



Perceptions of Bullying Victimization: Differences between Once-Retained and Multiple-Retained Students in Public and Private Schools in Brazil

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Accepted: 28 September 2018 / Published online: 6 October 2018
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Abstract

Being retained a grade in school has been associated with a number of negative outcomes for children. It is unclear, however, if being bullied is among them. In this study, differences were examined between retained and promoted students in their self-reported bullying victimization—verbal, physical, and social/relational bullying, and bullying in general. Unique to the study was that those differences were investigated as a function of students being in public or private schools. It was hypothesized that greater bullying of retained students would occur in private schools, where being retained is less common. The sample consisted of 378 students, grades 5 through 9, attending four public and two private schools in Southern Brazil. Retained students in private schools reported greater verbal and social/relational bullying, and bullying in general, than retained students in public schools. Differences in bullying victimization were not found between promoted, once-retained, and multiple-retained students in public schools (due to sample size this was not examined in private schools). Findings suggest the need for interventions that target pre-retention behaviors that may be associated with being bullied. A secondary purpose of the study was to provide evidence supporting the factor structure of the Brazilian Portuguese version of Delaware Bullying Victimization Scale – Student (Brazilian DBVS-S). CFA results supported both a bifactor model and three-factor model, but support was stronger for the latter. Reliability of the three subscale and total scale scores was evidenced by internal consistency coefficients above .70.

Keywords Grade retention · Bullying victimization · Measurement · Brazilian schools

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1 Introduction

Retaining students a grade in school is a common practice in countries around the world. Across 61 countries participating in the 2012 Programme for International Student Assessment (PISA), 12% of 15-year-old students reported having been retained (OECD 2014). Retention was found to be most common among socio-economically disadvantaged countries, with 20% of students reporting having been retained. However, retention is also widely used in countries that are not socio-economically disadvantaged. For example, France, Germany, and the Netherlands were among 16 countries retaining over 20% of students, and Argentina, Belgium, Brazil, Columbia, Portugal, and Spain were among the 11 countries retaining over 30% of students. In Brazil, the country where the current study was conducted, the retention rate is high—reported to be 36% in one study (OECD 2014) and 28% in another (INEP 2017).

Interestingly, retention continues to be a widespread practice despite research indicating that it is ineffective as an intervention and is associated with a number of negative outcomes, especially with respect to academic achievement. Studies have found that students who are retained tend to have lower academic achievement (Jimerson 2001; Jimerson and Ferguson 2007; Silbergliett et al. 2006; Martin 2009), a decline in academic performance over time (Jimerson 1999; Wu et al. 2008; Lamote et al. 2014), and poorer academic self-concept (Martin 2011). Research also has shown that retained students tend to have less motivation (Martin 2009, 2011), greater absences from school (Jimerson et al. 1997), and are at greater risk for dropping out of school (Alexander et al. 2003; Jimerson et al. 2002; Guevremont et al. 2007). The extent to which those outcomes are related causally to retention, however, is subject to much debate, especially in light of several recent longitudinal studies not demonstrating negative academic outcomes upon controlling for pre-retention differences between retained and promoted students (e.g., Lamote et al. 2014; Hong and Yu 2008). As discussed in the next section, research is mixed with respect to the relation of retention to social-emotional adjustment, including bullying victimization. Thus, it is unclear if students retained one or more years are more likely to be victims of bullying.

The purpose of this study was twofold. The primary purpose was to investigate differences between retained and promoted students (in public and private schools) in their self-reported bullying victimization—verbal, physical, and social/relational bullying, and bullying in general. Unlike in previous studies, we examined differences in bullying victimization between promoted students and two groups of retained students in public schools: those retained once and those retained twice or more. Also, unique to the study was examining differences in bullying victimization between promoted and retained students as function of attending either a public or private school in Brazil. A secondary purpose was to provide evidence supporting the factor structure of the Brazilian Portuguese version of Delaware Bullying Victimization Scale – Student (Brazilian DBVS-S) and the use of scores on its three subscales (Verbal, Physical, and Social/Relational). We conducted confirmatory factor analyses to test if scores fit our hypothesized construct of bullying victimization and to test for invariance in factor structure across public and private school groups and gender.

1.1 Retention and Bullying

Bullying is defined as a type of intentional aggression that aims to harm the victim, is repetitive over time, and involves an imbalance of power (i.e., the bully is more powerful than the victim) (Nansel et al. 2001). Three types of bullying – verbal, physical, and social/relational – are most commonly recognized by researchers and targeted in bullying prevention programs (Cornell and Bandyopadhyay 2010; Wang et al. 2009). *Verbal bullying* refers to name-calling, hurtful jokes or teasing, and saying hurtful or mean things. *Physical bullying* refers to hitting, kicking, pushing, threatening harm, and stealing or breaking others' belongings. *Social/relational bullying* refers to social exclusion, spreading rumors, or getting students to say mean things about other students. Due to increased computer and cell phone use by children and adolescents in recent years, *cyberbullying* has emerged as a new form of bullying. This type of bullying refers to aggression that occurs through electronic means, such as sending mean or hurtful messages via text message, instant message, or email and posting mean or hurtful things about others on social media.

