



School bullying victimization and self-rated health and life satisfaction: The gendered buffering effect of educational expectations[☆]



Lei Chai^a, Jia Xue^b, Ziqiang Han^{c,*}

^a Department of Sociology, University of Toronto, 725 Spadina Ave, Toronto, ON M5S 3L4, Canada

^b Factor-Inwentash Faculty of Social Work & Faculty of Information, University of Toronto, 246 Bloor Street W, Toronto, ON M5S 1V4, Canada

^c School of Political Science and Public Administration, Shandong University, Qingdao 266237, China

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ABSTRACT

Ample work has established the adverse impact of school bullying victimization on health and well-being outcomes. However, few studies have explored the potential coping mechanisms. To address this shortcoming, the present study examines three questions. First, how is school bullying victimization associated with self-rated health and life satisfaction? Second, how do educational expectations moderate those associations? Third, do any observed patterns further differ for boys and girls? Using a nationally representative survey of urban areas from China collected in 2016, we found that traditional bullying victims were more likely than non-victims to report poor self-related health and life satisfaction. We observed similar patterns for cyberbullying victims. Interestingly, traditional bullying victimization fully explained the effect of cyberbullying victimization on poor self-rated health and life satisfaction among boys. The patterns for girls remained less clear. Finally, educational expectations appeared to buffer the effect of cyberbullying victimization on poor self-rated health and life satisfaction for boys only. Overall, our findings underscored the complexity of documenting health and well-being disparities by bullying victimization.

1. Introduction

School bullying continues to be an important public health concern (Williford & Zinn, 2018). Scholars have assessed two forms of school bullying victimization, including traditional bullying (Tokunaga, 2010) and cyberbullying (Li, Smith, & Cross, 2012). According to studies conducted in Mainland China, Taiwan, and Hong Kong, the rates of traditional and cyberbullying bullying victimization ranged from 2% to 66% and from 12% to 72%, respectively (Chan & Wong, 2015). Traditional bullying is often defined as the “(1) intentional negative behavior that (2) typically occurs with some repetitiveness and is (3) directed against a person who has difficulty defending himself or herself” (Olweus, 2011, p.151). Cyberbullying is often defined as traditional bullying but delivered through digital platforms (Ybarra, Boyd, Korchmaros, & Oppenheim, 2012). Although prior research establishes that traditional bullying is more common compared to cyberbullying (Smith et al., 2008), more recent studies find evidence that cyberbullying victimization is as prevalent as traditional bullying victimization (Chan & Wong, 2015), and it is not uncommon for adolescents to experience both traditional bullying and cyberbullying simultaneously

(Cross, Lester, & Barnes, 2015; Smith et al., 2008; Tokunaga, 2010; Waasdorp & Bradshaw, 2015).

1.1. School bullying victimization and mental and behavioral outcomes

Research has established that school bullying victimization is detrimental to children's and adolescents' mental health and behavioral outcomes. For instance, compared to non-victims, youth who have experienced school bullying tend to report higher levels of internalizing symptoms, including anxiety (Moore et al., 2017; Schneider, O'donnell, Stueve, & Coulter, 2012; Wachs, 2012), depression (Chang et al., 2013; Moore et al., 2017; Murshid, 2017; Schneider et al., 2012; Wachs, 2012), feeling of loneliness (Cao et al., 2020; Pengpid & Peltzer, 2019), as well as lower levels of self-esteem (Coggan, Bennett, Hooper, & Dickinson, 2003; Tsaoasis, 2016). Moreover, school bullying victimization is linked to elevated rates of externalizing behavioral outcomes, such as substance use (Pengpid & Peltzer, 2019; Ttofi, Bowes, Farrington, & Lösel, 2014), self-injury (Gower & Borowsky, 2013; Moore et al., 2017), suicidal behavior (Moore et al., 2017; Romo & Kelvin, 2016), and aggression (Chan & Wong, 2017).

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* Corresponding author at: No.72 Binhai Road, Jimo, Qingdao, Shandong, China.

E-mail addresses: lei.chai@mail.utoronto.ca (L. Chai), jia.xue@utoronto.ca (J. Xue), ziqiang.han@sdu.edu.cn (Z. Han).

1.2. School bullying victimization and self-rated health and life satisfaction

In light of prior well-documented research findings, we examine whether the same patterns can be established to two important, yet understudied health and well-being outcomes, including self-rated health and life satisfaction. Scholars have recently proposed that school bullying victimization is linked to adolescents' physical health (Dhabhar, 2014; Straub & Cutolo, 2018). Although there is evidence that bullying victimization is associated with poor sleep quality (Herge, La Greca, & Chan, 2016) and physical or somatic symptoms, such as bedwetting, stomach-aches, or abdominal pain (Gini & Pozzoli, 2009), few studies have formally documented the effect of school bullying victimization on self-rated health (a global measure of physical health status). Using data from wave 5 of the Fragile Families and Child Wellbeing Study (FFCWS), Zhang and colleagues (2019) found that school bullying victimization was associated with poor self-rated health. Given prior sparse findings, more research is warranted.

Life satisfaction is an important general measure of subjective well-being (Diener, 1994). An extensive body of research has used life satisfaction to evaluate either children's and adolescents' overall quality of life (Pavot & Diener, 1993) or satisfaction with friends, family, and school experiences (Saha, Huebner, Hills, Malone, & Valois, 2014). Particularly, life satisfaction has been considered a main well-being outcome within the context of school bullying (Gini, Marino, Pozzoli, & Holt, 2018; Kerr, Valois, Huebner, & Drane, 2011; Valois, Kerr, & Huebner, 2012). Although there is considerable evidence that school bullying victims are more likely to report lower levels of life satisfaction (Nozaki, 2019; Weng, Chui, & Liu, 2017), most studies have employed homogenous samples of students, which limits the generalizability of their findings. The present study extends prior research by focusing on more heterogeneous groups of children and adolescents.

1.3. Educational expectations as a moderator

Despite the centrality of school bullying victimization for health and well-being consequences (Nozaki, 2019; Weng, Chui, & Liu, 2017; Zhang, De Luca, Oh, Liu, & Song, 2019), there has been surprisingly little attention to the question of what factors might buffer those relationships. Given that children and adolescents spend countless time in school, researchers have stressed that schools are in a unique position to address risks to health and well-being consequences (Masten, Herbers, Cutuli, & Lafavor, 2008).

Educational expectations might play an important role that influences the adverse effect of school bullying victimization on health and well-being. Using the stress process model (Pearlin & Bierman, 2013) as a guiding framework, we posit that educational expectations can be conceptualized as a protective resource that buffers the detrimental effect of bullying victimization on health and well-being outcomes. More specifically, the stress process model has three core components: stressors, protective moderating resources, and health outcomes (Pearlin & Bierman, 2013). Extensive evidence has established that (1) stressors are associated with deleterious health consequences, and (2) those adverse consequences are weaker for individuals who have access to protective resources (Pearlin & Bierman, 2013).

