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Victims of Bullying Among Students With a Disability or Chronic Illness and Their Peers: A Cross-National Study Between Ireland and France

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A B S T R A C T

Purpose: To explore bullying victimization among French and Irish students with a disability or chronic illness (D/CI), considering individual, social, and family factors. We investigated this issue in France and Ireland because of the documented differences between these two countries on relevant contextual factors.

Methods: Data from 12,048 students aged 11, 13, and 15 years (50.1% were boys) as part of the cross-national study 2006 Health Behaviour in School-aged Children were analyzed. Self-completion questionnaires were administered in classrooms; information on socio-demographic characteristics, bullying involvement, D/CI, school participation, social network, and family were collected. Multivariate logistic regressions were performed with individual, social, and family cofactors.

Results: Overall, the prevalence of bullying victimization was significantly higher in France compared with Ireland (34.2% [33.1–35.5] and 25.9% [24.5–27.4, respectively]). Youngest were more likely to report victimization; however, no gender differences were observed. In both countries, students with D/CI were significantly more likely to report that they have been bullied compared with students without D/CI, and a significant additional risk of being bullied was found when students reported D/CI with restriction in school participation. Regardless of country and D/CI status, being bullied was significantly associated with weaker social support and difficulty of communication with fathers, with even stronger associations found among students with D/CI.

Conclusion: Adolescents with D/CI are more likely to be victimized than their peers, with a similar risk in both countries. Besides individual, social and family factors are consistently associated to bullying victimization across countries. These results will guide future antibullying prevention programs.

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Bullying is a common problem among children and adolescents and its description, prediction, and prevention have motivated many researchers and educators [1,2]. Prevalence studies have consistently reported that a significant number of school-aged children are involved in bullying, even if its prevalence varies across countries [3–5]. A recent international study re-

ported significant decreases in bullying behaviors over the past decade in most countries studied, showing a positive development in the context of existing prevention activities [6].

The Olweus definition of bullying has been widely used in the published data. Olweus defined bullying as negative physical or verbal actions that have hostile intent, cause distress to victims, are repeated, and involve a power differential between bullies and victims. Thus, three important elements that define bullying are repetition, harm, and unequal power [7].

Recent studies have focused on understanding the conditions surrounding bullying, highlighting the need to consider contex-

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tual models to examine positive and negative adolescent behaviors [8–11]. Although some socio-demographic, family, and social factors have been found to be consistently associated with victimization, few studies have taken them into account together, or explicitly examined their interactions [3,10,12]. Previous studies have reported that men [1,5,13], younger children [1,3,5,10], those living in a nonintact family [5,13,14], with parents with low socioeconomic [13] or educational levels [3,5], who experience difficulties in communicating with their parents [14], poorer relationship with parents [10,13] or classmates [1,14], poorer social support [3], social isolation [14], fewer friends [10], poorer school climate [13], lower school involvement and performance [14] are more victimized.

Knowledge of bullying among students with a disability or chronic illness (D/CI) is sparse. Although some studies have documented higher rates of bully victimization among adolescents with D/CI [5,13,15,16], they tend to focus on specific conditions and show that specific groups of children (children with learning disabilities [17], attention-deficit and/or hyperactivity disorder [12], or cerebral palsy [18]) are at greater risk of being victimized. The hypothesis that adolescents different in appearance or in behavior are more likely to be bullied has also been investigated [13,19,20]. However, studies exploring bullying among adolescents with D/CI with a multicontextual explanatory approach are rare [13]. In her review, Stassen Berger [2] argues that there is not only one cause of bullying, but rather that the interaction between the chronic condition and the environment of the adolescent best predicts bullying. A previous study found that children with visible disability were overall more likely to be bullied; however, this association was not significant when elements of the child's environment were included in the analysis [19]. The negative effect of D/CI on children's participation in recreational and sporting activities has been documented, highlighting a higher risk of social isolation [21], whereas others have described bullying as an environmental barrier to full social participation for children with or without disability [22,23].