Bullying is associated with a number of negative outcomes. Students who experience bullying tend to show greater internalizing problems, such as depression and anxiety (Reijntjes et al. 2010; Rueger and Jenkins 2014; Duarte et al. 2015), and externalizing problems, such as fighting and stealing (Lester et al. 2012; Bradshaw et al. 2013). They also have difficulty making friends (Delfabbro et al. 2006; Hanish and Guerra 2002; Nansel et al. 2001), have lower social competence (Nation et al. 2008), have lower self-esteem (Rueger and Jenkins 2014; Delfabbro et al. 2006), and experience greater psychosomatic problems (e.g., headaches) (Gini and Pozzoli 2009). Furthermore, being bullied is associated with more negative perceptions of belonging, connectedness, and safety in school (Boulton et al. 2009; Waasdorp et al. 2011; Faris and Felmlee 2014) and lower academic engagement, achievement, and classroom concentration (Buhs et al. 2010; Smokowski and Kopasz 2005; Rueger and Jenkins 2014).

It is unclear if retained students are more likely than non-retained students to be victims of bullying; and, thus, if they are at increased risk of the negative outcomes above. Research specifically examining grade retention and bullying is lacking, as we found no such studies published in English journals. However, Crothers et al. (2010) studied differences in bullying victimization between “age-appropriate-for-grade students” and students “old for grade.” The sample consisted of 276 students, grades K – 12, who were rated by 16 teachers on their bullying and bullying-victim behaviors. Old-for-grade students were rated by teachers as more likely to engage in verbal, social/relational, and physical bullying. They also were rated as exhibiting greater passive victim behaviors (e.g., feeling insecure and crying when bullied) and aggressive/provocative victim behaviors (e.g., retaliating when bullied). Multiple limitations of the study hamper interpretation of the findings, however. Primary among them was that the study did not report if the old-for-grade students actually experienced greater bullying, but instead reported differences in how they responded to being bullied. Secondly, teacher ratings were used to assess bullying and bullying victimization. Research indicates that student ratings and peer nominations are generally more widely used and accurate (Cornell and Bandyopadhyay 2010; Branson and Cornell 2009). Thirdly, only one item assessed bullying victimization, which consisted of teachers

rating each student “on a continuum of being a passive victim to an aggressive/provocative victim” (p. 331). Finally, it is unknown if the students who were old for their grade had been retained or had entered school late, and if any of the students had been retained more than once.

What might account for old-for-grade, or retained students exhibiting greater bullying and bullying-victim behaviors? Crothers et al. (2010) attributed this finding to those students likely having behavioral and learning disabilities that interfered with peer relationships. They also surmised that if interventions had been directed for those behaviors, instead of using retention or school delay as an intervention, bully-victim conflicts might have been prevented. The hypothesis that retained students exhibit greater behavior problems than non-retained students, and thus are more prone to being bullied, lacks strong empirical support. Studies of differences in behaviors, other than academic behaviors, have been quite mixed, with most showing no significant differences. In a comprehensive review of the literature on retention, Jimerson (2001) found that 86% of the studies that examined social-emotional adjustment (which included peer competence, behavior problems, and school engagement), reported no significant differences between retained and promoted students. More specific to peer relationships, several studies have reported poorer peer relationships among retained students compared to non-retained students (Demanet and Van Houtte 2016), but others have reported no significant differences (Martin 2011; Wu et al. 2010). For example, in a 4-year longitudinal study of American students from grades one through four, Wu et al. (2010) reported long-term negative effects of retention on students’ peer-rated liking and perceptions of school belonging. In contrast, in a study of high school students in Australia, Martin (2011) found no differences between retained and promoted students in self-reported peer relationships.

Although retained students may not be at greater risk for bullying victimization due to greater psychosocial problems, it is plausible that academic problems, which are the most common reasons for retention (Jimerson and Ferguson 2007), contribute to bullying victimization. That is, struggling with academic work and especially exhibiting behaviors reflecting lack of engagement or motivation toward school work are likely to be viewed by other students as deviant, or non-normative, behaviors; thus, precipitating bullying, and particularly verbal (e.g., teasing) and social/relational bullying. Due to the likely greater physical size of retained students (i.e., being at least 1 year older), physical bullying would not be expected. We predicted that retained students are at greatest risk of being a victim of verbal or social/relational bullying under two conditions in which their retention is less normative. Those conditions are (1) when they are retained more than once (compared to students either never retained, or retained only once), and (2) when they attend a private school, versus a public school, in Brazil. Those two conditions are discussed next.

In the current study, 39% of the sample of students in the public schools had been retained (22% had been retained once, and 17% more than once); 7.5% of the sample of students in the private schools had been retained (7% once, and .5% more than once). Thus, being retained once in Brazilian schools, particularly in public schools, is not uncommon and thus may not be as stigmatizing and perceived by others (and oneself) as deviant, whereas being retained multiple times is somewhat less common and thus more likely to be viewed as deviant. Moreover, consistent with multiple retentions, it is very likely that those students exhibit academic problems. As such, social comparison

theory (Suls et al. 2002) would predict that in Brazilian schools, as well as in schools in other countries with high retention rates, students who are retained multiple times, but less so with once-retained students, are likely to experience greater verbal and social/relational bullying.