Research has established that bullying victimization is a prominent stressor, which is detrimental to adolescents' health and well-being (Priest, Kavanagh, Bécaries, & King, 2019). In addition, as one of the common protective resources, coping refers to "a behavioral or cognitive response to a stressor that helps to prevent or allay the harm otherwise caused by the stressor" (Pearlin & Bierman, 2013, p.330; also see Pearlin & Schooler, 1978). One form of coping is characterized by optimism (Taylor & Stanton, 2007). Based on 40 in-depth interviews with female secondary school students from rural Malawi, Frye (2012) stressed that unflagging optimism towards educational expectations was one crucial element contributing to educational success among disadvantaged youth. Being optimistic towards one's educational

aspirations allowed youth to create an imagined bright future to "refine their narratives about themselves and transcend their present reality" (Frye, 2012, p.1567), and ultimately developed a powerful cognitive schema that motivated themselves towards educational success. Therefore, it is reasonable to consider educational expectations as a proxy of optimism, which represents a protective resource. A body of quantitative research has found evidence supporting this claim. For instance, prior studies have observed that adolescents' educational expectations are positively associated with academic outcomes (Andrew & Flashman, 2017; Bozick, Alexander, Entwistle, Dauber, & Kerr, 2010; Feliciano & Lanuza, 2016; Karlson, 2015).

It is reasonable to assume that the moderating role of educational expectations might be particularly relevant in the context of Chinese culture. By conducting a comparative study across mainland China, Taiwan, South Korea, the U.S., Germany, and Australia, Li and Xie (2020) observed that compared with Western societies, children's educational expectations in East-Asian societies were less dependent on family's socioeconomic characteristics, such as parent's education. Instead, given Confucian cultural traditions embedded in East Asia, both parents and children tend to hold high values on higher educational attainment (Li & Xie, 2020). The cultural difference has explained the gap of higher educational achievement between Asian Americans and their white counterparts (Li & Xie, 2020). Given the importance of higher educational attainment among East Asians, it is crucial to examine how the potential moderating role of educational expectations might further benefit Chinese children's and adolescents' health and well-being.

1.4. Gender differences

There are reasons to suspect that the buffering effect of educational expectations might differ across gender. To guide our research hypothesis, we rely on the theoretical ideas of gender socialization (Leaper & Van, 2008; McKellar, Marchand, Diemer, Malanchuk, & Eccles, 2019; Yang & Gao, 2019). Gender socialization refers to a process where an individual develops beliefs towards gender roles and expectations (Stockard, 1999). The process of gender socialization has two stages (Davidson & Gordon, 1979): (1) the social construction of gender roles, and (2) the internalization of gender role expectations. Prior studies in China have stressed that the process of gender socialization contributes to the gender gap in educational achievement in higher education (Yang & Gao, 2019). On the one hand, the characteristics embedded in the social construction of gender roles (e.g., lower career expectations from families, schools, and gender stereotypes) might be detrimental to women's educational aspirations. Parents and teachers who hold traditional gender ideologies tend to have higher expectations towards the competence of boys than that of girls (Hand, Rice, & Greenlee, 2017; Hyde, Lindberg, Linn, Ellis, & Williams, 2008; Jacobs & Bleeker, 2004) and therefore prioritize boys' education than that of girls' (Lundberg, 2005; Zhang, Haddad, Torres, & Chen, 2011).

On the other hand, the individual characteristics, such as traditional gender role norms and attitudes, embedded in the internalization of gender role expectations, might also negatively shape women's educational expectations (Cui, Xue, Connolly, & Liu, 2016). Parents and teachers are the primary sources for youth to form gender role attitudes, which can shape children's and adolescents' educational development (Lu & Bai, 2002; Wei & Chen, 2005). If parents or teachers encourage their children or students to follow the traditional gender norms, boys should pursue higher education whereas girls should focus on how to perform the traditional gender role of being a good mother and wife (Li, Wang, & Shi, 2013). Then boys and girls would likely develop different paths toward educational trajectories. Taken together, as a result of the process of gender socialization, boys are more likely to report having high educational expectations (Zhang et al., 2011). Thus, they might be better able to use educational expectations as a

motivation to compensate for the negative effect of school bullying victimization on their health and well-being.

1.5. The present study

Using a nationally representative survey of urban areas from China collected in 2016, we examine three research questions. First, how is school bullying victimization associated with self-rated health and life satisfaction? Second, how do educational expectations moderate those associations? Third, do any observed patterns further differ for boys and girls? We hypothesize that:

Hypothesis 1: School bullying victims are more likely to report poor self-rated health and life satisfaction.

Hypothesis 2: Educational expectations buffer the effect of school bullying victimization on poor self-rated health and life satisfaction.

Hypothesis 3: The buffering effect of educational expectations is stronger for boys than girls.

2. Methods

2.1. Participants

The present study employed a nationally representative survey of urban areas from China collected in 2016. We first selected the seven provinces (i.e., northeast, north, east, south, northwest, southwest, and central part of China) because they represent the geographical variations. Then the capital city of each province was selected, including Shenyang, Beijing, Lanzhou, Guiyang, Nanjing, Guangzhou, and Changsha. The schools were conveniently selected due to the available connections with local schools. One of each type of pre-college school was selected, which means one primary school, one middle school, one high school, and one vocational school. Within each school, one class of each grade (without Grade one to Grade three in primary school) was randomly selected. We did not sample students from Grade one to Grade three because they were not capable of reading and understanding the survey questions. Then each student within the class was surveyed with the assistance of one of our research assistants. These different sampling strategies at each stage were chosen to best balance the “representativeness,” the scientific rationale, and the available reality (Lohr, 2009). In total, 3777 questionnaires were distributed to 28 schools (4 schools per province multiply by 7 provinces). The response rate was 100%. However, 102 (2.7%) students were excluded from the analyses due to missing values. The final sample is 3675 (1772 boys and 1903 girls) adolescents.

2.2. Measures

2.2.1. Self-rated health

We measured self-rated health based on the question: “In general, how do you evaluate your overall health status?” Responses were coded as: “very poor (1),” “poor (2),” “average (3),” “good (4),” and “very good (5).” Previous research has well-documented the validity of the single item of self-rated health (Zhang et al., 2019). We then recoded responses to a dummy variable (1 = “very poor/poor” and 0 = “average/good/very good”) (Mewes & Giordano, 2017; Sivakumaran & Margolis, 2019).

2.2.2. Self-rated life satisfaction

We measured self-rated life satisfaction based on the question: “In general, how do you evaluate your life satisfaction.” Responses were coded as: “very dissatisfied (1),” “dissatisfied (2),” “average (3),” “satisfied (4),” and “very satisfied (5).” Prior studies have documented the validity of the single item of self-rated life satisfaction (Jovanović & Lazić, 2018). We then recoded responses to a dummy variable (1 =

“very dissatisfied/dissatisfied” and 0 = “average/satisfied/very satisfied”) (Lacruz et al., 2016).