The aims of this article are (1) to describe the frequency of bullying victimization in students according to their D/CI status in Ireland and France; (2) to compare the relative strength of the associations between socio-demographic, social network, family factors, and bullying victimization between students with or without D/CI across these countries, hypothesizing that the environment at several levels may influence student's behaviors differently for students with D/CI compared with others; and (3) to document the additional risk of bullying victimization associated with the level of D/CI. We investigated this issue in Ireland and France as two contrasting environments which may influence bullying among students with D/CI: first, there is a large cross-national variation in the frequency of bullying behaviors, Ireland ranking lower than France [4]; and second, policies advocating inclusive education of students with disability into mainstream schools are more recent in France compared with Ireland.

Methods

Sample

This study uses data from the Irish and French 2006 Health Behavior in School-aged Children (HBSC) World Health Organization cross-national collaborative study. Research teams in participating countries followed the same protocol [24] regarding

question ordering, translation guidelines, comprehensive guidance on sampling and data collection procedures, so as to facilitate subsequent cross-national analyses. The population studied consists of nationally representative samples of students (random design, geographic and/or school grades stratification, and clustering into schools and classrooms), in three age groups (mean aged: 11.5, 13.5, and 15.5) broadly covering the onset and the middle years of adolescence, when changes occur and decisions are beginning to be made. Participation was anonymous and voluntary; consent was obtained from parents and students. Each country obtained approval to conduct the survey from the relevant institutional review board or equivalent regulatory institution. The response rates at school and student levels were 63% and 83% in Ireland, and 79% and 81% in France, respectively.

Measurement

Data were collected using standardized self-completion questionnaires administered in class. The questionnaire was developed by an interdisciplinary research group from the participating countries and a translation and/or back translation procedure was used to guarantee language equivalence.

Questions about bullying were those developed by Olweus [7] and were preceded by a standardized definition to ensure similar comprehension across countries. Participants were asked to report how frequently they had been bullied at school in the past couple of months. The five response options ranged from "I have not been bullied in the past couple of months" to "several times a week." For analyses, responses were dichotomized into "never" versus "at least once in the past couple of months."

To identify children with D/CI, a yes or no question, adapted from Finnish and Canadian 2001/2002 HBSC surveys, was used [25]: "Do you have a long-term illness, disability, or medical condition (like diabetes, arthritis, allergy, or cerebral palsy) that has been diagnosed by a doctor?" A subsequent question allowed identification of children for whom their D/CI restricted attendance or participation at school [25]. Students were then classified into three mutually exclusive categories as non D/CI children, D/CI without restriction in participation, and D/CI with restriction in participation.

The association of three independent groups of factors (socio-demographic, social network, and family factors) with bullying victimization was investigated. Sociodemographic factors included age, gender, and family affluence, the latter assessed by the validated Family Affluence Scale [26] through a composite score used as an ordinal indicator of affluence: high, middle, and low. The quality of social network was investigated by two indicators: one on communication with same-gender friends and a three-item scale measuring social support from classmates developed for the study (with a global score of classmate support ranging from 0 to 12, dichotomized into strong [12–6] vs. weak [6–0] support). Family factors were represented by family structure (living with both biological parents or not), and communication with mother and father was considered separately. The same item was used to measure ease of communication with mother, father, and same-gender friend ("How easy is it for you to talk to the following persons about things that really bother you?") coded on a five-point Likert scale. Ease of communication variables were dichotomized into "very easy/easy" and "difficult/very difficult," while the response "Don't have or see this person" was recoded in missing. More information related to these items is available in Currie et al [4].

Statistical analyses

All analyses were performed separately for each country; all estimates were adjusted according to the structure of the sampling frame. Univariate analyses were performed to describe the distribution of the three relevant groups of independent variables (sociodemographic, social network, and family factors), and Pearson's chi-square tests were used to explore differences across the countries. Frequencies of being bullied were compared by age, gender, and D/CI status using Pearson's chi-square statistics. No significant difference was found regarding missing data on bullying victimization according to disability level (1.4% missing data in No D/CI, 1.0% D/CI without restriction, and 1.9% D/CI with restriction).