The second condition in the current study hypothesized to be related to bullying victimization was the school setting—whether retained students attended a public or private school in Brazil. In Brazil, being retained, either once or multiple times, is more normative in public schools than in private schools, as the number of students who repeat a grade is twice as high in public schools compared to private schools (Moraes and Belluzzo 2014). As noted earlier, for the current study, the retention rate was over five times higher among the sample of students in public schools than private schools. Higher retention rates in public schools in Brazil is associated with greater poverty among public school students, and public schools' lack of adequate resources and well-trained teachers (Bruns et al. 2012). Interestingly, similar rates of bullying victimization have been reported for students in public and private schools in Brazil (Oliveira et al. 2015). However, we know of no studies that have examined differences in bullying victimization between students in public and private schools as a function of being retained. We hypothesized that due to greater stigmatization of being retained in a private school compared to a public school, and with retention being much less normative, retained students would experience greater verbal and social/relational bullying than their promoted peers.

For the secondary purpose of the study – to provide evidence supporting the factor structure of the Brazilian Portuguese version of Delaware Bullying Victimization Scale – Student (Brazilian DBVS-S) and the use of scores on its three subscales (Verbal, Physical, and Social/Relational) – we hypothesized that confirmatory factor analyses would show that scores fit our hypothesized construct of bullying victimization. We also expected that invariance in factor structure across public and private school groups and gender would be found.

2 Method

2.1 Students and Schools

The original sample consisted of 409 students, grades 5–9, enrolled in four public schools and two private Catholic schools in the Porto Alegre metropolitan area of southern Brazil. Public school total enrollments were 179, 218, 240, and 570, and private school enrollments were 874 and 950. Whereas the private schools served students from kindergarten through grade 12, the public schools served students from kindergarten through grade 9. The Brazilian researchers of the study invited four private and four public schools to participate. They were selected based on proximity to the researchers' university (minimizing travel time of research assistants administering the measures) and the researchers viewing the schools as being similar to most other schools in Porto Alegre. Two private schools declined. Accordingly, the sample was one of convenience, with all schools volunteering to participate. Although all schools enrolled students in grade 5, only one school elected to include that grade in the study. Both private schools chose to include only grades 6–8. Completion rates (number of

students invited to participate divided by the number completing the survey) were 43.0%, 63.8%, 81.4%, and 83.5% for the four public schools, and 36.5 and 40.5% for the two private schools. From the total sample, 31 students were excluded who answered “disagree” or “disagree a lot” to one or both of two validity screening items that appear in the survey: “I am telling the truth in this survey” and “I answered all items truthfully on this survey.” Thus, the final sample consisted of 378 students. Records identified that 80 students in the public schools (39% of the sample) had been retained and 13 students in private schools (7.5% of the sample) had been retained. Sample demographics, including number of retentions, are shown in Table 1.

2.2 Instruments

Researchers have employed a range of instruments to assess bullying victimization. Some have used a single item, such as indicating whether or not the student has been “bullied or picked on” by other students, with bullying left undefined (e.g., Blake et al. 2012). Perhaps more common is the use of multiple items presenting students with various bullying behaviors, while avoiding the use of the word bullying per se (Espelage and Holt 2001; Kokkinos and Panayiotou 2007; Ttofi and Farrington 2008). Still others have combined methods, such as presenting students with bullying behaviors and then with a single item tapping “bullying” (Bear et al. 2015; Swearer et al. 2012). This was the method used in the current study.

Students completed the 12-item Delaware Bullying Victimization Scale-Student (DBVS-S; Bear et al. 2014) to assess the extent to which they experienced verbal, physical, and social/relational bullying in school. Items on the DBVS-S were adapted

Table 1 Demographic information for students in public and private schools

	Public (<i>N</i> = 204)			Private (<i>N</i> = 174)		
Gender						
Males	104			71		
Females	100			103		
Grade	<i>N</i>	<i>M</i> age	<i>SD</i>	<i>N</i>	<i>M</i> age	<i>SD</i>
Grade 5	56	10.9	1.1			
Grade 6	41	11.8	1.1	64	11.4	0.5
Grade 7	45	13.2	1.3	50	12.5	0.5
Grade 8	37	14.2	1.2	60	13.6	0.6
Grade 9	25	15.0	1.0			
Retention	Public (<i>N</i> = 80)			Private (<i>N</i> = 13)		
Retained once	45			12		
Retained twice	21			1		
Retained three times	11					
Retained four times	2					
Retained five times	1					

M = mean, *SD* = standard deviation. Total *N* = 378. Once-retained students were an average of 1.2 years older than their promoted peers and multiple-retained students were an average of 3.2 years older

from the Adolescent Peer Relations Instrument: Bully/Target Scale (B/TS; Marsh et al. 2011). The DBVS-S consists of three 4-item subscales: Verbal Bullying (e.g., “A student said mean things to me.”; “Hurtful jokes were made up about me.”), Physical Bullying (e.g., “I was pushed or shoved on purpose.”; “A student threatened to harm me”), and Social/Relational Bullying (e.g., “Students left me out of things to make me feel badly.”; “A student told/got others not to like me.”). A score for each subscale was derived by summing responses across the four items of each subscale, with possible scores ranging from 1 to 6. The three-factor structure of the DBVS-S has been supported by confirmatory factor analyses conducted on 34,323 American students, grades 3–12, with evidence of validity shown in scores correlating with academic achievement and school suspensions (Bear et al. 2014).