2.2.3. Bullying victimization

We measured bullying victimization based on the question: “In the last academic year, have your classmates or peers done any of the following behaviors to you?” (Ba et al., 2019), including “called nickname, made fun of, or insulted in a hurtful way (1)” (verbal bullying), “threat you with harm (2)” (verbal bullying), “kick, hit, push, or spit at you (3)” (physical bullying), “deliberately destroy your things (4)” (physical bullying), “spread rumors about your and encourage others to dislike you (5)” (relational bullying), “exclude you from group activities on purpose (6)” (relational bullying), “spread bad news or rumors about you on the internet or social media (7)” (cyberbullying), “purposely post your private information/photos/videos on the internet or social media (8)” (cyberbullying), “threat or insult you by sending a message from phone/WeChat/QQ (9)” (cyberbullying), and “deliberately exclude you from online communication or game (10)” (cyberbullying). We created traditional bullying based on the first six behaviors and cyberbullying based on the last four behaviors following the existing literature (Ba et al., 2019). Responses of each question included “never (1),” “rarely (2),” “sometimes (3),” and “frequently (4).” We averaged items such that higher scores indicated more frequent traditional bullying and cyberbullying victimization.

2.2.4. Educational expectations

Similar to prior research (Andrew & Flashman, 2017; Fishman, 2019), we assessed educational expectations based on the question: “What is the plan about your future?” The responses included “go to college,” “(go to work) make money,” “I don’t know,” and “Other.” We recoded the responses into a dummy variable (1 = “go to college” and 0 = “other”).

We controlled for the following variables based on the existing literature (Han, Fu, Liu, & Guo, 2018; Nozaki, 2019; Zhang, De Luca, Oh, Liu, & Song, 2019). *Race/ethnicity* was recoded as “Han people” and “other ethnic minority groups.” *Boarding school* was coded as “yes (boarding school)” and “no (non-boarding school).” *School type* was recoded as “primary school,” “middle school,” “high school,” and “vocational school.” *Living arrangement* was recoded as “living with parents,” “living with one parent,” and “others.” *Father’s education* and *mother’s education* were coded as “less than middle school,” “middle school,” “high school,” “college (Da Zhuan),” “Bachelor’s degree,” and “above Bachelor’s degree.” *The family’s socioeconomic status* was recoded as “very low,” “low,” “average,” “high,” and “very high.” *Geographic location* was assessed as the name of the cities: “Beijing,” “Lanzhou,” “Guangdong,” “Guiyang,” “Changsha,” “Nanjing,” and “Shenyang.”

Table 1 reported descriptive statistics of selected variables used in the analyses. Among our four focal variables, 3.21% of respondents reported “very poor/poor” in self-rated health (3.78% for boys vs. 2.68% for girls). Likewise, 3.13% of respondents reported “very dissatisfied/dissatisfied” in self-rated life satisfaction (3.95% for boys vs. 2.36% for girls). From a scale of 1–4, the mean of traditional bullying victimization was 1.35 (1.42 for boys vs. 1.27 for girls). Similarly, the mean of cyberbullying was 1.15 (1.20 for boys vs. 1.11 for girls). In addition, 82.42% of respondents reported planning for college (79.35% for boys vs. 85.29% for girls).

Based on our selected control variables, 91.76% of respondents were Han people (92.44% for boys vs. 91.12% for girls). 18.18% of them attended to boarding school (16.48% for boys vs. 19.76% for girls). The majority (37.77%) were in primary school (i.e., grades 4–6), followed by middle school (27.76%), high school (26.91%), and vocational school (7.56%). Similar patterns had also been observed for boys and girls. 73.28% of respondents were living with parents (72.23% for boys and 74.25% for girls) compared to those living with one parent, and others. The majority of respondents’ parents had middle and higher

Table 1
Descriptive statistics of selected variables in the analyses.

	Full sample		Boys		Girls	
	means/%s	S.D.	means/%s	S.D.	means/%s	S.D.
Self-rated health						
Very poor/poor	3.21%		3.78%		2.68%	
Average/good/very good	96.79%		96.22%		97.32%	
Self-rated life satisfaction						
Very dissatisfied/dissatisfied	3.13%		3.95%		2.36%	
Average/satisfied/very satisfied	96.87%		96.05%		97.64%	
Traditional bullying	1.35	0.60	1.42	0.67	1.27	0.52
Cyberbullying	1.15	0.45	1.20	0.51	1.11	0.37
Educational expectations						
Yes	82.42%		79.35%		85.29%	
Others	17.58%		20.65%		14.71%	
Race/ethnicity						
Han people	91.76%		92.44%		91.12%	
Other ethnic minority groups	8.24%		7.56%		8.88%	
Boarding school						
Yes	18.18%		16.48%		19.76%	
No	81.82%		83.52%		80.24%	
School type						
Primary school	37.77%		39.28%		36.36%	
Middle school	27.76%		28.10%		27.43%	
High school	26.91%		26.24%		27.54%	
Vocational school	7.56%		6.38%		8.67%	
Living arrangement						
With parents	73.28%		72.23%		74.25%	
With one parent	9.90%		10.50%		9.35%	
Others	16.82%		17.27%		16.40%	
Father's education						
Less than middle school	10.07%		11.12%		9.09%	
Middle school	31.35%		30.14%		32.48%	
High school	24.24%		24.21%		24.28%	
College (Da zhuan)	11.43%		11.34%		11.51%	
Bachelor's degree	14.01%		14.05%		13.98%	
Bachelor's degree above	8.90%		9.14%		8.67%	
Mother's education						
Less than middle school	14.34%		13.04%		15.55%	
Middle school	30.01%		30.59%		29.48%	
High school	22.29%		22.46%		22.12%	
College (Da zhuan)	11.46%		11.00%		11.88%	
Bachelor's degree	13.55%		13.37%		13.72%	
Bachelor's above degree	8.35%		9.54%		7.25%	
Family's socioeconomic status						
Low	3.84%		4.68%		3.05%	
Below average	10.99%		11.74%		10.30%	
Average	54.20%		51.30%		56.91%	
Above average	26.39%		26.35%		26.43%	
High	4.57%		5.93%		3.31%	
Geographic location						
Beijing	16.08%		16.08%		16.08%	
Lanzhou	12.46%		12.98%		11.98%	
Guangzhou	12.82%		13.04%		12.61%	
Guiyang	13.66%		13.32%		13.98%	
Changsha	21.44%		22.35%		20.60%	
Nanjing	10.56%		11.12%		10.04%	
Shenyang	12.98%		11.12%		14.71%	
N	3,675		1,772		1,903	

school levels of education (middle school: 31.25% for fathers vs. 30.01% for mothers and high school: 24.24% for fathers vs. 22.29% for mothers). Similar patterns remained the same for the parents of the

boys and girls. Over 50% of respondents reported average as their family's socioeconomic status, followed by above average (26.39%), below average (10.99%), high (4.57%), and low (3.84%). Similar patterns had also been reported for boys and girls. Finally, a higher percentage of respondent were from Changsha (i.e., 21.44%) compared with the other six geographic locations. Similar patterns have also been observed for boys and girls (22.35% vs. 20.60%).

