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Relationships Between School Bullying and Frustration Intolerance Beliefs in Adolescence: A Gender-Specific Analysis

C. Potard¹  · R. Pochon² · A. Henry² · C. Combes¹ · V. Kubiszewski³ · A. Roy¹

Abstract

The purpose of this study was to address frustration intolerance related to bullying among adolescents. We investigated how sociodemographic characteristics and intolerance frustration beliefs are related to four bullying roles (pure victim, bully-victim, pure bully and noninvolved). This cross-sectional study featured a sample of 1124 French adolescents (616 girls and 508 boys), who completed the revised Olweus Bully/Victim Questionnaire and Frustration Discomfort scales. Results revealed that adolescents involved in bullying expressed more irrational frustration intolerance beliefs than their noninvolved peers. Entitlement, emotional intolerance and achievement frustration were positively associated with victimization, but only entitlement emerged as a significant predictor of victim status in a logistic regression analysis. Entitlement and achievement frustration were positively associated with bullying perpetration, but entitlement only emerged as a significant predictor of bully status in the regression analysis. The present findings show that entitlement is the type of frustration intolerance belief that contributes the most to bullying involvement. Interventions targeting irrational entitlement beliefs and reinforcing rational ones could be considered when dealing with adolescent bullying.

Keywords Bullying · Peer victimization · Peer aggression · Frustration intolerance beliefs · Irrational beliefs · Entitlement · Adolescence

Introduction

School bullying is a global health problem that affects a significant proportion of adolescents, with serious short- and long-term negative consequences for their psychological adjustment (Bauman et al. 2013; Gini et al. 2009; Takizawa et al. 2014;

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Wolke et al. 2015). Although levels of bullying vary according to sociocultural context and period of adolescence, research conducted over the past decade has shown that in many countries and regions, about 10–25% of adolescents are involved in school bullying (Chester et al. 2015; Craig et al. 2009; Due et al. 2005; Zych et al. 2019). In some studies, estimated bullying prevalence varies from 5 to 30% for perpetration and from 17 to 37% for victimization in traditional peer harassment (e.g., Due et al. 2005; Solberg et al. 2003). A recent meta-analysis of 80 studies (Modecki et al. 2014) showed that 35% of adolescents reported having been involved in traditional bullying and 15% in cyberbullying. With regard to possible gender-related differences, in most countries, studies have shown higher rates of victimization for girls than for boys (Craig et al. 2009; Scheithauer et al. 2006) and an increased likelihood of being a bully or a bully-victim for boys (e.g., Scheithauer et al. 2006).

Although definitions of bullying vary across studies and according to authors (Hymel et al. 2015), there is a general consensus that *bullying* refers to intentional harmful behavior that is carried out repeatedly against an individual who is unable to defend him/herself and that involves an imbalance of power, either actual or perceived, between the victim and the bully (Craig et al. 2003; Juvonen et al. 2014; Olweus 1994, 1995, 2006; Rigby 2004). Olweus (1995; Olweus et al. 2010) adds that victims feel vulnerably exposed to perpetrators, as they cannot effectively defend themselves (see Lamb et al. 2009; Thomas et al. 2015). It is customary to differentiate between several types of involvement in bullying. Prior studies have divided pupils involved in bullying into two groups: bullied (victims) and bullies (perpetrators or aggressors). Although numerous studies continue to be based on this dichotomy, current research indicates that adolescents can also be involved in bullying behavior both as bully and as victim, as so-called bully-victims (Haynie et al. 2001; Lereya et al. 2015).

Adolescents involved in bullying as either victims, bullies, or bully-victims experience behavioral and emotional problems (Hawker et al. 2000; Reijntjes et al. 2010; Sourander et al. 2010), that persist over the long term (Lereya et al. 2015; Sigurdson et al. 2014). Individuals who bully are more likely to have externalizing problems (Ttofi et al. 2014) such as conduct problems/disorder (Ragatz et al. 2011), aggression or anger (e.g., Camodeca et al. 2005; Salmivalli et al. 2002), while victims are characterized more by internalizing problems, with a higher risk of anxiety and depressive disorders (e.g., Schneider et al. 2012; Turner et al. 2013) or suicide (see Geel et al. 2014). Studies suggest that there are gender-related differences in the way that psychological factors are associated with bullying. For example, Hoertel et al. (2012) reported that females who have bullied in the past are significantly more likely to have externalizing or internalizing spectrum disorders in their lifetime than males who engage in such behavior. Differential associations have also been found for victimization, with girls experiencing more maladjustment than boys in response to peer bullying (Rueger et al. 2014; Skrzypiec et al. 2011). Such findings underscore the importance of stratifying correlates of bullying according to sex.