To assess students’ perceptions of being “bullied,” they also completed an additional item: “I’ve been bullied in this school” that followed the 12 bullying behaviors. Preceding the 13 items, students were given the following instructions: “Since September, how often has the following been done to you by another student at this school?” They responded to each item using a 6-point Likert scale, with 1 = *Never*, 2 = *Less than Once a Month*, 3 = *Once or Twice a Month*, 4 = *Once a Week*, 5 = *Several Times a Week*, and 6 = *Every Day*.

For purposes of the current study, all items were translated from English into Portuguese following a forward and backward translation procedure. Two independent translators translated the instrument to Brazilian Portuguese. Both Portuguese versions were synthesized into a single version that was then back translated to English by a third translator. All translators involved in this process were fluent in English and Portuguese native speakers. Subsequently, an evaluation was conducted with a group of five students, aged 9–16 years-old, in which participants were asked to complete the survey and provide their opinion about its content, structure, and application. Participants’ answers were analyzed in order to prevent possible content miscomprehension, and adjustments to the instrument were made after this step, reaching the survey’s final version.

2.3 Procedures

The study was approved by the Pontificia Universidade Católica do Rio Grande do Sul’s Committee on Ethics in Research. Written consent was obtained from both parents and students, with students being assured that their responses were confidential and their participation was voluntary. The scale used in the current study, as described above, took approximately 10 min to complete and was administered via paper surveys by graduate research assistants during regularly scheduled class periods in late winter and early spring. Surveys were completed during the same 2–3 month period, which began in January and ended in March. Students completed the scale as part of a larger survey assessing school climate, engagement, and other aspects of school mental health.

2.4 Statistical Analyses

The first set of analyses was conducted to evaluate the psychometric properties of the Brazilian DBVS-S. First, the factor structure of the scale was assessed using

confirmatory factor analysis (CFA). CFA was appropriate since the hypothesized structure of the scale was based on previous research and measures (i.e., the factor structure of the American DBVS-S). The proposed model was a three-factor model with 12 items loading on three factors: verbal bullying, social/relational bullying, and physical bullying. Four items were designed to load on each of the three proposed factors. This model was compared to two alternative models: a one-factor model with all items loading on one factor; and a bi-factor model with a general factor and three specific factors. Numerous measures of fit exist for evaluating the quality of measurement models. For each model, we used the root mean square error of approximation (RMSEA; Browne and Cudeck 1993), the standardized root mean square residual (SRMR; Jöreskog and Sörbom 1996), and the comparative fit index (CFI; Bentler 1990). Research suggests that the threshold of good fit should be close to .95 for CFI (Hu and Bentler 1999; Marsh et al. 2005). For the RMSEA and SRMR indices, values close to .06 and .08, respectively, indicate good fit (Hu and Bentler 1999).

Next, measurement invariance was tested to examine whether the scale was of comparable factor structure across school types and gender groups. The process of measurement invariance testing involves three levels of invariance: configural model, weak factorial model, and strong factorial model. The configural model serves as the baseline for multigroup equivalence and applies no quality constraints. Configural invariance is achieved if the model fit indices are appropriate. The result of chi-square test in the configural model is considered as a baseline for the Satorra-Bentler chi-square difference test in subsequent procedures. After configural invariance is found, the weak factorial model is used to examine the measurement unit equivalence by constraining equal factor loadings between groups. Since the total sample size was larger than 300, the model fit of weak factorial invariance was evaluated by using stringent criteria: A decrease in CFI of at least .010 supplemented by an increase in RMSEA of at least .015, or an increase in SRMR of at least .030, was used to indicate noninvariance. After weak factorial invariance was established, strong factorial model with equal constraints on factor loadings and intercepts was assessed by the following criteria: a decrease in CFI of at least .010 supplemented by an increase in RMSEA of at least .015 or increase in SRMR of at least .010 indicates noninvariance (Chen 2007).

The second set of analyses included one multivariate analysis of covariance (MANCOVA) and one multivariate analysis of variance (MANOVA) to examine differences between retained and promoted students in their self-reported bullying victimization. The MANCOVA, which covaried for gender, included students in both public and private schools. Due to only one student in private schools being retained more than once, this analysis did not separate once-retained and multiple-retained students but combined them into one group ($n = 91$). Dependent variables consisted of the three measures of bullying victimization behaviors (i.e., verbal, social/relational, and physical) and the separate item assessing students' perceptions of being bullied in their school (i.e., "I've been bullied in this school."). Gender was included as a covariate due to a greater number of males ($n = 9$) being retained compared to females ($n = 4$) in private schools.

A separate MANOVA was limited to students in public schools, allowing for inclusion of students who had been retained two or more years. Students who were retained four or five times were excluded, since only two students were retained four times and one student was retained five times. Thus, mean differences in bullying

victimization were examined between three groups: promoted students ($n = 111$), students retained once ($n = 41$), and those retained 2 or 3 years ($n = 31$). Listwise deletion was used in all analyses; thus, the number of subjects varied across dependent variables since not all students completed all items on each measure. Gender was not included as a covariate in this analysis, as there was no significant difference between the number of males ($n = 45$) and females ($n = 38$) retained in public schools.