2.3. Analytical strategy

We used logistic regression to fit models for our two dichotomous measures, including poor self-rated health and life satisfaction. In Tables 2 and 3, we tested the direct effect of bullying victimization on each of the two health and well-being outcomes. For these models, in addition to odds ratio (OR), we also reported average marginal effects (AME), which provided a discrete change in the outcome (i.e., the predicted probability) with other covariate values averaged across the population (Chai & Maroto, 2020). Next, in Tables 4–6, we examined whether the associations between bullying victimization and poor self-rated health and life satisfaction differed across educational expectations, and further for boys and girls.

3. Results

3.1. School bullying victimization and self-rated health and life satisfaction

Table 2 presented logistic regression models predicting the probability of reporting poor self-rated health. Among boys, Model 1a showed that, compared to non-traditional bullying victimization, every one-point increase in traditional bullying scale was associated with a 3.4 ($p < .001$) percentage point increase in the probability of reporting poor self-rated health. Similarly, compared to non-cyberbullying victimization, every one-point increase in cyberbullying bullying scale was associated with a 3.2 ($p < .001$) percentage point increase in the probability of reporting poor self-reported health (as shown in Model 1b). However, after accounting for both traditional bullying and cyberbullying victimization, Model 1c indicated that the effect of cyberbullying victimization on poor self-rated health became statistically insignificant. In contrast, the significant effect of traditional bullying victimization remained, suggesting that every one-point increase in traditional bullying scale was still associated with a 3.0 ($p < .001$) percentage point increase in the probability of reporting poor self-rated health.

Among girls, Model 2a showed that, compared to non-traditional bullying victimization, every one-point increase in traditional bullying scale was associated with a 2.7 ($p < .001$) percentage point increase in the probability of reporting poor self-rated health. Similarly, compared to non-cyberbullying victimization, every one-point increase in cyberbullying scale was associated with a 2.9 ($p < .001$) percentage point increase in the probability of reporting poor self-reported health (as shown in Model 2b). The same patterns remained after accounting for both traditional bullying and cyberbullying victimization. As Model 2c indicated, every one-point increase in traditional and cyberbullying scale was still associated with a 1.7 ($p < .05$) percentage point increase in the probability of reporting poor self-rated health, respectively.

Table 3 presented logistic regression models predicting the probability of reporting poor self-rated life satisfaction. Among boys, Model 1a showed that, compared to non-traditional bullying victimization, every one-point increase in traditional bullying scale was associated with a 3.5 ($p < .001$) percentage point increase in the probability of reporting poor self-rated life satisfaction. Similarly, compared to non-cyberbullying victimization, every one-point increase in cyberbullying scale was also associated with a 3.4 ($p < .001$) percentage point increase in the probability of reporting poor self-reported life satisfaction (as shown in Model 1b). However, after accounting for both traditional

Table 2
Logistic regression models predicting the probability of reporting poor self-rated health.

	Boys						Girls					
	Model 1a		Model 1b		Model 1c		Model 2a		Model 2b		Model 2c	
	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME
Traditional	2.850*** (0.422)	0.034			2.479*** (0.523)	0.030	3.066*** (0.697)	0.027			2.029* (0.599)	0.017
Cyber			2.576*** (0.409)	0.032	1.242 (0.289)	0.008			3.296*** (0.762)	0.029	2.044* (0.685)	0.017
Intercept	0.005		0.012		0.005		0.001		0.002		0.001	
PseudoR ²	0.167		0.138		0.169		0.163		0.162		0.174	

Note: All models include full control variables. Standard errors are reported in parenthesis.

***p < .001; **p < .01; *p < .05; + < 0.10.

Table 3
Logistic regression models predicting the probability of reporting poor self-rated life satisfaction.

	Boys						Girls					
	Model 1a		Model 1b		Model 1c		Model 2a		Model 2b		Model 2c	
	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME	O.R.	AME
Traditional	2.888*** (0.440)	0.035			2.285*** (0.488)	0.027	2.772*** (0.622)	0.023			2.003* (0.641)	0.015
Cyber			2.778*** (0.449)	0.034	1.449 (0.340)	0.012			2.794*** (0.642)	0.023	1.664 (0.566)	0.011
Intercept	0.006		0.014		0.006		0.002		0.003		0.002	
PseudoR ²	0.226		0.206		0.230		0.110		0.105		0.115	

Note: All models include full control variables. Standard errors are reported in parenthesis.

***p < .001; **p < .01; *p < .05; + < 0.10.

bullying and cyberbullying victimization, Model 1c indicated that the effect of cyberbullying victimization on poor self-rated life satisfaction became statistically insignificant. In contrast, the significant effect of traditional bullying victimization remained, suggesting that every one-point increase in traditional bullying scale was still associated with a 2.7 (p < .001) percentage point increase in the probability of reporting poor self-rated life satisfaction.

Among girls, Model 2a showed that, compared to non-traditional bullying victimization, every one-point increase in traditional bullying scale was associated with a 2.3 (p < .001) percentage point increase in the probability of reporting poor self-rated life satisfaction. Likewise, compared to non-cyberbullying victimization, every one-point increase in cyberbullying scale was also associated with a 2.3 (p < .001) percentage point increase in the probability of reporting poor self-reported life satisfaction (as shown in Model 2b). However, after accounting for both traditional bullying and cyberbullying victimization, Model 2c indicated that the effect of cyberbullying victimization on poor self-rated life satisfaction became statistically insignificant. In contrast, the significant effect of traditional bullying victimization remained, suggesting that every one-point increase in traditional bullying scale was still associated with a 1.5 (p < .05) percentage point increase in the probability of reporting poor self-rated life satisfaction. Taken together, our finding partially supported *hypothesis 1*.

3.2. The gendered buffering effect of educational expectations

Table 4 presented logistic regression models predicting the moderating effect of educational expectations on the relationship between bullying victimization and poor self-rated health and life satisfaction. And, whether those associations further differed for boys and girls. Given that the current *the American Sociological Review (ASR)* editors stress that: “don’t use the coefficient on the interaction term to conclude the significance of statistical interaction in categorical models such as logit, probit, Poisson, and so on” (Mustillo, Lizardo, & McVeigh, 2018,

p.1282), we therefore tested interaction effects between bullying victimization and planning for college using the predicted probability metric (Mize, 2019).