To explore and compare the strength of the associations between bullying victimization and sociodemographic, social network, family factors between students with or without D/CI across countries, separate logistic regression models were performed for students reporting a D/CI and for others in each country. The interaction terms were tested between country and all cofactors to explore cross-country differences. To estimate the additional risk of being bullied associated with reported D/CI, with or without restriction in school participation, an additional logistic regression analysis was performed, adjusted for all cofactors and country. This "level of disability" variable in three categories was considered a proxy for the severity of the disability, and this interpretation was supported by preliminary analyses that revealed a linear relation with the risk of being bullied. Level of disability was tested as a dichotomous variable as well as an ordinal variable, which increases the power of the estimation.

Odds ratios (ORs) for reporting being bullied at least once in the past couple of months were calculated. Confidence Intervals were computed at the 95% level and statistical significance was established at $p < .05$. All analyses were performed using STATA 9.2 (Statacorp LP, College Station, TX) [27].

Results

The sample consisted of 4,894 students in Ireland and 7,154 students in France. Table 1 shows the characteristics of the samples by country. The percentage of students reporting D/CI was higher in Ireland (20.6%) than in France (16.6%) ($p < .001$). As compared with the Irish students, French students were significantly more likely to report negative social network (in terms of communication with same-gender friends and classmate support) and more difficulties in communication with their parents. They were also less likely to live with their two parents.

A very consistent pattern emerged, with bullying behaviors more often reported in France than in Ireland in all age (results not shown), gender, and D/CI status groups (Table 2). Overall, 34.2% (33.1–35.5) of students reported being bullied in France versus 25.9% (24.5–27.4) in Ireland ($p < .001$). In both countries, and regardless of the D/CI status, the youngest students were significantly more likely to report being bullied than older students; and there were no significant gender differences in being bullied. Students with D/CI were significantly more likely to report being bullied in both countries (except among Irish boys).

Table 3 presents the associations between bullying victimization and the three independent groups of factors: socio-demographic, social network, and family factors, by D/CI status and by country. Regardless of country and D/CI status, weak classmate support was significantly associated with being bullied, and this

Table 1

Comparison of socio-demographic, social network and family characteristics by country

	Ireland (n = 4,894) n (%)	France (n = 7,154) n (%)	p-value
Socio-demographic factors			
Gender			
Girls	2,417 (49.4)	3,596 (50.3)	ns
Boys	2,477 (50.6)	3,558 (49.7)	
Age			
15 years old	1,685 (34.8)	2,222 (31.1)	<.05
13 years old	1,785 (36.9)	2,425 (34.0)	
11 years old	1,370 (28.3)	2,493 (34.9)	
Family affluence			
High	932 (20.4)	3,432 (49.6)	<.001
Medium	2,559 (56.2)	2,642 (38.1)	
Low	1,065 (23.4)	849 (12.3)	
Disability/chronic illness			
No D/CI	3,848 (81.5)	5,930 (83.8)	<.001
D/CI without restriction	615 (13.0)	931 (13.1)	
D/CI with restriction	260 (5.5)	220 (3.1)	
Social network factors			
Communication with same sex friends			
Easy or very easy	3,657 (82.5)	4,909 (77.9)	<.001
Not easy	707 (17.5)	1,391 (22.1)	
Weak classmate support			
No	4,375 (91.2)	6,119 (87.9)	<.001
Yes	423 (8.8)	845 (12.1)	
Family factors			
Family structure			
Two parents	3,727 (80.6)	5,164 (73.4)	<.001
Others	899 (19.4)	1,875 (26.6)	
Communication with mother			
Easy or very easy	3,732 (82.3)	4,983 (74.1)	<.001
Not easy	805 (17.7)	1,741 (25.9)	
Communication with father			
Easy or very easy	2,952 (67.3)	3,404 (53.1)	<.001
Not easy	1,432 (32.7)	3,004 (46.9)	

association tended to be stronger for students reporting D/CI. A particularly strong association (odds ratio (95% confidence interval)) was found between being bullied and students reporting D/CI both in Ireland: OR 3.5 (2.0–6.1) and in France: OR 4.0 (2.6–6.1). Ease of communication with same-gender friends was found to be significantly positively associated with bullying victimization only among students without D/CI. Regarding family factors, ease in communication with father was consistently, inversely, and significantly associated with being bullied in both countries. Ease in communication with mother was not found to be significantly associated with bullying victimization, except in Ireland for students without D/CI: OR 1.4 (1.1–1.7).