3 Results

3.1 Confirmatory Factor Analyses

The three-factor model was first tested, and yielded indices that met criteria for good fit: $\chi^2 = 70.90$ ($df = 50$, $N = 378$), $p < .05$; CFI = .97, RMSEA = .033, and SRMR = .046). We also tested a bifactor model, consisting of one general factor (i.e., bullying victimization) and three specific factors, as an alternative to the three-factor model. For the present sample, the bifactor model produced adequate fit indices: $\chi^2 = 104.03$ ($df = 42$, $N = 378$), $p < .001$; CFI = .92, RMSEA = .063, and SRMR = .043, as shown in Tables 2. Thus, the fit was not as strong as that of the three-factor model, as indicated by the Akaike Information Criterion (AIC) value of the three-factor model (AIC = 10,564.76) being lower than that of the bifactor model (AIC = 10,627.52). Finally, we tested a one-factor model, the more parsimonious of the two alternative models, and results yielded poor fit indices, as shown in Table 2. In sum, results showed that the three-factor model provided a better fit than the bifactor model and one-factor model. Factor loadings are shown in Table 3. Fit statistics for the three-factor model were found to be adequate across private and public school groups and good for gender groups, as shown in Table 3.

Next, we tested configural invariance, weak factorial invariance, and strong factorial invariance for the three-factor model across private/public school and gender groups. Results are summarized in Table 5. For private/public school groups, a model (Model 1) testing configural invariance yielded fit statistics indicating adequate model fit. The difference between test statistics for the configural (Model 1) and weak factorial (Model 2) invariance models indicated weak factorial invariance across private/public school groups: Satorra–Bentler scaled chi-square difference test was not significant, $\chi^2 = 4.39$ ($\Delta df = 9$), $p = ns$, there were no significant changes in fit statistics: $\Delta CFI = .02$, $\Delta RMSEA = -.008$, $\Delta SRMR = .006$. Mixed evidence of strong invariance for private/public school groups was found, as indicated in the difference between test statistics for

Table 2 Fit statistics for models tested

Model	χ^2	df	CFI	SRMR	RMSEA
Three-factor model	70.904	50	.973	.046	.033
Bifactor model	104.028	42	.921	.043	.063
One-factor model	1570.960	54	.756	.094	.273

χ^2 = Chi-square statistic; df = degrees of freedom; CFI = Comparative Fit Index; SRMR = Standardized Root Mean-Square Residual; RMSEA = Root Mean-Square Error of Approximation

Table 3 Confirmatory factor analysis of the Brazilian Portuguese DBVS-S: Three-factor model

Factor and Items	Loading	SE	z
Factor 1: Physical Bullying			
1.1 In this school I have been hit or kicked and it hurt.	.747	.053	14.140
1.2 In this school I have been shoved on purpose.	.594	.052	11.514
1.3 A student stole or broke something of mine on purpose.	.513	.099	5.203
1.4 A student threatened to harm me	.696	.067	10.361
Factor 2: Social Bullying			
2.1 A student got others not to like me.	.827	.039	20.986
2.2 Other students leave me out of things to make me feel badly.	.660	.068	9.768
2.3 A student convinced others to say mean things about me.	.689	.079	8.760
2.4 Students that don't like me told other students not to be friends with me.	.748	.060	12.568
Factor 3: Verbal Bullying			
3.1 I've been called things I didn't like in this school.	.849	.029	28.993
3.2 A students said mean things to me.	.796	.041	19.503
3.3 In this school I was teased with hurtful things being said to me.	.802	.035	22.882
3.4 Hurtful jokes have been made up about me.	.702	.061	11.438

Loading = standardized factor loading; SE = standard error; z = robust z score

the weak factorial (Model 2) and the strong factorial (Model 3) invariance models: Cutoff criteria for CFI, SRMR, and RMSEA were not met. Although the Satorra–Bentler scaled chi-square difference test was not significant, $\chi^2 = 9.62$ ($\Delta df = 12$), $p = ns$, there was no significant changes in the fit statistics: $\Delta CFI = -.023$, $\Delta RMSEA = -.007$, and $\Delta SRMR = .018$. As shown in Table 5, similar results were found in assessing weak and strong invariance across gender groups. The test statistics for configural invariance (Model 1) indicated adequate model fit, and the difference between statistics for Model 1 and the weak factorial invariance model (Model 2) indicated that there was weak factorial invariance: Satorra–Bentler scaled chi-square difference test was not significant, $\chi^2 = 12.61$ ($\Delta df = 9$, $p = ns$, $\Delta CFI = -.004$, $\Delta RMSEA = 0$, and $\Delta SRMR = .025$). Likewise, the difference between test statistics for Model 2 and the strong factorial invariance model (Model 3) supported strong invariance across gender groups: although the Satorra–Bentler scaled chi-square difference test was significant, $\chi^2 = 24.61$ ($\Delta df = 12$), $p < .05$, there was no significant changes in fit statistics: $\Delta CFI = -.009$, $\Delta RMSEA = .002$, and $\Delta SRMR = .001$.