Several theoretical models of bullying have highlighted the role of frustration in this aggressive behavior. According to general strain or frustration-aggression theories (Agnew 1992; Berkowitz 1989; Breuer et al. 2017), individuals who experience strain (e.g., being treated unethically by educators, being reprimanded by parents,

or being teased by peers) and feel frustrated are more at risk of adopting aggressive behavior. For example, two studies (Patchin et al. 2011; Tam et al. 2007) showed that some adolescents bully partly because they are frustrated and are attempting to escape their disturbing emotions. Whereas bullying was initially defined as a form of proactive aggression, recent studies (e.g., Fung et al. 2019; Stein et al. 2020) have tended to split bullying into two categories (reactive and proactive), underlining two different functions of aggression. For example, the dual aggression model (Hubbard et al. 2010) differentiates between (i) reactive aggression (*aroused/hot*) in response to a real or perceived blockage or provocation, resulting in frustration or anger and (ii) proactive aggression which, by contrast, tends to be calm and instrumental and less associated with frustration.

The cognitive approach (e.g., Ellis 1999; Lazarus et al. 1988) emphasizes the role of the *cognitive appraisal* process in accounting for individual differences in emotional and behavioral responses to adverse situations. This approach assumes that feelings and behaviors are the outcome of conscious or unconscious cognitive processing (David et al. 2004). Emotional disturbance, such as frustration, both stems from and is supported by personal beliefs that are assumed to be true even if they are inconsistent with reality, illogical, nonpragmatic and/or without empirical support (Ellis et al. 2004). Given that exposure to traumatic events confirming or denying personal identity and expectations, such as being bullied, tends to activate irrational cognitions (i.e., irrational beliefs, IBs) among victims (Sabancı et al. 2019), it would be well worth applying the cognitive approach to bullying. In stressful situations, IB activation is thought to engender emotional distress (Ellis 1994) and ineffectual problem-solving strategies (e.g., submission, aggression, avoidance) that contribute to the risk and continuation of peer victimization (Rosen et al. 2007). Previous studies have found significant positive associations between IBs and both cyber victimization (Sabancı et al. 2019) and cyberbullying (Birle et al. 2013).

The A-B-C model of psychological disturbance suggests that a stressful life event activates (A) IBs (B) that generate consequences (C) in terms of maladaptive behaviors and/or psychological disturbance (David and Szentagotai 2006; Felgoise et al. 2006; Jibeen 2013; Vaida et al. 2013). IBs are typically referred to within the framework of Ellis's rational-emotive behavior therapy (REBT; Ellis 1991, 1996, 1999, 2004). Considering the content of IBs, such as the need for achievement, approval and comfort (Dryden et al. 1990), is fundamental to understanding emotional and behavioral conduct. Ellis initially described 11 categories of IBs, which were subsequently reduced to four, including low frustration tolerance (Ellis et al. 2004).

Frustration intolerance beliefs (FIBs) reflect a negative expectation of one's strength or ability to tolerate frustration, discomfort, or pain events, thereby making a situation seem intolerable (DiGiuseppe et al. 2014; Szentagotai et al. 2010). *Frustration intolerance* is essentially an "attempt to shoehorn reality to fit our desires, whilst tolerance is the acceptance of the undesirable in order to achieve longer-term goals" (Harrington 2007, p. 193). Also called *discomfort disturbance*, it refers to IBs about the tolerability of discomfort and frustration and the demand for comfortable and easy conditions (Harrington 2005a) and usually reflects poor self-control (DiGiuseppe et al. 2014). Higher levels of FIBs are known to be related to emotional

disturbance and maladaptive behaviors (e.g., Chang et al. 1996; DiGiuseppe 1996; Rabinowitz et al. 1996).

Harrington (2005c) developed the Frustration Discomfort Scale (FDS), a frustration intolerance scale that distinguishes between four different forms of FIBs, namely discomfort intolerance, entitlement, emotional intolerance and achievement frustration. *Discomfort intolerance* is the belief that life should be easy, comfortable and free of hassle, effort or inconvenience. *Entitlement* is the belief that wishes should be met (immediate gratification) and other people should indulge and not frustrate these desires. *Emotional intolerance* is the belief that emotional distress is unbearable and must be quickly relieved or avoided. *Achievement frustration* is a perfectionist belief and reflects intolerance of obstacles to achieving high standards. These four forms are intercorrelated and complex disorders may involve several of them. Overall, high frustration intolerance has been found to be significantly related to emotional disturbance, unassertive behavior and poor self-control (Filippello et al. 2014). The precise form of FIB may play a central role in determining the type of emotional disturbance. For example, high *emotional intolerance* is related to high anxiety, depression and low assertiveness, while high *entitlement* is significantly related to anger (Stanković et al. 2011). Relatively little is known about the role of FIBs in behavioral problems (or externalizing symptoms). However, they are reported to be associated with problems of self-control, such as self-harm, over-spending (Harrington 2005a, b, c) and Internet addiction (Ko et al. 2008).

