPsychology & Behavior*, 11(3), 253-261. <https://doi.org/10.1089/cpb.2007.0016>
- [9] Salmivalli, C., Kärnä, A., & Poskiparta, E. (2011). *Counteracting bullying in Finland: The KiVa program and its effects on different forms of being bullied*. *International Journal of Behavioral Development*, 35(5), 405-411. <https://doi.org/10.1177/0165025411407457>
- [10] Agatston, P., Kowalski, R., & Limber, S. (2012). *Youth views on cyberbullying*. In J. W. Patchin, & S. Hinduja (Eds.), *Cyberbullying prevention and response: Expert perspectives* (pp. 57–71). New York, NY: Routledge.
- [11] Smith, P. K., & Slonje, R. (2010). *Cyberbullying: The nature and extent of a new kind of bullying, in and out of school*. In S. R. Jimerson, S. M. Swearer, & D. L. Espelage (Eds.), *Handbook of bullying in schools: An international perspective* (pp. 249–262). New York, NY: Routledge. <https://doi.org/10.4324/9780203864968-23>
- [12] Vandebosch, H., & Van Cleemput, K. (2009). *Cyberbullying among youngsters: Profiles of bullies and victims*. *New Media & Society*, 11(8), 1349-1371. <https://doi.org/10.1177/1461444809341263>
- [13] Cassidy, W., Brown, K., & Jackson, M. (2011). *Moving from cyber-bullying to cyber-kindness: What do students, educators and parents say?* In E. Dunkels, G.-M. Franberg, & C. Hallgren (Eds.), *Youth culture and net culture: Online social practices* (pp. 256–277). Hershey, NY: Information Science Reference.
- [14] Dooley, J. J., Gradingier, P., Strohmeier, D., Cross, D., & Spiel, C. (2010). *Cyber-victimisation: The association between help-seeking behaviours and self-reported emotional symptoms in Australia and Austria*. *Australian Journal of Guidance and Counselling*, 20, 194–209, doi:10.1375/ajgc.20.2.194.
- [15] Nocentini, A., Calmaestra, J., Schultze-Krumboltz, A., Scheithauer, H., Ortega, R., & Menesini, E. (2010). *Cyberbullying: Labels, behaviours and definition in three European countries*. *Australian Journal of Guidance and Counselling*, 20, 129–142, doi:10.1375/ajgc.20.2.129#.
- [16] Biedermann, H., Nagel, A., & Oser, F. (2018). *Beschimpfen, Gerüchte-verbreitung und Verunglimpfung im virtuellen Raum: Messmodell zu Einstellungen gegenüber Cybermobbing bei Schülerinnen und Schülern*. *Swiss Journal of Educational Research*, 40(2), 447-462. <https://doi.org/10.24452/sjer.40.2.5069>
- [17] Sabella, R. A. (2007). *Book Review: Cyberbullying and Cyberthreats: Responding to the Challenge of Online Social Aggression, Threats, and Distress*. *PsycEXTRA Dataset*. <https://doi.org/10.1037/e400292008-008>
- [18] APA Dictionary of Psychology. (n.d.-c). American Psychological Association. <https://dictionary.apa.org/attributes>
- [19] Hinduja, S., & Patchin, J. W. (2010). *Bullying, cyberbullying, and suicide*. *Archives of suicide research*, 14(3), 206-221.
- [20] Montoya, R. M., Horton, R. S., & Kirchner, J. (2008). *Is actual similarity necessary for attraction? A meta-analysis of actual and perceived similarity*. *Journal of Social and Personal Relationships*, 25(6), 889-922. <https://doi.org/10.1177/0265407508096700>
- [21] Byrne, D., Griffitt, W., & Stefaniak, D. (1967). *Attraction and similarity of personality characteristics*. *Journal of Personality and Social Psychology*, 5(1), 82-90. <https://doi.org/10.1037/h0021198>
- [22] Chinese Academy of Social Sciences, 2019.
- [23] Spence, J. T., Helmreich, R., & Stapp, J. (1974). *Personal Attributes Questionnaire*. *PsycTESTS Dataset*. <https://doi.org/10.1037/t02466-000>
- [24] Zhang, H., Hook, J. N., & Johnson, K. A. (2016). *Moral Foundations*. *Questionnaire*. *Encyclopedia of Personality and Individual Differences*, 1-3. https://doi.org/10.1007/978-3-319-28099-8_1252-1.
- [25] Giammanco, M., Tabacchi, G., Giammanco, S., Di Majo, D., & La Guardia, M. (2005). *Testosterone and aggressiveness*. *Medical science monitor : international medical journal of experimental and clinical research*, 11(4), RA136–RA145.
- [26] Panumaporn, J., Hongsangunsri, S., Atsariyasing, W., & Kiatrungrit, K. (2020). *Bystanders' behaviours and associated factors in cyberbullying*. *General Psychiatry*, 33(3). <https://doi.org/10.1136/gpsych-2019-100187>.