

Patterns of Bullying Victimization among Adolescents in China: Based on a Latent Profile Analysis

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Abstract. *This study was to explore potential patterns of bullying victimization among adolescents in China. By cluster sampling, Delaware Bullying Victimization Scale-Student (DBVS-S), Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder Scale-7 (CAD-7) were administered to 3,761 school adolescents in Hunan Province. Latent profile analysis (LPA) was conducted on victimization by verbal, physical, social and cyberbullying. We found that (i) There is a high degree of co-occurrence among four subtypes of bullying victimization. Four latent classes were identified, including an all-type (traditional and cyber) bullying victimization class (1.5%), a traditional victimization class (3.9%), a mild traditional victimization class (14.9%), and a non-victimization class (79.6%). (ii) Males, middle school students, rural students and poor students were more likely to be all types of victims. (iii) There was a graded relationship between the four latent classes and the level of depression as well as anxiety.*

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Introduction

BULLYING victimization refers to the phenomenon that an individual is bullied or injured by one or several peers for a long time or repeated times (Olweus, 1993), with the characteristics of power imbalance, deliberateness, repetitiveness, and harmfulness (Smith & Wilson, 1998), and is an essential risk factor affecting the physical and mental health of Children and adolescents (Gini & Pozzoli, 2009, Hawker & Boulton, 2000). Studies have shown that victims of bullying have higher risks in social and emotional problems, and are more prone to psychological introversion problems such as depression and anxiety (Li et al., 2012; Menesini et al., 2009). Among the various types of people who are involved in the bullying, the proportions of victims of bullying are the highest. A survey of tens of thousands of elementary and middle school students in Norway found that about 15% of students were involved in bullying, of which about 9% were victims of bullying (Olweus, 1993). Zhang (2002) found that nearly one-fifth of elementary and middle school students in China were involved in school bullying, and 14.9% of students were victims of bullying. A comparative study of bullying in China and the US show that 22.05% of American students and 21.77% of Chinese students have been bullied (Xie et al., 2016).

For the victims, bullying is a serious life event. Compared with ordinary life events, repeated and persistent bullying produces a negative impact on individual's body and mind more profoundly. Besides, there are many forms of bullying including verbal, relational, physical, and cyber-bullying (Crick & Grotpeter, 1995; Olweus, 1993; Björkqvist, 1994; Smith et al, 2008). Accumulating data have shown that there is a high degree of symbiosis between various forms of bullying (Raskauskas & Stoltz, 2007; Li, 2007; Smith, Mahdavi et al, 2008; Nylund et al., 2007; Wang et al., 2010; Zhang et al., 2014). Most victims often suffer from more than one form of bullying. Within the victims, the forms of bullying and their combinations are different, the severity of bullying is different, and the victims are heterogeneous.

Previous studies on campus bullying include the demographic characteristics of victims, the impact of bullying on individual mental health, introversion and extroversion, etc (Zhang et al., 2000; Schwartz et al., 2001; Zhang, 2002; Chen & Le, 2002; Chen et al., 2013; Wu et al., 2016). Regardless of the results, there was a problem that ignores the heterogeneity within the victims. Positive Psychology, especially Psychological Elasticity Research, showed that the difference in mental health among disadvantaged individuals was more noteworthy than the difference among different groups (Rutter, 2000; Wan & Tang, 2016; Zhang et al., 2016). Understanding the heterogeneity within the victims can help people differentiate the different nature of the victim sub-groups. On this basis, the study of different models of sub-groups was carried out to provide more targeted programs for different sub-groups in the formulation of bullying prevention and intervention programs. We explored the model of bullying in school, which was based on the characteristics of the heterogeneity of bullying, and the demographic characteristics and mental health of various types of bullying.

Latent Class Analysis (LCA) has been being used widely in heterogeneous group classification in many fields such as sociology, biomedicine, and psychology. LCA is a technique based on the response of individual manifest variable to the tendency to divide individuals into a few mutually exclusive Latent Class variables (Qiu, 2008). LCA classification can ensure the greatest difference among latent classes and the smallest difference within the class. At the same time, the latent characteristics of each class can be judged according to the response modes of each item in the scale, and the proportion of the population of each class in the whole group can be understood, and explore the heterogeneous classification mode within the group.