While proneness to frustration is classically associated with a heightened risk of aggression (Dane et al. 2014), to our knowledge, no study has yet investigated the relationship between bullying and FIBs. Thus, in accordance with the ABC model, the present study was designed to investigate the interrelations between school bullying behaviors and FIBs, taking gender differences into account, as recommended by Ko et al. (2008). The main goal of the current study was to expand the literature by comprehensively exploring associations among FIBs and the four aforementioned bullying roles (i.e., pure bully, pure victim, bully-victim and not involved), which have received less attention in the literature. Previous studies have highlighted the existence of common, but also specific, risk factors, depending on the bullying role (Cook et al. 2010). In particular, authors (e.g., O'Connor et al. 2019) have suggested that distinct psychological processes may underlie the bullying behavior of bullies but not of bully-victims and vice versa (i.e., distinct processes hypothesis; van Dijk et al. 2017). We therefore asked the following questions: Do students differ on FIBs according to their bullying roles? If that is the case, in what ways do they differ? By developing an understanding of the specific IBs subtending different bullying roles, it should be possible to design interventions that target these IBs, in order to foster long lasting change.

Based on literature findings on the relationship between aggressive behaviors and low tolerance frustration (Fives et al. 2011), we tested three predictions. First, we predicted that adolescents involved in bullying would have higher FDS scores than those who were not involved. Second, as frustration tolerance, which has been associated with reactive aggressive behaviors among adolescents (Smeets et al. 2017), may be more typical of bully-victims, we predicted that bully-victims (i.e., those engaging in more reactive aggression) would have higher FDS scores than pure

bullies. Third, as FIBs result in negative events being appraised as unbearable and intolerable (David et al. 2010), making people less able to cope with adverse situations (Leyro et al. 2010) or unpleasant circumstances (Dryden 1990), we predicted that pure victims would have higher FDS scores than noninvolved participants. Gender-specific relationships between FIBs and bullying involvement were systematically considered, to determine whether differential patterns of risk emerged for boys and for girls. Given the lack of research in the field, we did not make any assumptions about the associations between specific forms of FIBs (emotional intolerance, entitlement, etc.) and individual bullying profiles (pure bully, pure victim, bully-victim and noninvolved) and these relationships were therefore studied in an exploratory manner.

Method

Participants

After we had excluded responses with missing data ($n=48$) and invalid responses ($n=18$), the final sample comprised 1124 sixth to ninth graders from 18 junior high schools located in five regions of France (Centre Val de Loire, Grand Est, Normandy, Bourgogne Franche-Comté, Pays de la Loire). The inclusion criteria were (a) attending school, (b) French-speaking, (c) aged 10–18 years and (d) informed consent (adolescent and parent/legal guardian). A priori sample size calculation, using G*Power (version 3.1.9.4; Faul et al. 2009) indicated that this sample size would provide enough statistical power ($1-\beta = 0.95$; $\alpha = 0.05$) to detect small (Cohen's $f = 0.12$) and medium (Cohen's $f = 0.25$.) effect sizes for a repeated-measures analysis of variance (ANOVA).

Participants attended schools in peri-urban ($n = 451$, 40.2%), rural ($n = 351$, 31.1%), or urban ($n = 322$, 28.7%) areas, while around 11% were enrolled in one of three private schools. There were 388 sixth graders (34.5%), 121 seventh graders (10.7%), 426 eighth graders (37.9%) and 189 ninth graders (16.8%). There were 616 (54.8%) girls and 508 (45.2%) boys. Their mean age was 12.7 years ($SD = 1.53$, range = 10–18), with no significant difference according to sex ($t = 0.84$, $p = 0.40$).

Instruments

Demographics

Participants answered questions about their age, sex, education level and place of residence.

Bullying

Bullying involvement was measured using the French version of the revised Olweus Bully/Victim Questionnaire (Fr-rBVQ; Kubiszewski et al. 2014). This self-report

questionnaire begins with a definition of bullying, which was read out to each of the adolescents before they responded to the questions. It assesses experiences of being victimized (7 items) or bullying others (7 items) “in the past couple of months”. Various types of bullying are assessed: being bullied verbally, being excluded from / ignored by a group, being bullied physically, having false rumors spread, having money and other possessions taken away or damaged, being threatened or forced to do things and being bullied about one’s race or color. In the present study, one additional type (i.e., cyberbullying) was added for each part (i.e., victimization/perpetration). Items were rated on a 5-point Likert scale ranging from 1 (*Never*) to 5 (*Several times a week*). Two versions of the overall measures were used for analyses: (1) a continuous approach allowed us to calculate two mean scores (one for the victimization items and one for the bullying perpetration items), while (2) a categorical approach led to participants being classified as pure victims, pure bullies, bully-victims, or noninvolved, based on Solberg et al. (2003)’s criteria (e.g., participants who had been bullied / bullied others “2 or 3 times a month” or more were categorized as being involved in bullying. The Fr-rBVQ had acceptable reliability in this sample (α s=0.67-0.72).