Table 4 shows the associations between being bullied and the level of D/CI adjusted for all other factors. In both countries, students who reported D/CI with restricted participation at school had a significantly higher risk of being bullied (fully adjusted model: OR 1.8 [1.4–2.4]), compared with those with D/CI without restriction (OR: 1.3; 1.1–1.4). The interaction between communication with mother and country was statistically significant ($p = .006$), indicating that among students who reported communicating more easily with their mother, French students were significantly more victims of bullying than Irish students (OR: 1.4; 1.2–1.6). No cross-country difference was found among students reporting difficulty in communication with mother.

Table 2
Comparison of students (% and 95% Confident Interval) reporting bullying victimization by disability/chronic illness (D/CI) status, gender and country

	Total		D/CI		No D/CI		p-value
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)	
Ireland							
Boys	642	26.7 (24.8–28.6)	146	29.4 (25.5–33.5)	494	26.1 (24.0–28.3)	ns
Girls	601	25.2 (23.2–27.4)	154	32.1 (27.9–36.6)	446	23.6 (21.4–26.0)	<.001
France							
Boys	1,164	33.3 (31.8–35.0)	245	41.0 (37.2–45.0)	915	31.8 (30.1–33.5)	<.001
Girls	1,253	35.1 (33.5–36.7)	236	41.0 (37.0–45.2)	1,009	33.9 (32.2–35.7)	<.01

Discussion

Our findings confirm cross-national differences in bullying victimization with a higher prevalence in France than in Ireland [4], even after controlling for a range of factors previously found to be associated with bullying behaviors. In both countries, students with D/CI were significantly more likely to report that they had been bullied than students without D/CI, and a 30% additional risk of being bullied was found when students reported both D/CI and restriction in school participation. Being bullied was consistently associated with weaker social support and difficulty of communication with fathers, with even stronger associations among students with D/CI.

Two factors might help explain the cross-national variation between countries: differences in the interpretation of the bullying concept and cultural or contextual differences. Stassen Berger [2] suggests that variation in the interpretation of the term bullying and the understanding of the concept could help to explain some variation across countries reported in the published data on bullying. However, the preamble in our questionnaire describes bullying in a complete and clear manner, and

thus provides a common operational definition, allowing confidence in these cross-national comparisons. The variations observed in bullying rates may well stem from different educational systems or different national or school level policies related to bullying prevention. School bullying is well known in Scandinavian and Anglo-Saxon countries, where many prevention programs have been implemented, since many years. In Ireland, all schools have been required to take action against bullying and have a locally agreed and implemented antibullying policy. In contrast, the term “school violence” appeared in France only 10 years ago, without an emphasis on bullying or being specific about “power differentials” inherent in bullying behavior. In addition, antihazing legislation exists in France since 1997, but prevention programs are aimed at graduate students. Molcho et al have shown that in many countries where national prevention is consistent, the prevalence of bullying behaviors has recently decreased [6], and this has been the case in Ireland. A decrease was also observed in France, which may be attributed to the observed growing media coverage of school violence in general.

Table 3
Associations between bully victimization and predictors by disability/chronic illness (D/CI) status and country