Of the studies of latent class of bullying, a LCA of the incidence of physical bullying, verbal bullying, social exclusion, rumors, and cyberbullying in American teenagers divided the subjects into three classes: full-type victim groups (9.7% for men and 6.2% for women), Verbal/Social victim group (28.1% male, 35.1% female), and uninjured group (62.2% male, 58.7% female) (Wang et al., 2010). Zhang (2014) conducted potential class analysis on the occurrence of physical bullying, verbal bullying and relational bullying among students of grades 4, 6 and 8, and divided the subjects into four classes: verbal-body bullying (10.8%), verbal-body-social bullying (10.6%), verbal-social bullying (5.8%) and victimless bullying (72.9%). Li (2015) analyzed the subjects in grades 7, 8, 10 and 11 of two schools and found three types of bullies: all types of bullying (10.3%), cyber/verbal/social bullying (47.5%) and non-bullying (42.2%). These study tools, involving the crowd, and concluded that the results were inconsistent; for the victims, the bullying measurement used in the study were scored higher, if use the LCA, the original score points to 0/1 class for subsequent analysis. Due to the lack of accuracy of discrete data (Zhang et al., 2010), data information will be lost when continuous data is converted into discrete data resulting in deviation of classification results. Therefore, this study will use the Latent Profile Analysis (LPA) to extend the method of latent variables, so as to explore the pattern of Chinese bullying victimization more accurately.

Therefore, our study intends to study the co-occurrence characteristics of the detection of four common forms of bullying victimization, including cyberbullying, and then build an LPA model based on the data of the four forms of bullying victimization, to explore the different bullying victimization patterns and their main demographic characteristics of Chinese adolescents. Based on the consideration of the heterogeneity within the bullying-victimized group, the psychological introversion of different bullying victimization patterns (depression, anxiety) and their differences were further discussed.

Objects and Methods

Objects

The method of cluster sampling in eight areas of Hunan Province was used. A total of 3,788 middle to high school students (age range of 11 to 20 years old, $M = 15.03$, $SD = 1.685$) from 20 schools (including 13 city schools, 7 township and rural schools) were

included. To remove the demographic variable information (such as gender), recycling effective questionnaire was 3,761, and the effective rate was 99.29%. Detailed sampling information is shown in **Table 1**.

Research Tools

Delaware Bullying Victimization Scale-Student (DBVS-S)

DBVS-S (2016 Chinese Edition) was adopted. The scale has a total of 17 items, which are divided into four dimensions: verbal bullying (4 items), physical bullying (4 items), social/relational bullying (4 items) and cyber bullying (4 items). Item 13 “I was bullied in this school” is a screening item, which is not included in the data analysis (Bear et al., 2016). The scale was introduced by Xie (2015). The Chinese edition of the latest revision was adopted in this study (Xie et al., 2018). The Cronbach’s α coefficient of DBVS-S was 0.906, and the fitting factor of the four-factor model confirmative factor analysis was good (CFI = 0.922, RMSEA = 0.043 [0.040-0.046]). The scale uses the Likert six-point score, “1” = “never”, “2” = “occasionally”, “3” = “one or two times a month”, “4” = “once a week”, “5” = “multiple times a week” and “6” = “every day.” The higher was the score, the more serious was the bullying.

Patient Health Questionnaire Depression Scale -9 (PHQ-9)

PHQ-9 was used to assess the frequency of depressive symptoms in the past two weeks. The scale has a total of 9 items, of which the 9th item “whether there is suicidal or self-mutilation thought” is not a clinical intervention for this study, and suicide or self-mutilation was detected. The investigator could not provide further evidence for subjects who have a positive answer. Based on ethical considerations and referring to the practices of similar studies, we did not include it, and only the first 8 items were used in the test. The scale uses the Likert four-point score, “0” = “nothing at all”, “1” = “with a few days”, “2” = “more than half of the number of days”, “3” = “almost every day”. The higher the rate was, the more severe the depressive symptoms were. Cronbach’s α coefficient was 0.850 when PHQ-9 was revised (Hu et al., 2014). The Cronbach’s α coefficient of PHQ-9 in our sample data was 0.834, and the fitting factor of the one-factor model confirmative factor analysis was good (CFI = 0.933, RMSEA = 0.074 [0.068-0.080]).