Frustration Intolerance

We used the French version of the FDS (Chamayou et al. 2016) to probe participants’ perceived capacity to withstand frustration. This 23-item self-report questionnaire assesses four subdomains: *discomfort intolerance* (e.g., “I can’t stand doing tasks that seem too difficult”), *entitlement* (e.g., “I can’t stand it if other people act against my wishes”), *emotional intolerance* (e.g., “I can’t bear disturbing feelings”) and *achievement frustration* (e.g., “I can’t bear the frustration of not achieving my goals”). Respondents estimated the strength with which they held a particular belief when distressed or frustrated on a 5-point Likert-like scale ranging from 1 (*Absent*) to 5 (*Very strong*), with higher scores indicating greater frustration intolerance. Four mean subdomain scores and a mean overall score were computed. In the present study, internal consistency for the four FDS subscales was adequate (α s=0.67-0.84).

Procedure

This study was performed in line with the principles of the Declaration of Helsinki. The questionnaire and methodology for this study were approved by the relevant institutional review board for each of the 18 schools. An information letter was sent to each family and written parental consent and child assent were obtained. The survey was administered by school staff and participants anonymously completed either a paper-and-pencil or an online version of the questionnaire during lesson time. The online version (developed using Lime Survey®) was not available to the general public and students could only access it by following a link provided by the researchers. Participants remained anonymous. On the homepage, participants were asked to provide their informed consent. Several studies comparing online versus paper-based questionnaires have found little or no difference in response rates between the two different data collection modes (e.g., Ebert et al. 2018; Horevoorts

et al. 2015; Kongsved et al. 2007). In our study, we found no differences in sociodemographic and data characteristics, except for lower numbers of missing values for the online version than for the paper-and-pencil one. The mean survey completion time was 25 min. All participants completed the questionnaires in the same order and none received any remuneration. The overall response rate was 67%.

Data Analysis

We examined the normality of the data by calculating skewness and kurtosis for each variable. As the variables did not follow a normal distribution, we applied nonparametric tests. We undertook a descriptive analysis of participants' sociodemographic and bullying characteristics, using means, standard deviations and percentages, depending on the nature of the variables. A Mann–Whitney U test with Bonferroni correction (to counteract the problem of multiple analysis) was used to compare scores according to gender. Bivariate correlations (Spearman's r) explored the associations between FIBs and the bullying subscales. The sample was divided into four groups according to bullying role (noninvolved, pure victim, bully-victim, or pure bully). We ran Kruskal–Wallis ANOVAs, with bullying variables (victimization, perpetration) as a dependent variable and Dunn-Bonferroni post hoc comparisons, to test the effect of each FIB subdomain on bullying roles. Their explanatory power was assessed by constructing multinomial logistic regression models for each of the three bullying roles (using noninvolved participants as the control group). Logistic regression was used to analyze the dichotomous dependent variables. For this purpose, we treated the bullying roles as dependent variables and the FIB dimensions as independent variables, controlling for age and sex. Thus, the possible influence of each sociodemographic variable was controlled and these variables were included in each model. All the analyses were performed with SPSS 23.0®. The significance threshold was set at $p=0.05$.

Results

Prevalence of Bullying and Descriptive Analysis of Variables

Before testing our research hypotheses, we calculated basic descriptive statistics of the study's focal variables. The means and standard deviations of participants' bullying and FIB scores are shown in Table 1. Based on the Fr-rBVQ, participants were divided into four bullying groups: noninvolved (66.8%, $n = 751$), pure victims (19.3%, $n=217$), pure bullies (8.8%, $n=99$) and bully-victims (5.1%, $n=57$). Based on these bullying roles, a group comparison analysis revealed differences between the sexes for all the bullying roles except victims, with boys being overrepresented compared with girls ($\chi^2=38.925$, $p<0.001$ for bully-victims and $\chi^2=7.976$, $p < 0.01$ for pure bullies). Based on victimization and perpetration scores, we found higher victimization scores for boys than for girls ($t = -7.216$, $p < 0.001$). Table 1 shows details of the mean scores and bullying prevalence. We also investigated