Country	Ireland		France	
	D/CI (n = 686) OR ^a (95% CI)	No D/CI (n = 2,820) OR ^a (95% CI)	D/CI (n = 893) OR ^a (95% CI)	No D/CI (n = 4,439) OR ^a (95% CI)
Socio-demographic factors				
Gender				
Girls	1.0	1.0	1.0	1.0
Boys	1.0 (.7–1.3)	1.3 (1.1–1.6)	1.2 (.9–1.6)	1.1 (1.0–1.2)
Age				
15 years old	1.0	1.0	1.0	1.0
13 years old	1.4 (.9–2.2)	1.5 (1.2–1.8)	1.6 (1.1–2.3)	1.7 (1.4–2.0)
11 years old	1.4 (.9–2.2)	1.8 (1.4–2.3)	1.8 (1.2–2.5)	1.9 (1.6–2.2)
Social network factors				
Communication with same sex friends				
Easy or very easy	1.0	1.0	1.0	1.0
Not easy	1.5 (1.0–2.3)	1.3 (1.0–1.6)	1.2 (.9–1.7)	1.2 (1.1–1.4)
Weak classmate support				
No	1.0	1.0	1.0	1.0
Yes	3.5 (2.0–6.1)	2.8 (2.1–3.8)	4.0 (2.6–6.1)	3.4 (2.8–4.1)
Family factors				
Family structure				
Two parents	1.0	1.0	1.0	1.0
Others	1.2 (.7–1.9)	1.4 (1.1–1.8)	1.6 (1.2–2.3)	1.1 (1.0–1.3)
Communication with mother				
Easy or very easy	1.0	1.0	1.0	1.0
Not easy	1.1 (.7–1.8)	1.4 (1.1–1.7)	.8 (.5–1.1)	1.0 (.9–1.2)
Communication with father				
Easy or very easy	1.0	1.0	1.0	1.0
Not easy	2.1 (1.4–3.2)	1.5 (1.2–1.9)	1.9 (1.4–2.5)	1.6 (1.4–1.8)

^a Adjusted for FAS (Family Affluence Scale).

Table 4

Associations between bullying victimization and level of disability or chronic illness (D/CI)

Level of disability	n	OR ^a (95% CI)	p-value
No D/CI	7,259	1	
D/CI without restriction ^b	1,178	1.3 (1.1–1.4)	<.01
D/CI with restriction ^b	314	1.8 (1.4–2.4)	<.001
Ordinal assumption ^c	8,751	1.3 (1.2–1.4)	<.001

^a Adjusted for age, gender, FAS, communication with same sex friends, classmates support, family structure, communication with mother, communication with father and country.

^b Level of disability/chronic illness entered as a dichotomous variable with no D/CI as reference group.

^c Level of disability/chronic illness entered as ordinal. Odd ratio thus indicate in risk for each level.

Despite the differences in bullying rates between both countries, we found that students with D/CI are more likely to be victimized with a similar risk in Ireland and in France. In many Western countries, children with D/CI have become increasingly integrated into mainstream schools assuming that inclusive education encourages the acceptance of children with disability by their peers. In both France and Ireland, education systems favor mainstreaming and offer a variety of special needs services, but the concept of truly inclusive education is relatively new in both education systems [28]. In France, the legislative framework on disability was recently reformed with the Act for Equal Right and Opportunities, Participation and Citizenship of Disabled People of February 11, 2005 recognizing the right for any child with disability to attend his and/or her local primary or secondary school. In Ireland, the Education Act 1998 requires the provision of a quality education to each person in the country, whereas the 2004 Education for Persons with Special Needs Act specifies that education must be inclusive, unless there are particular reasons why a specialized placement is required for an individual child.

Our study explored factors associated with bullying victimization among adolescents with and without D/CI, using a global approach taking into account individual, social network, and family factors, in two countries with contrasting contexts. We found considerable similarities between countries and between D/CI status groups in the factors associated with being bullied. Consistent with previous studies, we found that younger students were more likely than older students to report that they have been bullied [1,3,5,29,30], and this holds true for D/CI students as well. Social networks, in terms of social skills [31], number and quality of friends [2], and friendship quality [32], have been described as a moderator of risk factors in predicting peer victimization. More specifically, some studies have shown that some chronic conditions, causing lower youth involvement in social activities and depleting their social network, place students at higher risk of being bullied [33]. Students with D/CI may be more frequently absent from school if they are receiving treatment or special lessons, and this can affect their social standing and friendships [33]. With a stronger influence of classmate support on victimization among adolescents with D/CI, our findings are consistent with this literature. Our results in relation to family factors are more surprising, and somewhat controversial, with the strong association between ease in communication with fathers and bullying victimization, and a less consistent association for communication with mothers. To our knowledge, the specific role of fathers in relation with bullying victimization has not been explored, but rather the familial environment

through either both parents or mothers only [5,13,15,34]. Some studies have shown that fathers have a unique contribution to their children's behaviors, irrespective of the mothers role [35], and relationships with fathers have been shown to be of particular importance when the father is not residing in the main family home [36].