Generalized Anxiety Disorder Scale-7 (GAD-7)

GAD-7 was used to understand the frequency of anxiety symptoms such as stress and anxiety in the past two weeks. The scale consists of 7 items in total, and the scale adopts Likert four-point score, “0” = “none”, “1” = “several days”, “2” = “more than half of the days”, and “3” = “almost every day”. The higher the score was, the more serious the anxiety symptoms were. Cronbach’s α coefficient was 0.93 when GAD-7 was revised (Qu & Sheng, 2015). The Cronbach’s α coefficient of GAD-7 in our sample data was 0.884, and the fitting factor of the one-factor model confirmative factor analysis was good (CFI = .973, RMSEA = 0.063 [0.056-0.071]).

Table 1. Participants Distribution Information.

	7th Grade	8th Grade	9th Grade	10th Grade	11th Grade	12th Grade	Total
Male	197	244	234	462	310	376	1,823
Female	224	233	254	459	414	354	1,938
Total	421	477	488	921	724	730	3,761

Procedure

All data were collected by the paper questionnaire, and the class was taken as the unit for a group test. Before the test, we communicated fully with the sample school, obtained support from the school and informed consent from the parents (or guardians) of all the sampled students. The experimenters were specially trained graduate students in psychology, and each class was equipped with 1-2 experimenters. The test time was during the school break or self-study class, and the time for the participants to complete the questionnaire was about 15 minutes. The head teacher is required to be present during the test (only present without patrolling). The experimenter explained the instructions and sample questions to the participants in detail. Of the instructions, experimenter explained the meaning of the survey and emphasized that the test content was only used for scientific research. The questionnaire was collected and taken away by the experimenters on the spot and would not be reviewed by the school or teachers. The sampling began in early December 2016 and lasted about one month.

Statistical Analysis

Mplus 7.4 was used for Latent Profile Analysis, and SPSS 22.0 was used for multiple logistic regression analysis and variance analysis of Latent Profile Analysis results.

Results

Incidence and Co-Occurrence Percentage of Different Types of Bullying

During data processing, as long as the score of each item in DBVS-S was ≥ 3 , that is, the participants selected “once or twice a month” or more were considered to have been bullied by the dimension represented by this item. Individuals subjected to verbal, physical, and social bullying of any kind or more were classed as traditional bullying victims.

The incidences of four types of bullying victims were: verbal bullying, 31.53% (male 37.74%, female 25.70%); physical bullying: 20.55% (27.65% for males and 13.88% for females); social bullying 19.60% (22.65% for males and 16.72% for fe-

males); cyberbullying, 4.3% (5.76% for males, 2.94% for females). Verbal bullying is the most common type of bullying among males, followed by physical bullying; verbal bullying is the most common type of bullying among females, and social bullying is the second most common type. The percentage of victims of each type by other types is shown in **Table 2**: when cyberbullying occurred, the probability of traditional bullying occurring at the same time was 87% (89.5% for males and 82.5% for females); when traditional bullying occurred, the probability of simultaneous cyberbullying was 9.8% (11.4% for males and 7.7% for females).

From the perspective of the co-occurrence characteristics of the four types of bullying victims, the co-occurrence rate of verbal bullying was the highest. Victims of physical, relational and cyber bullying were usually victims of verbal bullying. The three types of traditional bullying victimization have high co-occurrence. The occurrence of cyberbullying among Chinese teenagers was often accompanied by traditional bullying.

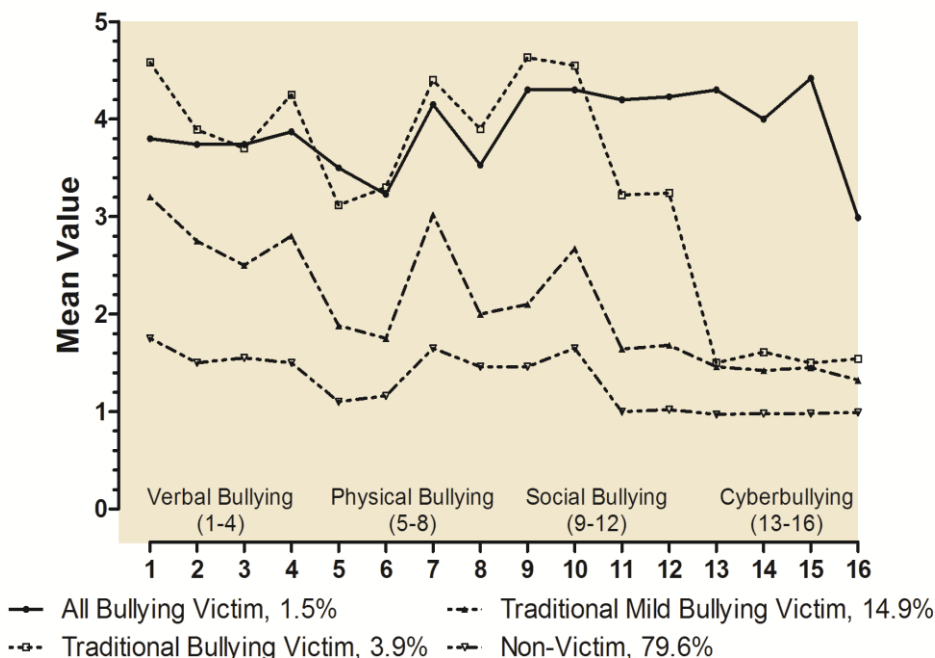
The Results of Latent Profile Analysis of Adolescent Bullying Victims