By following Mize (2019) methodological approach, Models 1a-2b in Table 5 indicated predicted probability of reporting poor self-rated health and life satisfaction by bullying victimization and educational expectations for boys and girls separately. Among boys, Model 1a indicated that every one-point increase in the traditional bullying scale was associated with a 9.9 (p < .001) percentage point increase in the probability of reporting poor self-rated health for boys who reported no educational expectations. The effect of traditional bullying victimization on poor self-rated health was only marginally statistically significant for those who had educational expectations (p < .10). Together, educational expectations buffered the adverse effect of traditional bullying victimization on poor self-rated health for boys. That is, the effect of traditional bullying victimization on poor self-rated health was weaker for boys who had educational expectations (AME = −0.078, p < .001). We then turned our attention to cyberbullying victimization. The results suggested that the effect of cyberbullying victimization on poor self-rated health was weaker for those who had educational expectations (AME = −0.024, p < .05). However, as Model 1b indicated, educational expectations did not moderate the association between bullying victimization and poor self-rated health for girls.

Model 2a indicated that, among boys, every one-point increase in traditional bullying scale was associated with an 8.3 (p < .001) percentage point increase in the probability of reporting poor self-rated life satisfaction for those who had no educational expectations. The effect of traditional bullying victimization on poor self-rated life satisfaction was statistically insignificant for those who had educational expectations (AME = 0.013 and p > .05). Together, educational expectations buffered the adverse effect of traditional bullying victimization on poor self-rated life satisfaction for boys. That is, the effect of traditional bullying victimization on poor self-rated life satisfaction was weaker for

Table 4
Logistic regression models predicting poor self-rated health and life satisfaction by educational expectations and gender.

	Boys				Girls				Full sample			
	Poor SR health		Poor SR life satisfaction		Poor SR health		Poor SR life satisfaction		Poor SR health		Poor SR life satisfaction	
	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.	O.R.
Boys (=1)												
Traditional	3.907** (1.217)	2.430*** (0.529)	2.856*** (0.827)	2.079*** (0.462)	1.666 (0.642)	1.858* (0.570)	1.506 (0.612)	1.783 + (0.597)	0.285 (0.245)	0.444 (0.394)	0.310 (0.240)	0.424 (0.293)
Cyber	0.198 (0.298)	2.035* (0.619)	1.440 (0.359)	2.312** (0.706)	2.031* (0.646)	1.813 (0.753)	1.682 (0.599)	1.524 (0.631)	1.291 (0.250)	2.181*** (0.376)	1.447 (0.462)	1.939*** (0.351)
Educational expectations (1 = yes)	2.065 (1.554)	1.908 (1.252)	1.027 (0.716)	1.384 (0.897)	0.329 (0.261)	0.346 (0.251)	0.219 + (0.172)	0.308 (0.226)	0.447 (0.331)	0.281 + (0.194)	0.252 + (0.188)	0.253 + (0.184)
Traditional × educational expectations	0.466* (0.148)		0.562 + (0.176)		1.168 (0.487)		1.341 (0.576)		0.972 (0.373)		1.203 (0.491)	
Cyber × educational expectations		0.375** (0.140)		0.378* (0.150)		1.171 (0.542)		1.107 (0.536)		1.423 (0.612)		1.286 (0.616)
Boys × traditional									1.693 (0.607)		1.957 + (0.676)	
Boys × cyber										1.518 (0.553)		1.904 (0.702)
Educational expectations × boys										6.142* (0.5,700)		5.106 + (0.4,849)
Traditional × educational expectations × boys									4.447 (4.567)		4.217 (0.4,200)	
Cyber × education expectations × boys									0.530 (0.256)		0.473 (0.238)	
Intercept	0.004	0.005	0.008	0.008	0.003	0.003	0.005	0.005	0.011	0.009	0.020	0.016
Pseudo R ²	0.194	0.197	0.261	0.266	0.185	0.185	1.34	0.133	0.146	0.148	0.187	0.189

Note: All models include full control variables.

***p < .001; **p < .01; *p < .05; + < 0.10.

Table 5

Predicted probability of reporting poor self-rated health and life satisfaction by bullying victimization and educational expectations for boys and girls.

		Poor SR health		Poor SR life satisfaction	
		Model 1a	Model 1b	Model 2a	Model 2b
		Boys	Girls	Boys	Girls
		AME	AME	AME	AME
Traditional	No educational expectations	0.099***	0.030	0.083***	0.025
	Have educational expectations	0.021 +	0.018	0.013	0.016
Traditional × educational expectations		−0.078***	−0.069**	−0.009	
Cyber	No educational expectations	0.059**	0.037	0.053**	0.037
	Have educational expectations	0.035**	0.016	0.023*	0.013
Cyber × educational expectations		−0.024*	−0.030*	−0.025	

Note: ***p < .001; **p < .01; *p < .05; + < 0.10.

Table 6

Predicted probability of reporting poor self-rated health and life satisfaction by bullying victimization and educational expectations and gender.

		Poor SR health		Poor SR life satisfaction	
		Model 1a	Model 1b	Model 2a	Model 2b
		AME	AME	AME	AME
Traditional × educational expectations for boys		−0.030**		−0.036***	
Traditional × educational expectations for girls		−0.018		−0.007	
Traditional × educational expectations × gender		−0.012		−0.028	
Cyber × educational expectations for boys			−0.029**		−0.038**
Cyber × educational expectations for girls			0.004		0.002
Cyber × educational expectations × gender			−0.033 +		−0.040*

Note: ***p < .001; **p < .01; *p < .05; + < 0.10.

boys who had educational expectations (AME = −0.069, $p < .01$). In terms of cyberbullying victimization, the results showed similar patterns that we observed for traditional bullying victimization, suggesting that the effect of cyberbullying victimization on poor self-rated life satisfaction was weaker for boys who had educational expectations (AME = −0.030, $p < .05$). However, as Model 2b indicated, educational expectations did not moderate the association between bullying victimization and poor self-rated life satisfaction for girls. Taken together, our finding partially supported *hypothesis 2*.

Table 6 presented the predicted probability of reporting poor self-rated health and life satisfaction by bullying victimization, educational expectations, and gender. Model 1a showed that although the interaction between traditional bullying victimization and educational expectations was statistically significant for boys (AME = −0.030, $p < .01$) and that interaction was not statistically significant for girls (AME = −0.018, $p > .05$), the three-way interaction with gender was not statistically significant (AME = −0.012, $p > .05$). Similar patterns had also been observed for poor self-rated life satisfaction (as shown in Model 2a).

In terms of cyberbullying victimization, Model 1b showed that the interaction between cyberbullying victimization and educational expectations was statistically significant for boys (AME = −0.029, $p < .01$), that interaction was not statistically significant for girls (AME = 0.004, $p > .05$), and the three-way interaction with gender was marginally statistically significant (AME = −0.033, $p < .10$). Similar patterns had also been observed for poor self-rated life satisfaction (as shown in Model 2b). Taken together, our finding partially supported *hypothesis 3*.