Table 1 Means and standard deviations for the Fr-rBVQ and FDS scores

Variables		Total		Girls		Boys		Group comparisons	
Category		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	chi ²	<i>p</i>
Bullying	Noninvolved	751	66.8	438	58.4	312	41.6	2.42	<i>ns</i>
	Pure victims	217	19.4	125	57.6	92	42.4	.04	<i>ns</i>
	Bully-victims	57	5.1	9	15.8	48	84.2	38.93	***
	Pure bullies	99	8.8	43	43.4	56	56.6	7.98	**
	Dimension	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>	<i>t</i>	<i>p</i>
Bullying	Victimization	10.53	3.76	10.34	3.55	10.76	3.99	-1.84	<i>ns</i>
	Perpetration	9.01	2.04	8.62	1.12	9.49	2.69	-7.22	***
FIBs	Discomfort intolerance	3.35	.84	3.43	.80	3.27	.88	3.11	***
	Entitlement	3.25	.80	3.29	.77	3.20	.84	1.78	<i>ns</i>
	Emotional intolerance	3.75	.76	3.85	.67	3.62	.82	4.86	***
	Achievement frustration	3.53	.71	3.61	.64	3.44	.77	4.22	***
	Total score	3.47	.64	3.54	.58	3.38	.70	4.17	***

Note. FIBs: frustration intolerance beliefs; *ns*: nonsignificant. ** $p < .01$. *** $p < .001$ with Bonferroni correction ($\alpha = .012$ for chi² and $\alpha = .006$ for *t* test)

sex differences in the FIB variables. With the exception of entitlement, girls scored higher than boys on all FIB subdomains.

Relationships Between Bullying and Frustration Intolerance Beliefs Subdomains

Relations between bullying and FDS dimensions are depicted in Table 2. Overall, there were positive correlations between bullying and FIB types ($r_s = 0.08$ – 0.21 , $p_s < 0.05$ – 0.01), except for the association between emotional intolerance

Table 2 Spearman correlation coefficients for frustration intolerance beliefs, bullying dimensions and age, according to sex

Variables		Victimization			Perpetration		
		Total	Girls	Boys	Total	Girls	Boys
Sociodemographic variables	Age	-.06	.07	-.05	.11**	.16**	.10**
FIBs	Discomfort intolerance	.09**	.14**	.04	.07* ^a	.10* ^a	.07
	Entitlement	.14**	.14**	.14*	.16**	.21**	.14*
	Emotional intolerance	.09**	.11**	.11*	.01	.05	-.03
	Achievement frustration	.09**	.08* ^a	.10* ^a	.08**	.10**	.10* ^a
	Total score	.13**	.15**	.11*	.09**	.15**	.07

Note. FIBs: frustration intolerance beliefs. * $p < .05$. ** $p < .01$. ^a nonsignificant after Bonferroni correction ($\alpha = .01$)

Table 3 Mean FIB scores and standard deviations according to bullying role and results of ANOVA and post hoc test for girls ($n=616$)

		Nonin-volved (0)		Pure vic-tims (1)		Bully-vic-tims (2)		Pure bul-lies (3)		Group comparisons		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	<i>U</i>	<i>p</i>	Post hoc
FIBs	Discomfort intolerance	3.38	.78	3.53	.85	3.50	.80	3.59	.75	1.84	<i>ns</i>	–
	Entitlement	3.21	.78	3.43	.69	3.27	.84	3.66	.72	6.39	***	1 & 3 > 0
	Emotional intolerance	3.82	.68	3.93	.65	3.80	.75	3.85	.63	.89	<i>ns</i>	–
	Achievement frustration	3.56	.63	3.69	.63	3.61	.65	3.92	.56	5.12	**	3 > 0
	Total score	3.49	.58	3.65	.57	3.55	.57	3.75	.52	4.37	**	1 & 3 > 0

Note. FIB: frustration intolerance beliefs; *ns*: nonsignificant. ** $p < .01$. *** $p < .001$

Table 4 Mean FIB scores and standard deviations according to bullying role and results of ANOVA and post hoc test for boys ($n=508$)

		Nonin-volved (0)		Pure vic-tims (1)		Bully-vic-tims (2)		Pure bul-lies (3)		Group comparisons		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	<i>U</i>	<i>p</i>	Post hoc
FIBs	Discomfort intolerance	3.27	.88	3.09	.92	3.57	.82	3.29	.82	3.18	*	2 > 1
	Entitlement	3.15	.84	3.14	.84	3.56	.84	3.30	.79	3.84	**	2 > 0 & 1
	Emotional intolerance	3.61	.83	3.64	.83	3.75	.89	3.60	.75	.39	<i>ns</i>	–
	Achievement frustration	3.41	.74	3.37	.87	3.71	.74	3.46	.74	2.42	†	2 > 0
	Total score	3.36	.69	3.31	.74	3.65	.68	3.41	.62	2.79	*	2 > 0 & 1

Note. FIB: frustration intolerance beliefs; *ns*: nonsignificant. † $p < .06$. * $p < .05$. ** $p < .01$

and bullying perpetration. Age was moderately positively associated with bullying perpetration ($r_s = 0.10$ – 0.16 , $p_s < 0.01$). It should be noted that there was also a significant and positive correlation between victimization and perpetration ($r_s = 0.10$, $p_s < 0.01$). After Bonferroni correction ($p = 0.05/5 = 0.01$), all associations except for correlations between bullying variables and achievement frustration for boys and between victimization and achievement frustration for girls, remained significant.