To further explore patterns of bullying victimization among adolescents, we then conducted LPA based on the occurrence degree (i.e. frequency) of each type of bullying. The fitting indexes of 2-5 classes were extracted and summarized in **Table 3**, and conducted a model test. The Model adaptation test indexes mainly include: Information Evaluation Index AIC, BIC, sample size-adjusted BIC, aBIC, Entropy index, Likelihood Ratio Test Index LMR-LRT and Likelihood Ratio Test Index Based on Bootstrap (BLRT). The smaller the three information evaluation indicators are, the better the model fits. Entropy ranges from 0 to 1, and Entropy closer to 1 indicates the more accurate the classification. Entropy < 0.60 is equivalent to over 20% of individuals with a classification error, and Entropy = 0.8 indicates an accuracy of over 90%. The p-values of the two indexes of LMR-LRT and BLRT reach a significant level, indicating that the k classes' models are significantly better than the k-1 classes of models (Qiu, 2008).

The data showed that the conclusion of the various information indicators was not consistent. The Entropy values of the five models exceed 0.8, and the BIC is the smallest when the five classes are retained. However, the LMR-LRT values are not significant when the 5th class are retained, indicating that the 5th class are not excellent. In the 4th class, the LMR-LRT and BLRT indicators of the 4th class are significant, and the average probability (column) of the 4th class of the adolescents (rows) comprehensive consideration, the 4th class is selected as best model (Nylund et al., 2007). The estimated conditional mean and individual value distribution on the 4 latent class model on the 16 items of bullying (reordering by dimension after removing the 13th question of the original scale) is shown in Figure 1.

From **Figure 1**, the mean conditions of the four latent classes on the 16 items of the four factors of bullying victimization are significantly different, showing different characteristics. Among them, Class 1 (C1) has a high mean value in the four bullying dimensions, accounting for 1.5% of the total subjects. According to its score charac-

Figure 1. Estimated Conditional Means of Four Latent Class of Bullying Victims.



teristics, C1 is defined as “all-type (traditional and cyber) bullying victimization class”. In Class 2 (C2), the mean value of the conditions in the dimension of cyberbullying was significantly lower than C1. The score trend and mean value of the conditions in items 1-12, namely the three dimensions of traditional bullying victimization, were similar to C1, which was defined as “a traditional victimization class”, accounting for 3.9% of all subjects. The score trend of class 3 (C3) in the three dimensions of traditional bullying victimization was similar to that of C2, but the mean value of the conditions was lower than C2. The mean value of the conditions in the dimension of cyber bullying was consistent with C2. Therefore, C3 was named as “a mild traditional victimization class”, accounting for 14.9% of all subjects. Class 4 (C4) was named “non-victimization class”, accounting for 79.6% of all subjects.