In addition and in accordance with the published data on bullying that have shown that victims of bullying are also often bullies [1,10,14,16], we performed a sensibility analysis to check whether the students reporting D/CI were more victims than bully-victims and had a different profile in terms of social and family context. No differences were found on analysis.

We also studied the additional risk of being bullied associated with the level of disability adjusted for all cofactors. Our results confirm the hypothesis that the level of disability was more severe when students reported that their D/CI affected their school participation compared with those reporting D/CI without such a restriction in participation. However, additional quantitative and qualitative studies are required to help document the nature of the relationships between all these dimensions.

The current article is based on large representative samples in two countries, using standardized research methods that had been tested many times in previous HBSC studies, language equivalence, and a common operational definition of bullying. France and Ireland were chosen for analysis primarily because of the differences in reported prevalence of school bullying behaviors as known in previous waves of the HBSC studies [4]. It should be noted that the samples also differ on other indicators: higher rates of D/CI students and lower levels of family affluence in Ireland and more children not living with both parents in France. Another strength of this study is its relevance to public health and its potential contribution to prevention efforts toward a vulnerable population.

However, this study relies on self-reported data for both bullying behavior and D/CI status. Self-reported D/CI is significantly more prevalent in Ireland than in France. This could stem from higher level of integration of children with D/CI in mainstream education in Ireland or from a different understanding of the question, despite the examples given. On the basis of other sources, prevalence data on chronic conditions among adolescents in France and Ireland are not available for comparison. However, previous Canadian results suggest that chronic conditions can be under-reported by children compared with parents [25,37]. In line with some previous findings indicating that allergy and asthma are the most commonly reported chronic conditions in childhood [16,37,38], we assumed that in our sample, most students reporting D/CI without restriction have such illnesses, and that a higher proportion of students with most severe chronic illness and disability are to be found among those reporting D/CI with restricted participation at school. In our data, difference across countries of prevalence were significant for students reporting D/CI with restricted participation (France: 3.1% [2.7–3.5] vs. Ireland: 5.5% [4.9–6.2]) but not for those reporting D/CI without restriction (France: 15.2% [12.4–14.0] vs. Ireland: 13.0% [12.1–14.0]). This could mirror the fact that the integration of students with more severe disability is more advanced in Ireland. Qualitative work would help in further understanding these differences. Another limitation of the present study is related to the general measure of bullying that was used: we cannot distinguish between different forms or types of bullying, such as physical or social exclusion bullying. Qualitative studies on students' perceptions of bully-

ing could be particularly useful in helping to understand any existing cross-national differences in bullying.

Nansel et al [1] highlighted that young people who are bullied generally have higher levels of insecurity, anxiety, depression, loneliness, unhappiness, physical and mental symptoms, and lower self-esteem. Another study has shown that students who have been bullied are more likely to have more fragile health at adulthood [39]. Future prevention and intervention programs should pay more attention to students with D/CI whose number is increasing in schools and who are especially vulnerable to bullying. Consequences for these young people are multiple including more social isolation, less participation in activities at school, more negative self-perceptions, as well as potential effects on both objective and subjective components of health. We have shown that contextual factors were associated with reports of bullying victimization, and these should be considered for future strategies to prevent such bullying at school and in other settings. Vignes et al [40] found that factors related to disability knowledge were significantly associated to better attitudes among students. Thus, we also recommend the inclusion of a disability component in future antibullying programs and policies, and to take into account students' environment, that is peers, teachers, and family members.

In conclusion, our study highlights the need to pay attention to the particular issues for children with D/CI associated with bullying victimization, and these findings deserve qualitative exploration cross-nationally. This study also suggests that there is a need to further investigate the possible health consequences of being bullied among students with D/CI because they seem to cumulate vulnerabilities associated with being bullied, as well as or in combination with their existing chronic conditions.

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