4. Discussion

Our findings contribute to prior research on the association between school bullying victimization and health in two ways: First, although a large body of research has established that school bullying victimization is associated with adverse mental health and behavioral consequences (Moore et al., 2017; Pengpid & Peltzer, 2019), other aspects

of health and well-being outcomes such as self-rated health and life satisfaction have been understudied. Our study showed that, compared to non-victims, traditional bullying victims were more likely to report poor self-rated health and life satisfaction. Similar patterns had also been observed for the association between cyberbullying victimization and poor self-rated health and life satisfaction. These results are consistent with what prior studies have found that school bullying victimization is detrimental to children's and adolescents' health (Nozaki, 2019; Zhang, De Luca, Oh, Liu, & Song, 2019).

However, after taking into account both traditional bullying and cyberbullying victimization simultaneously, the associations between bullying victimization and poor self-rated health and life satisfaction changed dramatically. More specifically, among boys, the adverse effect of cyberbullying victimization on poor self-rated health became statistically insignificant, while the effect of traditional bullying remained statistically significant. A similar pattern had also been observed for the association between bullying victimization and poor self-rated life satisfaction. Among girls, the patterns appeared to be less clear. Most existing literature has examined the effect of school bullying victimization on health and well-being outcomes using either only one form (Nozaki, 2019) or a general measure of victimization (Zhang et al., 2019). However, given that there is often an overlap between traditional and cyberbullying victimization (Cross et al., 2015; Smith et al., 2008; Tokunaga, 2010; Waasdorp & Bradshaw, 2015), researchers would assume these two forms of bullying victimization are associated with health and well-being independently without documenting both forms of bullying victimization simultaneously. However, our results indicated their biased estimates.

Second, using the stress process model (Pearlin & Bierman, 2013) as a guiding framework, this study is the first that discovered educational expectations as a powerful protective resource that buffered the effect of bullying victimization on adverse health and well-being consequences for boys. Our results indicated that the adverse effect of traditional bullying victimization on poor self-rated health and life satisfaction was weaker for boys who had educational expectations. Interestingly, although cyberbullying was not directly associated with

poor self-rated health (as shown in Model 1c, Table 2) and life satisfaction (as shown in Model 1c, Table 3), educational expectations still appeared to buffer those associations (Models 1a and 2a, Table 5). These patterns suggested that without testing the moderating effect of educational expectations, we would falsely conclude that a statistically insignificant effect of cyberbullying on poor self-rated health and life satisfaction for boys, though conditional effects appeared to exist.

By contrast, educational expectations did not buffer the associations between bullying victimization and health and well-being outcomes for girls. These patterns align with the prediction of the ideas of gender socialization (Stockard, 1999), which emphasize the important roles embedded in the social construction of gender roles and the internalization of gender role expectations. By conducting three-way interactions, we found that only the interactions between cyberbullying and poor self-rated health and life satisfaction further differed for boys and girls. Given that adolescent girls tend to report lower educational expectations attributed to their perceptions of barriers faced in schools and at workplaces (Andres, Adamuti-Trache, Yoon, Pidgeon, & Thomsen, 2007; Eccles & Wigfield, 2002; Lent et al., 2001; Mello, 2008), as well as parents' gendered stereotypes (Lundberg, 2005; Zhang et al., 2011), educational expectations might play a less important factor to influence detrimental health and well-being consequences for girls than boys.

Despite its contributions, our study included two major limitations. First, the dataset employed in the present study was cross-sectional, which limited potential causality. Second, due to the dataset limitation, we were unable to examine self-rated mental health consequences among school bullying victims.

5. Conclusion and implications

School bullying continues to be an important public health and education concern (Williford & Zinn, 2018). To provide effective strategies towards reducing the detrimental effect of school bullying victimization on children's and adolescent's health and well-being, prior research has primarily focused on the mediating effects of school-related characteristics such as school connectedness (Liu, Carney, Kim, Hazler, & Guo, 2020) and school satisfaction (Oriol, Miranda, & Unanue, 2020). Little is known about what moderating mechanism that might buffer the adverse association between bullying victimization and health and well-being among youth. Our study discovered the protective effect of educational expectations. This finding has important policy implications. First, teachers and school administrators should encourage students to hold high educational expectations by promoting college for all ethos (Domina, Conley, & Farkas, 2011) to improve students' health and well-being. Second, although there is some preliminary evidence that Chinese traditional gender norms have weakened dramatically due to the one-child policy (Xiao & Feng, 2010; Zhang, 2006). Our statistically insignificant effect of educational expectations for girls reported in our study might suggest otherwise. To improve girls' educational expectations, parents and teachers should make more efforts to promote gender equality. To sum, although our study has provided valuable empirical evidence on the gendered buffering effect of educational expectations on the association between bullying victimization and self-rated health and life satisfaction. Future studies should explore other health outcomes such as mental health and other potential protective resources to improve health and well-being disparities by school bullying victimization.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