Multivariate Logistic Regression Results of Demographic Variables for Four Latent Classes

This research further explored the demographic characteristics of bullying victimization patterns based on the results of LPA. LPA results as dependent variables, gender (female as a reference), grade (high school as a reference), school type (city as a reference), boarding situation (day reading as a reference), and self-evaluation academic record

Table 2. The Prevalence of All Four Types of Bullying.^a

	Traditional Types Of Bullying Victims				Cyber-bullying (%)
	Verbal bullying (%)	Physical bullying (%)	Social Bullying (%)	Traditional Bullying (%) ^b	
Total (n=3,761)					
Traditional Bullying (n=1,436)					9.8
Verbal bullying (n=1,186)	-	53.7 ^c	50.1 ^c		10.6 ^c
Physical bullying (n=773)	80.9	-	62.0		15.5
Social bullying (n=737)	80.6	65.0	-		16.8
Cyberbullying (n=162)	77.8	74.1	76.5	87.0	-
Male (n=1,823)					
Traditional bullying (n=825)					11.4
Verbal bullying (n=688)	-	59.0	50.6		12.1
Physical bullying (n=504)	80.6	-	61.9		16.5
Social bullying (n=413)	84.3	75.5	-		20.1
Cyberbullying (n=105)	79.0	79.0	79.0	89.5	-
Female (n=1,938)					
Traditional bullying (n=611)					7.7
Verbal bullying (n=498)	-	44.08	49.4		8.6
Physical bullying (n=269)	81.4	-	62.1		13.8
Social bullying (n=324)	75.9	51.5	-		12.7
Cyberbullying (n=57)	75.4	64.9	71.9	82.5	-

a. The percentage of each type of victim who was bullied by the other type.

b. If an individual is bullied by one or more types of verbal bullying, physical bullying or social exclusion, it is considered as the traditional bullying victimization type.

c. For example, among the 1,186 victims of verbal bullying, 53.7%, 50.1%, and 10.6% are also victims of physical bullying, social exclusion, and cyberbullying.

(successful results as a reference) as self variables were subjected to multiple logistic regression analysis. Among them, the non-victimization class (C4) was used as the reference category for comparison, and the Odd Ratio coefficient was obtained through analysis. The OR coefficient reflected the ratios of different genders, grades, urban and rural locations, boarding situations, and self-assessment academic performance in the

Table 3. Summary of Latent Profile Analysis Fit Information.

Index	Model Number			
	2	3	4	5
Total (n=3761)				
AIC	134,874.143	127,284.693	123,542.594	118,438.308
BIC	135,179.532	127,696.034	124,059.887	119,061.552
aBIC	135,023.834	127,486.318	123,796.153	118,743.799
Entropy	0.991	0.988	0.962	0.994
LMR-LRT (p)	< 0.001	0.1096	0.0261	0.6154
BLRT (p)	< 0.001	< 0.001	< 0.001	< 0.001

Table 4. Multivariate Logistic Regression Results of Demographic Variables for Four Latent Classes.

		All-type(traditional and cyber) bullying victimization (C1)		A traditional victimization (C2)		A mild traditional victimization (C3)	
		OR	CI (95%)	OR	CI (95%)	OR	CI (95%)
Gender	Female	1.000		1.000		1.000	
	Male	4.241**	2.303-7.809	1.794**	1.275-2.523	2.338**	1.925-2.838
Grade	12th Grade	1.000		1.000		1.000	
	7th Grade	9.471**	3.741-23.977	15.029**	6.636-34.038	3.803**	2.703-5.349
	8th Grade	3.609*	1.296-10.050	11.070**	4.876-25.131	3.372**	2.425-4.689
	9th Grade	1.991	0.636-6.237	8.402**	3.658-19.295	2.635**	1.883-3.688
	10th Grade	1.237	0.437-3.500	2.096	0.870-5.052	1.084	0.781-1.504
	11th Grade	1.338	0.446-4.015	2.147	0.860-5.361	1.067	0.751-1.517
School Location	Urban	1.000		1.000		1.000	
	Rural	5.238**	3.062-8.961	4.513**	3.216-6.331	2.824**	2.340-3.409
Boarding Situation	Day-student	1.000		1.000		1.000	
	Boarder	1.342	0.745-2.149	1.427	0.982-2.074	1.037	0.854-1.258
Academic Record (Self-Assessed)	Poor	1.000		1.000		1.000	
	Medium	0.613	0.337-1.116	0.563*	0.381-0.831	0.775*	0.617-0.973
	Excellent	0.400*	0.172-0.935	0.534**	0.326-0.876	0.751*	0.570-0.990

Note. * $P < .05$, ** $P < .01$.

potential categories of bullying victims. The results of multinomial logistic regression are shown in **Table 4**.

Taking the C4 as the reference group, C1, C2, and C3 were compared with it. The OR results showed that the distribution of victims of bullying was affected by gender, grade, school location, and student performance, the effect of boarding was not significant.