Comparison Between Bullying Groups on Frustration Intolerance Beliefs Subdomains

We conducted a series of ANOVAs (Kruskal–Wallis test), followed by Dunn–Bonferroni post hoc comparisons, to investigate differences between the four bullying roles (victim, bully-victim, bully and noninvolved) with regard to FIB variables, for girls and for boys. As observed in Table 3, among girls, the pure bully group differed significantly on FIBs, especially entitlement and achievement frustration, with higher mean scores compared with the noninvolved group. Concerning the victim group, we found statistically significant differences on entitlement. Girls in this

group made significantly greater use of these FIBs. Among boys (see Table 4), the bully-victim group scored significantly higher on discomfort intolerance, entitlement and achievement frustration than either the victim or noninvolved groups.

Relationships Between Bullying Roles, Demographics and FIB Variables

Using exploratory stepwise logistic regression analyses, we tested whether the adolescents' sociodemographic and FIB variables predicted involvement in each of the three bullying roles (pure victim, bully-victim and pure bully). We ran multiple logistic regression models (pure victims vs. noninvolved; pure bullies vs. noninvolved; bully-victims vs. noninvolved). Sociodemographic variables (age, sex), together with the FDS scores, were entered in the model and then successively removed if $p < 0.05$, until a final model was produced. The logistic regression models are summarized in Table 5.

Two variables were associated with the risk of being bullied: high levels of entitlement significantly predicted a high risk, while discomfort intolerance predicted a lower risk. We also found that the risk of being a bully-victim was predicted by three variables, with being a boy, higher entitlement and being older predicting a higher risk. Lastly, regression on the pure bully role revealed four predictors: entitlement, age, sex and emotional intolerance. Higher entitlement, being a boy and being older significantly predicted a higher risk of being a bully, while higher emotional intolerance seemed to be a protective factor.

Discussion

The present study explored the association between FIBs and bullying among adolescents. Bullying was present in this sample, with 19% of participants being categorized as victims, 5% as bully-victims and 9% as bullies. These results are consistent with both international (Menesini et al. 2017) and European (Ehlinger et al. 2016) findings on the prevalence of bullying among adolescents. In line with previous studies (e.g., Scheithauer et al. 2006), we found that boys were more likely to be bullies or bully-victims than girls. Another sex difference was found for FIBs, where girls had significantly higher scores than boys, except for entitlement. These results have also been found in the literature (Ko et al. 2008). This was the first study to test the association between FIBs and bullying in adolescents. Results revealed higher FIB scores among female pure bullies and pure victims and among male bully-victims, compared with noninvolved participants. More specifically, entitlement was identified as a risk factor for all three bullying roles. Nevertheless, these relationships between FIBs and bullying need to be understood in the light of sex and age differences. Further analyses revealed sex-specific associations between frustration intolerance and bullying roles. In particular, the victimization and perpetration dimensions were both significantly associated with high FIB scores.

All the FIBs were related to the victimization dimension, with the exception of discomfort intolerance for boys. Previous studies had shown that FIBs lead to

Table 5 Frustration intolerance beliefs predicting bullying roles (compared with noninvolved group), according to age and sex

Predictors	Pure victims				Predictors	Bully-victims				Predictors	Pure bullies			
	<i>B</i>	Wald χ^2	<i>p</i>	Expl. (<i>B</i>)=OR		<i>B</i>	Wald χ^2	<i>p</i>	Expl. (<i>B</i>)=OR		<i>B</i>	Wald χ^2	<i>p</i>	Expl. (<i>B</i>)=OR
Entitlement	.34	6.20	**	1.40	Sex (1 = ♂)	.37	29.37	***	7.54	Entitlement	.68	16.57	***	1.97
Discomfort intolerance	-.20	2.66	*	.80	Entitlement	.56	9.49	**	1.74	Sex (1 = ♂)	.59	7.03	***	1.80
					Age	.20	34.92	*	1.22	Age	.22	10.86	***	1.25
										Emotional intolerance	-.41	5.16	*	.67
<i>R</i> ^{2 a}	.08					.17					.14			

Note. **p* < .05. ** *p* < .01. *** *p* < .001. OR: odds ratio. Only statistically significant variables are reported