- Andres, L., Adamuti-Trache, M., Yoon, E. S., Pidgeon, M., & Thomsen, J. P. (2007). Educational expectations, parental social class, gender, and postsecondary attainment: A 10-year perspective. *Youth & Society*, 39(2), 135–163.
- Andrew, M., & Flashman, J. (2017). School transitions, peer influence, and educational expectation formation: Girls and boys. *Social Science Research*, 61, 218–233.
- Ba, Z., Han, Z., Gong, Z., Li, F., Zhang, H., & Zhang, G. (2019). Ethnic differences in experiences of school bullying in China. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2019.104402>.
- Bozick, R., Alexander, K., Entwistle, D., Dauber, S., & Kerr, K. (2010). Framing the future: Revisiting the place of educational expectations in status attainment. *Social Forces*, 88(5), 2027–2052.
- Cao, Q., Xu, X., Xiang, H., Yang, Y., Peng, P., & Xu, S. (2020). Bullying victimization and suicidal ideation among Chinese left-behind children: Mediating effect of loneliness and moderating effect of gender. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2020.104848>.
- Chai, L., & Maroto, M. (2020). Economic insecurity among gay and bisexual men: Evidence from the 1991–2016 US General Social Survey. *Sociological Perspectives*, 62(1), 50–68.
- Chan, H. C. O., & Wong, D. S. (2015). Traditional school bullying and cyberbullying in Chinese societies: Prevalence and a review of the whole-school intervention approach. *Aggression and Violent Behavior*, 23, 98–108.
- Chan, H. C. O., & Wong, D. S. (2017). Coping with cyberbullying victimization: An exploratory study of Chinese adolescents in Hong Kong. *International Journal of Law, Crime and Justice*, 50, 71–82.
- Chang, F. C., Lee, C. M., Chiu, C. H., Hsi, W. Y., Huang, T. F., & Pan, Y. C. (2013). Relationships among cyberbullying, school bullying, and mental health in Taiwanese adolescents. *Journal of School Health*, 83(6), 454–462.
- Coggan, C., Bennett, S., Hooper, R., & Dickinson, P. (2003). Association between bullying and mental health status in New Zealand adolescents. *International Journal of Mental Health Promotion*, 5(1), 16–22.
- Cross, D., Lester, L., & Barnes, A. (2015). A longitudinal study of the social and emotional predictors and consequences of cyber and traditional bullying victimisation. *International Journal of Public Health*, 60(2), 207–217.
- Cui, N., Xue, J., Connolly, C. A., & Liu, J. Jianghong Liu. (2016). Does the gender of parent or child matter in child maltreatment in China? *Child Abuse & Neglect*, 54, 1–9.
- Davidson, L., & Gordon, L. K. (1979). *The sociology of gender*. Chicago: Rand McNally.
- Dhabhar, F. S. (2014). Effects of stress on immune function: The good, the bad, and the beautiful. *Immunologic Research*, 58(2–3), 193–210.
- Diener, E. (1994). Assessing subjective well-being: Progress and opportunities. *Social Indicators Research*, 31(2), 103–157.
- Domina, T., Conley, A., & Farkas, G. (2011). The link between educational expectations and effort in the college-for-all era. *Sociology of Education*, 84(2), 93–112.
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53(1), 109–132.
- Feliciano, C., & Lanuza, Y. R. (2016). The immigrant advantage in adolescent educational expectations. *International Migration Review*, 50(3), 758–792.
- Fishman, S. H. (2019). Do plans really matter? Re-assessing the role of adolescent expectations in educational attainment. *Research in Social Stratification and Mobility*, 62. <https://doi.org/10.1016/j.rssm.2019.05.002>.
- Frye, M. (2012). Bright futures in Malawi's new dawn: Educational aspirations as assertions of identity. *American Journal of Sociology*, 117(6), 1565–1624.
- Gini, G., Marino, C., Pozzoli, T., & Holt, M. (2018). Associations between peer victimization, perceived teacher unfairness, and adolescents' adjustment and well-being. *Journal of School Psychology*, 67, 56–68.
- Gini, G., & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics*, 123(3), 1059–1065.
- Gower, A. L., & Borowsky, I. W. (2013). Associations between frequency of bullying involvement and adjustment in adolescence. *Academic Pediatrics*, 13(3), 214–221.
- Han, Z., Fu, M., Liu, C., & Guo, J. (2018). Bullying and suicidality in urban Chinese youth: The role of teacher–student relationships. *Cyberpsychology, Behavior, and Social Networking*, 21(5), 287–293.
- Hand, S., Rice, L., & Greenlee, E. (2017). Exploring teachers' and students' gender role bias and students' confidence in STEM fields. *Social Psychology of Education*, 20(4), 929–945.
- Herge, W. M., La Greca, A. M., & Chan, S. F. (2016). Adolescent peer victimization and physical health problems. *Journal of Pediatric Psychology*, 41(1), 15–27.
- Hyde, J. S., Lindberg, S. M., Linn, M. C., Ellis, A. B., & Williams, C. C. (2008). Gender similarities characterize math performance. *Science*, 321(5888), 494–495.
- Jacobs, J. E., & Bleeker, M. M. (2004). Girls' and Boys' developing interests in math and science: Do parents matter? *New Directions for Child and Adolescent Development*, 106, 5–21.
- Jovanović, V., & Lazić, M. (2018). Is longer always better? A comparison of the validity of single-item versus multiple-item measures of life satisfaction. *Applied Research in Quality of Life*, 1–18. <https://doi.org/10.1007/s11482-018-9680-6>.
- Karlsen, K. B. (2015). Expectations on track? High school tracking and adolescent educational expectations. *Social Forces*, 94(1), 115–141.
- Kerr, J. C., Valois, R. F., Huebner, E. S., & Drane, J. W. (2011). Life satisfaction and peer