Compared with females, males in the groups C1, C2 and C3 were suffered more bullying and victimization. Compared with the senior 3 students, in the C1, the bullying of the junior 1 and junior 2 students was more serious. The bullying injury among the junior 3, senior 1, and senior 2 students was not significant from that of the senior 3 students. In the C2 and C3, there are more bullying victims in the three grades of middle school, and the phenomenon of bullying in senior 1 and senior 2 students is not significant from that of senior 3 students. Compared with urban students, among the three classes of C1, C2 and C3, there are more bullying injuries among rural students. There was not significance in the victimization of boarding and day students. Compared with students with lower graders, there was not significance in bullying among students with poor grades and middle grades in the C1 class. Students with higher grades were less likely to suffer from bullying than those with lower grades. Among the C2 and C3, students with middle grades and excellent grades were less likely to suffer from bullying than those with poorer grades.

Comparison of Depression and Anxiety Symptoms among Latent Classes of Juvenile Bullying

The results of the analysis of variance are shown in **Table 5**. The depression scores of adolescents in different categories of bullying victims ($F(3,3757)=104.136, p < 0.01, \eta^2 = 0.077$) and anxiety scores ($F(3,3757)=121.953, p < 0.01, \eta^2 = 0.089$) was significant. The multiple comparison results show: The depression and anxiety scores in C1 were significantly higher than those in the other three groups. The depression and anxiety scores in C2 were lower than those in C1, which was significantly higher than that in C3 and C4. The depression and anxiety scores in C3 were significantly higher than those in group C4.

Discussion

The Co-Occurrence Characteristics and Heterogeneity of Juvenile School Bullying Model

We explored the patterns of four common forms of bullying using latent profile analysis. There were four modes of bullying victimization in the tested adolescents: all-type (traditional and cyber) bullying victimization class, a traditional victimization class, a mild traditional victimization class, a non-victimization class. There were significant differences in the scores and trends of bullying victims in each group indicating the heterogeneity of bullying victims. There are three bullying victimization classes (C1, C2, and C3)

Table 5. Comparison of Depression and Anxiety Symptoms among Latent Classes.

	C1 (n=58)	C2 (n=147)	C3 (n=544)	C4 (n=3,012)	F	η^2
Depression	11.90±6.072	10.60±5.004	8.80±4.427	6.60±4.037	104.136**	0.077
Anxiety	10.43±4.946	9.18±4.881	7.54±4.390	5.09±3.949	121.953**	0.089

Note: Data are depicted as Mean ± SD.

in the four modes, accounting for a total of 20.4%, among which the mild traditional victimization class has the largest number of people and the all-type bullying victimization class has the smallest number. This indicates that bullying and victimization phenomenon is prevalent in Chinese schools at present, and the distribution of all classes is pyramid-like, and the more severe the bullying, the less the number of people suffering from bullying.

Among the three classes of bullying victims, the C1 and C2 were subjected to more serious traditional bullying, and the C3 group was subjected to mild traditional bullying. It can be seen that three forms of traditional bullying usually occur together. In terms of conditional means, verbal bullying is the most common form of bullying, which is consistent with the co-occurrence rate of the various forms of bullying in **Table 2**. In addition, compared with the C2 and C3, only all types of bullying victims have more serious cyberbullying, which indicates that the cyberbullying of teenagers is more serious, and the victims may also suffer or encounter other traditional types of bullying. Victims of cyberbullying are often victims of traditional bullying, which is consistent with previous studies (Raskauskas & Stoltz, 2007; Li, 2007; Smith et al., 2008). The results also support the hypothesis that cyberbullying is an extension of campus bullying (Zhang et al., 2015; Zhu et al., 2014).