Table 4 Fit statistics across groups for three-factor model

Model	N	χ^2	df	CFI	SRMR	RMSEA
Full sample	378	70.904	50	.973	.046	.033
Private school	174	73.666	50	.947	.065	.052
Public school	204	97.722	50	.908	.061	.068
Male	175	65.728	50	.961	.060	.042
Female	203	70.990	50	.961	.059	.045

Table 5 Fit statistics for confirmatory factor analysis of three-factor model testing measurement invariance across public and private schools and gender

	χ^2	<i>df</i>	CFI	SRMR	RMSEA
School type					
Model 1	171.142	100	.927	.062	.061
Model 2	166.952	109	.947	.068	.053
Model 3	170.330	121	.924	.086	.046
Gender					
Model 1	136.989	100	.960	.060	.044
Model 2	149.740	109	.956	.085	.044
Model 3	170.330	121	.947	.086	.046

Model 1: Configural invariance. Model 2: Weak factorial invariance. Model 3: Strong

factorial invariance. χ^2 = Chi-square statistic; *df* = degrees of freedom; *CFI* = Comparative Fit

Index; *SRMR* = Standardized Root Mean-Square Residual; *RMSEA* = Root Mean-Square Error of Approximation

3.1.1 Correlations among Factors and Internal Consistency

To examine the relative independence of the scores and the extent to which each subscale assessed the construct of bullying victimization, correlations among scores on each of the subscales were computed. For these analyses, we used manifest indicators of each factor (i.e., sum of raw scores of items on the derived subscales and total scale). For all respondents combined, correlation coefficients ranged in strength of value (i.e., absolute value) from the correlation between physical and social/relational bullying ($r = .54$) to the correlation between verbal and social bullying ($r = .66$), with a median of the correlation between verbal and physical bullying

Table 6 Means and standard deviations for promoted and retained students (public and private schools)

Dependent Variables	Groups							
	Promoted				Retained			
	Public (<i>N</i> = 111)		Private (<i>N</i> = 157)		Public (<i>N</i> = 78)		Private (<i>N</i> = 12)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Bullying Victimization								
Verbal	1.83	1.07	1.78	.94	1.60	.96	2.27	1.30
Physical	1.54	.86	1.40	.60	1.33	.58	1.39	.55
Social/Relational	1.38	.76	1.33	.63	1.31	.50	1.63	.78
"I've been bullied in this school."	1.59	1.34	1.47	.96	1.27	.73	2.15	1.77

M = mean, *SD* = standard deviation. *N* = 358 (268 promoted and 90 retained) for bullying victimization subscales and the additional bullying victimization item. Scores range from 1 to 6 for all items. Higher scores reflect greater perceptions of bullying victimization

Table 7 Means and standard deviations for students retained never, once, or two or three years (public schools only)

Dependent Variables	Groups					
	Never Retained (<i>N</i> = 111)		Retained 1 Year (<i>N</i> = 41)		Retained 2 or 3 Years (<i>N</i> = 31)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Bullying Victimization						
Verbal	1.83	1.07	1.59	.78	1.42	.77
Physical	1.54	.86	1.34	.61	1.23	.49
Social/Relational	1.38	.76	1.23	.27	1.36	.62
“I’ve been bullied in this school.”	1.59	1.34	1.32	.76	1.07	.25

M = mean, *SD* = standard deviation. Total *N* = 183 for bullying victimization subscales and the additional bullying victimization item. Scores range from 1 to 6 for all items. Higher scores reflect greater perceptions of bullying victimization

($r = .63$). With respect to the reliability of the scale, coefficients of internal consistency were .72 for physical bullying, .82 for social/relational bullying, .87 for verbal bullying, and .90 for the total scale.

3.2 Mean Differences in Bullying Victimization

Table 6 presents the means and standard deviations for promoted and retained students in public and private schools on the measures of bullying victimization. For the MANCOVA, the assumption of multivariate homogeneity was not satisfied, as evidenced by a statistically significant Box’s test ($F = 3.91, p < .001$). Thus, Pillai’s trace was used in assessing the multivariate effect (Tabachnick and Fidell 2007). A significant Retention x Public/Private school interaction effect was found, indicating that upon covarying for gender, scores on the dependent variables were significantly affected by the combination of membership in the two retention groups and attending public or private school (Pillai’s Trace = .029, $F = 2.63, df[4, 351], p = .034$). Partial η^2 was .029, indicating a small-to-medium effect size. Univariate *F* tests revealed that students in private schools who had been retained, compared to retained students in public schools, reported being victims of greater verbal bullying ($F = 4.83, df[1, 359], p = .029$, partial $\eta^2 = .013$ [small effect size]), greater social/relational bullying ($F = 3.92, df[1, 359], p = .049$, partial $\eta^2 = .011$ [small effect size]), and indicated greater agreement with the statement “I’ve been bullied in this school” ($F = 7.42, df[1, 359], p = .007$, partial $\eta^2 = .021$ [small-to-medium effect size]). No significant differences were found for physical bullying ($F = .530, df[1, 359], p = .467$). This pattern of differences was not found between promoted students in private and public schools.