- victimization among USA public high school adolescents. *Child Indicators Research*, 4(1), 127–144.
- Lacruz, M. E., Schmidt-Pokrzywniak, A., Dragano, N., Moebus, S., Deutrich, S. E., Möhlenkamp, S., & Stang, A. (2016). Depressive symptoms, life satisfaction and prevalence of sleep disturbances in the general population of Germany: Results from the Heinz Nixdorf Recall study. *BMJ Open*, 6, Article e007919.
- Leaper, C., & Van, S. R. (2008). Masculinity ideology, covert sexism, and perceived gender typicality in relation to young men's academic motivation and choices in college. *Psychology of Men & Masculinity*, 9(3), 139–153.
- Lent, R. W., Brown, S. D., Brenner, B., Chopra, S. B., Davis, T., Talleyrand, R., & Suthakaran, V. (2001). The role of contextual supports and barriers in the choice of math/science educational options: A test of social cognitive hypotheses. *Journal of Counseling Psychology*, 48(4), 474–483.
- Li, Q., Smith, P. K., & Cross, D. (2012). Research into cyberbullying: Context. In Q. Li, D. Cross, & P. Smith (Eds.). *Cyberbullying in the global playground: Research from international perspectives* (pp. 3–12). Malden, MA: Blackwell.
- Li, J., Wang, Y., & Shi, T. (2013). 社会性别观念对女研究生学业成就的影响——基于第三期中国妇女社会地位调查之女大学生典型群体调查数据的分析 (the influence of gender awareness on female graduate students' academic achievement: Findings from the third National Survey on the status of Chinese women). *Collection of Women's Studies*, 3, 18–27.
- Li, W., & Xie, Y. (2020). The influence of family background on educational expectations: A comparative study. *Chinese Sociological Review*, 1–26. <https://doi.org/10.1080/21620555.2020.1738917>.
- Liu, Y., Carney, J. V., Kim, H., Hazler, R. J., & Guo, X. (2020). Victimization and students' psychological well-being: The mediating roles of hope and school connectedness. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2019.104674>.
- Lohr, S. L. (2009). *Sampling: Design and analysis*. Boston, MA: Brooks/Cole Cengage Learning.
- Lu, X. Y., & Bai, Q. Y. (2002). 传统的性别角色观念与女性成才 (on traditional concept of sex role and the female accomplishment). *Journal of Chong qing University of Posts and Telecommunications*, 3(1), 89–92.
- Lundberg, S. (2005). Sons, daughters, and parental behaviour. *Oxford Review of Economic Policy*, 21(3), 340–356.
- Masten, A. S., Herbers, J. E., Cutuli, J. J., & Lafavor, T. L. (2008). Promoting competence and resilience in the school context. *Professional School Counseling*, 12(2), 76–84.
- McKellar, S. E., Marchand, A. D., Diemer, M. A., Malanchuk, O., & Eccles, J. S. (2019). Threats and supports to female students' math beliefs and achievement. *Journal of Research on Adolescence*, 29(2), 449–465.
- Mello, Z. R. (2008). Gender variation in developmental trajectories of educational and occupational expectations and attainment from adolescence to adulthood. *Developmental Psychology*, 44(4), 1069–1080.
- Mewes, J., & Giordano, G. N. (2017). Self-rated health, generalized trust, and the affordable care act: A US panel study, 2006–2014. *Social Science & Medicine*, 190, 48–56.
- Mize, T. D. (2019). Best practices for estimating, interpreting, and presenting nonlinear interaction effects. *Sociological Science*, 6, 81–117.
- Moore, S. E., Norman, R. E., Suetani, S., Thomas, H. J., Sly, P. D., & Scott, J. G. (2017). Consequences of bullying: victimization in childhood and adolescence: A systematic review and meta-analysis. *World Journal of Psychiatry*, 7(1), 60.
- Murshid, N. S. (2017). Bullying victimization and mental health outcomes of adolescents in Myanmar, Pakistan, and Sri Lanka. *Children and Youth Services Review*, 76, 163–169.
- Mustillo, S. A., Lizardo, O. A., & McVeigh, R. M. (2018). Editors' comment: A few guidelines for quantitative submissions. *American Sociological Review*, 83, 1281–1283.
- Nozaki, Y. (2019). Why do bullies matter? The impacts of bullying involvement on Adolescents' life satisfaction via an adaptive approach. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2019.104486>.
- Olweus, D. (2011). Bullying at school and later criminality: Findings from three Swedish community samples of males. *Criminal Behaviour and Mental Health*, 21(2), 151–156.
- Oriol, X., Miranda, R., & Unanue, J. (2020). Bullying victimization at school and subjective well-being in early and late Peruvian adolescents in residential care: The contribution of satisfaction with microsystem domains. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2019.104685>.
- Pavot, W., & Diener, E. (1993). The affective and cognitive context of self-reported measures of subjective well-being. *Social Indicators Research*, 28(1), 1–20.
- Pearlin, L. I., & Bierman, A. (2013). Current issues and future directions in research into the stress process. In C. Aneshensel, J. Phelan, & A. Bierman (Eds.). *Handbook of the sociology of mental health* (pp. 325–340). Dordrecht, The Netherlands: Springer.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *Journal of Health and Social Behavior*, 19(1), 2–21.
- Pengpid, S., & Peltzer, K. (2019). Bullying victimization and externalizing and internalizing symptoms among in-school adolescents from five ASEAN countries. *Children and Youth Services Review*. <https://doi.org/10.1016/j.childyouth.2019.104473>.
- Priest, N., Kavanagh, A., Bécarea, L., & King, T. (2019). Cumulative effects of bullying and racial discrimination on adolescent health in Australia. *Journal of Health and Social Behavior*, 60(3), 344–361.
- Romo, M. L., & Kelvin, E. A. (2016). Impact of bullying victimization on suicide and negative health behaviors among adolescents in Latin America. *Revista panamericana de salud publica*, 40, 347–355.
- Saha, R., Huebner, E. S., Hills, K. J., Malone, P. S., & Valois, R. F. (2014). Social coping and life satisfaction in adolescents. *Social Indicators Research*, 115(1), 241–252.
- Schneider, S. K., O'donnell, L., Stueve, A., & Coulter, R. W. (2012). Cyberbullying, school bullying, and psychological distress: A regional census of high school students. *American Journal of Public Health*, 102(1), 171–177.
- Sivakumaran, G., & Margolis, R. (2019). Self-rated health by sexual orientation among middle-aged and older adults in Canada. *The Journals of Gerontology Series B*. <https://doi.org/10.1093/geronb/gbz067>.
- Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry*, 49(4), 376–385.
- Stockard, J. (1999). Gender socialization. In J. S. Chafetz (Ed.). *The handbook of the sociology of gender* (pp. 215–227). New York: Plenum Publishers.
- Straub, R. H., & Cutolo, M. (2018). Psychoneuroimmunology—developments in stress research. *Wiener Medizinische Wochenschrift*, 168(3–4), 76–84.
- Taylor, S. E., & Stanton, A. L. (2007). Coping resources, coping processes, and mental health. *Annual Review of Clinical Psychology*, 3, 377–401.
- 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.
- Tsaousis, I. (2016). The relationship of self-esteem to bullying perpetration and peer victimization among schoolchildren and adolescents: A meta-analytic review. *Aggression and Violent Behavior*, 31, 186–199.
- Ttofi, M. M., Bowes, L., Farrington, D. P., & Lösel, F. (2014). Protective factors interrupting the continuity from school bullying to later internalizing and externalizing problems: A systematic review of prospective longitudinal studies. *Journal of School Violence*, 13(1), 5–38.
- Valois, R. F., Kerr, J. C., & Huebner, S. E. (2012). Peer victimization and perceived life satisfaction among early adolescents in the United States. *American Journal of Health Education*, 43(5), 258–268.
- Waasdorp, T. E., & Bradshaw, C. P. (2015). The overlap between cyberbullying and traditional bullying. *Journal of Adolescent Health*, 56(5), 483–488.
- Wachs, S. (2012). Moral disengagement and emotional and social difficulties in bullying and cyberbullying: Differences by participant role. *Emotional and Behavioural Difficulties*, 17(3–4), 347–360.
- Wei, G. Y., & Chen, X. F. (2005). 家庭文化对青少年性别刻板印象形成的影响 (the impact of family culture on teenagers' gender stereotype). *Collection of Women's Studies*, 1, 31–38.
- Weng, X., Chui, W. H., & Liu, L. (2017). Bullying behaviors among Macanese adolescents—association with psychosocial variables. *International Journal of Environmental Research and Public Health*, 14(8), 887.
- Williford, A., & Zinn, A. (2018). Classroom-level differences in child-level bullying experiences: Implications for prevention and intervention in school settings. *Journal of the Society for Social Work and Research*, 9(1), 23–48.
- Xiao, F. Q., & Feng, X. T. (2010). 性别平等与生育选择 (gender equality and reproductive choice). *China Youth Study*, 7, 68–73.
- Yang, X., & Gao, C. (2019). Missing women in STEM in China: An empirical study from the viewpoint of achievement motivation and gender socialization. *Research in Science Education*. <https://doi.org/10.1007/s11165-019-9833-0>.
- Ybarra, M. L., Boyd, D., Korchmaros, J. D., & Oppenheim, J. K. (2012). Defining and measuring cyberbullying within the larger context of bullying victimization. *Journal of Adolescent Health*, 51(1), 53–58.
- Zhang, Y. X. (2006). 独生子女家庭背景中女孩的性别角色社会化 (gender socialization among girls in one-child family). *Academic Journal of Zhongzhou*, 3, 131.
- Zhang, A., De Luca, S., Oh, S., Liu, C., & Song, X. (2019). The moderating effect of gender on the relationship between bullying victimization and adolescents' self-rated health: An exploratory study using the Fragile Families and Wellbeing Study. *Children and Youth Services Review*, 96, 155–162.
- Zhang, Y., Haddad, E., Torres, B., & Chen, C. (2011). The reciprocal relationships among parents' expectations, adolescents' expectations, and adolescents' achievement: A two-wave longitudinal analysis of the NELS data. *Journal of Youth and Adolescence*, 40(4), 479–489.