Demographic Characteristics and Analysis of Their Depression and Anxiety Indicators of Different Types Bullying Victims

The analysis of demographic characteristics of victims of different types of bullying showed that there are differences in demographic variables such as gender, grade level, school location, and academic achievements. Compared with females, in all three types of bullying mode, males are more likely to be bullied, and the gender differences in bullying patterns are consistent with previous studies (Rivers & Smith, 1994; Zhang et al., 2000; Chen & Le, 2002; Chen et al., 2013). This suggests that more attention should be paid to the bullying of males. Of the grade level, the overall bullying is declining with the growth of grades. The bullying in middle school students is significantly more than that of high school students, but it has slightly different in different types. In the C1, bullying and victimization in the first and second grade were much higher than in other

grades. In the C2 and C3, the three middle school grades are higher than the high school grades, and the severe bullying and victimization mainly occur in the middle and lower middle grades in middle school. A comparison of urban and rural schools showed that students whose schools are located in rural areas have a higher proportion of bullying than those whose schools are located in urban areas, which supported the previous findings (Wu et al., 2016). In practice, national and local governments should strengthen the prevention and control of bullying in rural schools. Previous studies regarding the impact of boarding on bullying suggested that the management system of rural boarding schools was not perfect and rural boarding students may lead to more bullying than urban boarding students (Wu & Hou, 2017; Wu et al., 2016). In this study, the comparison between day students and boarders showed that boarding students were more likely to suffer from bullying than day students, but there was no significant difference with the type of bullying. It may be due to the interaction between school location and boarding. The differences between rural and urban school boarding and the underlying mechanisms need further studies. Students with different self-assessment performance have different proportions in each bullying mode. In general, students with poor self-assessment scores are more likely to be bullied, which is consistent with previous report (Schwartz et al., 2001). Compared with students with poor and middle-level self-assessment scores, students with excellent self-assessment scores in C1 are less likely bullied, and students with middle and excellent self-assessment scores in C2 and C3 group are less likely bullied than those with poor self-assessment scores. Taken together, the self-assessed high academic performance in Chinese adolescent students seems to be an advantageous factor in protecting themselves from being bullied.

The results of the depression and anxiety scores of different types of victims showed that there were significant differences in the scores of depression and anxiety, and the higher the frequency of bullying suffered, the higher the level of depression and anxiety would be. It is worth emphasizing that the scores of a mild traditional victimization class and the questionnaire on the two scales of depression and anxiety are significantly higher than the non-victimization class, which means that as long as the students have the experience or feeling of being bullied, even if the frequency of bullying is not high, but it will produce a more serious negative impact on individual's mental health. The results of the depression and anxiety scores of the victims of each model support the "zero tolerance" of bullying on campus (Zhao & Wang, 2018).

Education and Intervention Enlightenment

In 2017, China issued the Guidance on Preventing and Controlling Bullying and Violence among Primary and Middle School Students, which shows the importance of controlling school bullying at the national level (Yao, 2017). Among the people who are involved in the bullying on campus, the proportion of bullying victims was the highest (Hu, 2017), and it has important practical significance. From our study, when students were noticed to have been suffering from a certain type of bullying, they should be paid more attention to the situation, i.e. whether they have suffered from multiple types of bullying at the same time, especially cyber bullying. Our findings indicated that the de-

gree of bullying was relatively more serious than the imagination. The exploration of bullying patterns of victims aimed to understand the qualitative differences within the bullied group. We found that even mild bullying can produce serious negative impact on students' depression and anxiety. Therefore, in daily study life, teachers and parents should pay attention to the signs of bullying and victimization, and should not ignore the stigmatization, malicious mocking and other minor encroachment behaviors in the communication with students, so as to find and stop bullying and victimization in time, and to prevent further deterioration of the situation. In addition, the study also suggests that male, junior in high school, middle school, lower grade, rural schools, poor self-rated academic performance are the demographic characteristics of the high incidence of bullying victimization.

Conclusions

In this study, the potential profile analysis was used to explore the bullying victimization patterns of adolescents at school, and the demographic characteristics and psychological introversion problems (depression and anxiety) were analyzed, and we draw conclusions below:

- Among the victims of school bullying, the four common types of bullying, namely verbal, physical, relational and cyber bullying, are co-occurring, and there are four typical patterns of school bullying victimization: all-type (traditional and cyber) bullying victimization class (1.5%), a traditional victimization class (3.9%), a mild traditional victimization class (14.9%), a non-victimization class (79.6%).
- Verbal bullying is the most common form of bullying, and most victims of cyber bullying are also victims of traditional bullying. Different demographic characteristics (gender, grade, school location, self-assessed academic performance) will affect the bullying mode of victimization. Male, middle school, rural school, and low self-evaluated students are more vulnerable to bullying.
- Even mild bullying involvement can produce a serious negative impact on an individual's mental health, and this is the solid evidence for a "zero tolerance" to bullying.

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