Table 7 presents the means and standard deviations for the three retention groups (i.e., promoted, retained once, and retained 2 or 3 years) on the measures of bullying victimization for the second MANOVA, which included only students in public schools. The assumption of multivariate homogeneity was not met (Box’s $F = 8.50, p < .001$), so Pillai’s trace was used to assess the multivariate effect. The multivariate effect was not significant (Pillai’s Trace = .058, $F = 1.33, df[8, 356], p = .227$). Thus, in

public schools, promoted, once-retained, and multiple-retained students did not differ significantly in their self-reported bullying victimization.

4 Discussion

The primary aim of this study was to investigate differences between retained and promoted students (in both public and private schools) in their self-reported verbal, physical, and social/relational bullying, and bullying in general. Retained students in private schools, compared to those in public schools, reported experiencing greater verbal and social/relational bullying. The effect sizes were small. Students retained in private schools also reported greater overall bullying victimization, as reflected in group differences in responses to the item “I’ve been bullied in this school.” The effect size was small to medium. Unexpectedly, no differences were found between promoted, once-retained, and multiple-retained students in the sample of students in public schools.

A secondary purpose of the study was to provide evidence supporting the factor structure of the Brazilian DBVS-S. CFA results supported both a bifactor model and three-factor model, but the three-factor model was found to best represent the factor structure. As evidence supporting the reliability of scores, coefficients for internal consistency were .72 for physical bullying, .82 for social/relational bullying, .87 for verbal bullying, and .90 for the total scale. Findings for group differences in scores are discussed below, followed by a discussion of limitations and implications.

4.1 Differences in Bullying Victimization between Promoted and Retained Students in Public and Private Schools

As predicted, we found that retained students in private schools, compared to retained students in public schools, were more likely to report being victims of verbal and social/relational bullying behaviors, as well as bullying in general. As discussed in the introduction, similar rates of bullying victimization have been reported for students in public and private schools in Brazil (Oliveira et al. 2015). However, we know of no previous research that examined differences in bullying victimization between students in public and private schools as a function of being retained, as was done in the current study. Studies that have investigated the impact of retention on outcomes that would be suspected to be tied to bullying victimization (i.e., social-emotional adjustment and peer relationships) have yielded mixed results, with the majority of studies showing no significant differences between retained and non-retained students (Jimerson 2001; Martin 2011; Wu et al. 2010). Thus, it appears that school setting (i.e., public or private) may serve as a moderating factor between being retained and experiencing bullying victimization. Because being retained is much more common in public versus private schools in Brazil (Moraes and Belluzzo 2014), retention, or “failing” a grade, likely comes with a greater stigma in private schools, by being less normative, compared to public schools. Therefore, retained students in private schools appear to view themselves as experiencing greater verbal and social/relational bullying behaviors, as well bullying in general, than retained students in public schools. We surmise that not finding differences in physical bullying can be attributed to the likely greater

physical size of retained students, who are generally at least 1 year older than their promoted peers.

We expected that greater bullying victimization would be reported by students who were retained more than once (i.e., two or three times). However, in our sample of students in public schools, no differences were found in bullying victimization between those who were promoted, retained once, or retained multiple times. This may be due to the relative normality of being retained, both once and multiple times, in public schools in Brazil. Although being retained multiple times is slightly less normative, it may be common enough to not be viewed as deviant by other students, and thus not contribute to greater bullying, contrary to the situation in private schools. However, it is still somewhat unclear why multiple-retained students did not report greater bullying victimization than promoted and once-retained students, especially since research has shown there to be cumulative negative effects of retention on school engagement, academic outcomes, and behavior (Im et al. 2013). Although the current study was not longitudinal and did not include students beyond the ninth grade, we reasoned that multiple retentions would have a similar cumulative and negative impact on bullying victimization.

4.2 Limitations

Although the results of this study provide insight into the relationship between grade retention and students' perceptions of their bullying victimization in school (in both public and private schools in Brazil), several limitations should be noted. First, the study relied on students' self-reports alone rather than including peer nominations and/or teacher reports. All three methods are commonly used to assess bullying and bullying victimization in school, with self-reports being the most widely used, but there is a lack of agreement on which method is the most accurate (Cornell and Bandyopadhyay 2010; Branson and Cornell 2009). For example, peer and teacher nominations, as well as unbiased observations, may not capture forms of victimization that are not observable and are only known to the victim (Branson and Cornell 2009; Felix et al. 2011). Additionally, one of the strongest and most practical reasons to rely on student self-reports to assess bullying and bullying victimization is that a large amount of data can be collected in a short period of time (Cornell and Bandyopadhyay 2010). Second, the cross-sectional and correlational, rather than longitudinal or experimental, design of our study prevents causal relationships between grade retention and students' perceptions of their bullying victimization from being made.

A third limitation was the sample. The sample size was small and represented only six schools in one Brazilian city, with twice as many public schools as private schools. Efforts were made to recruit more private schools, but only two accepted the invitation to participate. Schools and students volunteered to participate and were not randomly selected, but were viewed by the researchers as typical public and private schools in the Brazilian cities. Although socioeconomic data were not collected on the students or schools, it is very likely that students who attended the public schools were from lower income families than those who attended private schools, with a higher percentage of private school students being from middle and upper-middle class families. This is commonly found in Brazil, as private school tuition costs approximately \$400 monthly.