^a Nagelkerke *R*²

dysfunctional behavioral adjustment, such as avoidance behavior (Harrington 2005a, b, c). FIBs may make adolescents who experience bullying (a chronically stressful situation) unwilling to tolerate negative emotional events (Ko et al. 2008) and more likely to seek flight from the unbearable situation. A nonconfrontational problem perpetuates the vicious circle of bullying, by reinforcing the feeling of an imbalance between the victim and his/her aggressor. However, the causal relationship between FIBs and bullying should be further clarified, as FIBs may also develop as a result of chronic victimization. Chronic exposure to bullying may lead victims to feel that they are unable to cope with-or withstand-the repeated traumatic event. Victims tend to view the causes of negative situations (and the negative emotions attached to them) as stable, unchangeable and intolerable, leading them to develop a sense of helplessness and weakness (deLara 2012) and adopt submissive or unassertive behavior (Atik et al. 2012). In addition, the presence of low tolerance frustration among victims has already been identified as a cognitive vulnerability factor for the development of posttraumatic stress in response to adverse events (Hyland et al. 2013). Future research is therefore needed to investigate this risk among adolescents who are bullied at school.

For the bullying perpetration dimension, by contrast, results revealed sex-specific relationships. Whereas high entitlement and achievement frustration scores were associated with more bullying perpetration for both boys and girls, a high discomfort intolerance score was only associated with more bullying perpetration for girls. These results reinforce and clarify those of Fives et al. (2011), who found that sex and an intolerance of rules FIB predicted both direct physical and indirect bullying perpetration among adolescents.

Results based on the categorical approach, which had the advantage of distinguishing bully-victims from both pure victims and pure bullies, indicated that female victims and perpetrators had significantly higher FIB scores than the others. Once again, entitlement and achievement frustration beliefs were especially relevant. Victims had higher entitlement scores, while perpetrators had higher entitlement and achievement frustration scores.

Entitlement refers to the “I must get what I want” cognition related to demands for immediate gratification, when nothing and no one must frustrate the individual’s desires. It increases the risk of becoming hostile and reactively aggressive (Fossati et al. 2010; Reidy et al. 2008). Adolescents with this narcissistic personality trait are especially liable to use bullying, as they tend to ruminate about what they think they should receive or obtain. The present findings are in line with previous studies (Harrington 2006) underlying the role of entitlement in angry and hostile reactions. Regarding the role of entitlement in victimization, there are two hypotheses. First, in line with Sabancı et al. (2019)’s study, being bullied undermines victims’ sense of self and activates IBs. However, that does not explain why entitlement is activated. Second, based on Zitek et al. (2010)’s study, people tend to develop an increased sense of entitlement (and selfishness) after experiencing unpleasant life experiences.

High achievement frustration scores among female pure bullies and male bully-victims suggested an orientation for high standards and an intolerance of frustration of these standards (e.g., “I can’t bear the frustration of not achieving my goals”). Unrealistically high standards and the inability to accept mistakes (i.e., neurotic

perfectionism) have previously been positively related to verbal aggression among adolescents (Chester et al. 2015; Öngen 2010). Excessive concerns and rumination about perceived failure/inadequacies may lead to unhealthy patterns of behavior. Our result was in line with sociocognitive theories of aggression suggesting that aggression emerges when a frustration is experienced because a desired goal or performance cannot be achieved. For girls, higher achievement frustration may reflect a form of perfectionistic self-presentation, expressed through proactive aggressive behaviors such as bullying, in order to achieve and maintain their high personal standards. This finding is in line with recent evidence of a link between bullying perpetration and perfectionism among adolescents (Farrell et al. 2019). For adolescent boys, bullying perpetration often reflects an exacerbated negative affective response to an experience of failure, with the expectation that it will improve their mood (Bushman et al. 2001). Our result for male bully-victims is fairly consistent with the generally available description of bully-victims as reactively aggressive. Low frustration tolerance has previously been related to reactive aggression (Vitaro et al. 2002).

Male bully-victims had also significantly higher discomfort intolerance scores than either noninvolved participants or victims. This results suggests that discomfort intolerance is associated with bullying perpetration, a dysregulated behavior. Previous studies have underlined that individuals with low discomfort tolerance often cope with feelings of distress by engaging in behaviors such as substance use or self-harm (Anestis et al. 2011; Gratz et al. 2011). Bully-victims seem to exhibit an emotionally dysregulated profile, reflecting the more reactive type of aggression that has been described for these individuals for this group (Hubbard et al. 2010).

Regression analyses similarly highlighted a sex-specific relationship between FIBs and bullying. Entitlement, in particular, appeared to be a risk factor for all bullying involvement. Nevertheless, this cognitive schema appeared to be more important for involvement in bullying as either bully-victims or pure bullies. To a lesser extent, discomfort intolerance (e.g., “I can’t stand doing tasks that seem too difficult”) seemed to be a protective factor for victim status, as did emotional intolerance (e.g., “I can’t bear disturbing feelings”) for bully status. Greater susceptibility to emotional distress may also lead adolescents to seek help or a solution to the bullying situation. Another hypothesis is that adolescents with high discomfort intolerance may be perceived of as *unpredictable* by bullies and therefore be targeted less by them. The combination of high entitlement and low emotional intolerance (i.e., few beliefs that negative emotions are dangerous and must be avoided) tend to corroborate the classic *rightfully and instrumental* profile of the pure bully. Results for pure bullies suggested that higher emotional intolerance is a protective factor. This finding is in line with a higher level of emotional disengagement in bullies, compared with nonaggressive pupils (Menesini et al. 2003). Intolerance of negative emotions, such as guilt and shame (i.e., moral emotion), can inhibit aggressive behavior in adolescents, but those who repeatedly bully may be more emotionally tolerant (Menesini et al. 2003; Thornberg et al. 2015).