An additional consequence of students' voluntary participation was low completion rates of the scale in two of the four public schools (i.e., 43.0 and 63.8%) and in both of the private schools (i.e., 36.5 and 40.5%), contributing to the likelihood that the sample is non-representative of the student population of each school (and other schools in Brazil). Thus, the findings should not be generalized beyond the study's sample. Clearly, studies replicating our findings are needed.

The low completion rates also might have created a response bias, yielding more positive, or negative, responses than if all students had participated. There are several possible reasons for the low completion rates, and for differences in rates between private and public schools. According to the Brazilian authors of this study, private schools and parents tend to have greater reservations about participating in research conducted by outside agencies. That is, the schools may be cautious about revealing information that might be viewed unfavorably by parents or the general public and thus harm enrollment. Although completion rates tended to be higher in public than private schools, especially in two schools exceeding 80%, the rates also were low in the two other public schools. It is unclear why these differences occurred, but it should be noted that schools, parents, and students were not given any incentives to encourage completion of consent forms and the surveys. Incentives might have increased completion rates.

Despite the small sample and potential non-response bias, and consequent limited power for the statistical analyses, significant differences were obtained for several comparisons, all of which were predicted based on previous research. Interestingly, where hypothesized differences were not statistically significant, and power was low due to small sample sizes, mean differences were not in the direction predicted. That is, the means for bullying victimization among multiple-retained students, compared to promoted students, were slightly, yet consistently, lower across the four measures. Mean differences were greatest for promoted students who were more likely than multiple-retained students to report "I've been bullied in this school." Thus, although the sample size was small for the multiple-retained group, the differences in means that were found provide no support for the hypothesis that multiple-retained students in Brazilian public schools are at greater risk of bullying than are promoted or once-retained students.

Another limitation related to the small sample size was that it prevented the examination of grade level effects. Although theory does not suggest a strong rationale for expecting grade differences, some research suggests "sleeper effects" of retention, where more negative impacts of being retained do not emerge until the later grades. This notion is illustrated by the findings of a longitudinal study in the Netherlands by Goos et al. (2013), beginning when students were in first grade, in which differences in psychosocial adjustment between promoted and retained students did not emerge until early secondary school. Having a wider range of grade levels than those included in the current study, and larger sample sizes, would allow for testing of potential grade level differences. Additionally, due to the small sample size, relationships among variables were only examined at the student level, and not at the classroom and school levels. Future studies should employ multilevel analyses to compare findings across levels. Research has also shown that having a greater number of retained students in classrooms and schools tends to negatively impact other students in those settings (e.g., greater behavior problems and absences) (Demanet and Van Houtte 2013).

4.3 Implications

The most intriguing finding of this study was that significantly greater bullying victimization was reported by retained students in private schools, compared to public schools, in Brazil. As mentioned previously, the non-experimental design of the study precludes determining any causal relationships. Thus, it is unknown if being retained, particularly in a private school, is casually related to greater bullying victimization. Finding that retained students in public schools reported significantly less bullying victimization, however, suggests that retention, per se, does not place students at greater risk for being bullied. What appears to matter more is how normative, or deviant, retention is in a school: Retained students are more likely to be bullied in schools where retention is not common, and high academic achievement is expected, such as in private schools in Brazil. Still, we do not know if retention increased the risk of those students being bullied.

Recent longitudinal research, using rigorous research designs, indicate that retention has no harmful impact on academic achievement (e.g., Allen et al. 2009) or social-emotional adjustment (Demanet and Van Houtte 2013). Researchers interpret those findings as indicating that what matters more than the decision to retain a student are differences between promoted and retained students in behaviors related to retention—behaviors that existed prior to the decision to retain, and that often continue thereafter in the absence of effective interventions. Applied to bullying victimization and the findings of the current study, those results suggest that it may not necessarily be retention that places retained students at greater risk for bullying in private schools, but certain behaviors, academic or social-emotional, that are not normative, such as lack of academic engagement or social skill deficits. Longitudinal studies, controlling for pre-retention behaviors, are needed to examine if behaviors often associated with the decision to retain students, rather than retention per se, might best explain greater bullying of retained students in private schools and in other schools where retention is not the norm. If results are similar to those of other longitudinal studies that control for pre-retention effects, as cited earlier, they would support the notion that instead of assuming that retention might be effective in helping students overcome academic or other deficits, it would make more sense for schools to target for intervention the pre-retention behaviors that research has shown to be associated with being bullied (see Cook et al. 2010 for review). The same might apply not only to pre-retention behaviors associated with being a victim of bullying but also to those behaviors associated with being a perpetrator of bullying. Bullying others was not a focus of the current study. Crothers et al. (2010) found that teachers rated “old-for-grade” students as more likely than “age-appropriate-for-grade students” to exhibit both bullying and bullying-victim behaviors. We found no other studies that examined bullying among retained students. Despite limitations of that study, as discussed earlier, the findings suggest that interventions, best implemented prior to retaining a student, should target both bullying and bullying victimization behaviors that might be associated with the decision to retain. Clearly, there is a need for further research to investigate bullying and bullying victimization behaviors, both prior to and after retention, to help guide interventions.

Compliance with Ethical Standards

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

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