The present study had several limitations that need to be taken in account. First, as the data came from self-reports, there may have been a response bias. Future research should consider other bullying measurement methods, such as interviews or

observations and try to replicate our findings. Second, the cross-sectional research design meant that we could not establish clear causal relationships between variables. A longitudinal study is therefore needed to fully test both the intercorrelations and causal ordering of the constructs in this study. A particular limitation of this study was the relatively small size of the bully sample. Bullies are difficult to recruit because of the low prevalence rates, particularly with self-reporting methods. This study would benefit from replication with larger sample, ideally with a longitudinal design. Experimental studies based on frustration intolerance (e.g., emotion provoking vignettes/scenarios) are also needed to evaluate less conscious and observable IBs and state emotions than conscious elaborations evaluated by the FDS. The present study did not include an assessment of mental health (e.g., internalizing and externalizing disorders), which is a major limitation, given the close relationship between school bullying and forms of psychological distress such as depression, anxiety and posttraumatic stress disorder (Moore et al. 2017). In particular, longitudinal research is needed to understand the extent to which FIBs predict mental health outcomes among pupils involved in bullying. Moreover, it would be useful to investigate the relative importance of others IBs such as self-worth beliefs (e.g., self-esteem) or personality traits such as narcissism in bullying. It is important to extend this research by including other potential factors of likely importance, such as mood (e.g., depression and anxiety), critical stressful life events and perceived social support. Future research should also measure both general-level FIBs and specific bullying-related FIBs, as this could lead to a better theoretical understanding of the cognitive architecture (i.e., evaluative cognition) that subtends bullying.

The present study provides evidence of the usefulness of a multidimensional model of FIBs. As expected, we found significantly different associations between the various types of FIBs and specific bullying roles, underlining the importance of considering both general and specific FIBs. These findings are in line with previous studies showing that IBs constitute transdiagnostic vulnerability factors in various contexts (Vislă et al. 2016). However, the current study draws a potentially complex picture of the role of FIBs in school bullying, in that it suggests that certain FIBs may also be protective, or at least not always *dysfunctional* (Harrington 2005b). This emphasizes the need for further research to examine the role of dysfunctional belief systems (e.g., specific FIBs) in the development and maintenance of bullying roles, to add to our understanding of the etiology and consequences of bullying. For example, an understanding of FIBs, particularly entitlement (e.g., its association with narcissism or blame; Pickard 2013; Watson et al. 1990) might allow bullying to be managed more effectively through prevention programs. REBT could provide a useful framework for encouraging desistance among adolescents involved in bullying and providing support for any mental health issues they have.

Conclusion

The results of the present study support the idea that specific FIBs are related to bullying involvement. Entitlement was found to be an effective predictor of bullying, suggesting that the latter could partly be a frustration intolerance problem and

is more specifically related to entitlement IBs. If other studies confirm this association between FIBs and bullying and if the *precedence* of FIBs is documented, REBT interventions for adolescents could be worthwhile. By evaluating IBs, challenging those related to entitlement frustration and adjusting them so that they are more adaptive and rational, these interventions might help to reduce bullying behaviors. The effectiveness of REBT in the treatment of aggressive behaviors has already been established (Trip et al. 2012). However, further intervention research is needed to evaluate whether programs targeting IBs (e.g., REBT) can reduce bullying. In view of the sex differences in the association between bullying involvement and FIBs, interventions should be designed to focus on entitlement. Our findings tend to support REBT theory, which suggests that adolescents with a propensity for FIBs exhibit aggressive behavior in response to limit setting. A better understanding of sex-related differences in FIBs and bullying could substantially improve clinical practice, by allowing for the provision of sex-specific preventive and therapeutic strategies.

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Author Contributions First author designed the study and conducted the statistical analyses. All authors collected data. First author wrote the first draft of the manuscript. All authors revised critically the manuscript, contributed to interpretation of data and contributed to and have approved the final manuscript.

Data Availability The data for the current study is not publicly available, but they are available from the corresponding author upon reasonable request.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval The current submission does not overlap with any other published, in press, or in preparation articles, books, or proceedings and has not been posted on a website. Our research is not under consideration elsewhere. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all participants included in the study.

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