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Submitted April 20, 2021

Accepted January 5

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The Effect of the NoTrap! Anti-bullying Program on Ethnic Victimization: When the Peer Educators' Immigrant Status Matters

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The research was funded by the National Project PRIN 2017 [n.20173E3Z7W –003 "Prejudicial bullying involving ethnic groups: Understanding mechanisms and translating knowledge into effective interventions" (period: 19.08.2019 to 18.10.2022)].

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The authors have no conflict of interest to declare. All data, analysis code, and research materials are available by prior request to Federica Stefanelli. This study's design and its analysis were not preregistered. 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. This article does not contain any studies with animals performed by any of the authors. Informed consent was obtained from all students included in the study, from their parents, from the school principal, and from the class council.

Participation was entirely voluntary, confidential, and anonymous. Students were informed that they were free to withdraw from the study at any time. The authors are grateful to all of the students, teachers, and schools who took part in the study. Correspondence concerning this article should be addressed to Federica Stefanelli, Department of Education, Languages, Interculture, Literature and Psychology, University of Florence, via di San Salvi 12, Padiglione 26–50135, Florence, Italy. Email: federica.stefanelli@unifi.it

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Abstract

Nowadays, an increasing number of children and adolescents living in Europe have an immigrant background. Since ethnicity is a recognizable characteristic that may become the driver of bullying, these youths are at high risk of victimization. School interventions based on peer-led approaches, assuming all the conditions postulated in contact theory, could be suitable to counteract bias-based bullying and victimization.

This study aims to analyze whether the NoTrap! anti-bullying program, an evidence-based peer-led intervention, may also be effective in counteracting ethnic bullying and victimization when students with an immigrant background are involved as peer educators. 1570 students participated in the study: 24 control classes (N=476) and 50 experimental classes (N=1094). Within the last group we identified two conditions: 30 classes in which all peer educators were Italian (Experimental A, N=661); 20 classes in which at least one of them had an immigrant background (Experimental B, N=433).

Results of two linear mixed models showed a significant interaction time by Experimental Condition for ethnic victimization ($F_{(1, 1170)}=4.185; p=.015$). Specifically, the NoTrap! is effective in reducing ethnic victimization when at least one student with an immigrant background is involved as a peer educator. Only in this condition, indeed, peer educators are directly involved in the phenomenon they counteract, and all four circumstances postulated in the contact theory are satisfied. No effects on ethnic bullying have been found ($F_{(1, 1162)}=0.215; p=.806$). This is in line with the activities proposed in the program, which is more focused on empowering victims than on acting directly on bullies.

Key Words: Ethnic bullying, ethnic victimization, peer-led interventions, NoTrap! program, peer educators' immigrant background

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Nowadays, an increasing number of children and adolescents attending schools belong to an ethnic minority community (International Organization for Migration, 2019). These students may be bullied, victimized, and excluded by peers because of their stigmatized status (Pottie et al., 2015).

One of the developmental tasks both native and non-native students face is growing up in culturally heterogeneous societies and dealing with diversity positively (Larson, 2002; Strohmeier et al., 2008). For this reason, students need to be supported by adults, especially within the school context where, because of multi-ethnicity, the risk of bias-based harassment is high (Vervoort et al., 2010).

Being bullied often has serious implications for the victim's health (e.g. Arseneault et al., 2010; Ttofi et al., 2012) and these negative outcomes result more severe for ethnic minority youths than for native students (Agirdag et al., 2011; Vitoroulis & Georgiades, 2017). In particular, ethnic bullying victimization appears to be associated with psychological problems, such as depression and drug abuse (Cardoso et al., 2018). Being a bully may also result in negative outcomes. Bullying perpetration, indeed, is often related to suicidal ideation and suicidal attempts (Holt et al., 2015), drug abuse (Ttofi et al., 2016), and violence in later life (Ttofi et al., 2012). According to a recent study, being an ethnic bully/victim is positively correlated with alcohol, tobacco, and marijuana use (Hong et al., 2021).

Given the increasing number of students from immigrant backgrounds in Europe, and the consequences that ethnic bullying victimization has on both victims' and bullies' health, programs to prevent and counteract this phenomenon are needed. According to the literature, in order to be effective, such programs should be able to promote ethnic tolerance and counteract ethnic prejudice (Russell et al., 2012). While one possibility is to design programs specifically geared toward addressing this phenomenon, a more parsimonious approach might test whether already validated anti-bullying programs, under specific circumstances, are also effective in reducing ethnic bullying and ethnic victimization.

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Ethnic bullying: definition and consequences

Scholars define ethnic bullying as a specific manifestation of bias-based bullying, namely peer harassment motivated by stigma (NASEM, 2016). Ethnic bullying is based on cultural prejudices, and it manifests itself through threats, name-calling, rumour spreading, harassment, pushing, or excluding peers because of their stigmatized status. As well as traditional bullying, ethnic bullying is characterised by the intention to hurt, systematic aggressions over time, and imbalance of power between victims and aggressors (Olweus, 1993). Usually, victims of ethnic bullying are targeted for the peculiarities that characterize their minority group and separate them from the norm, such as physical appearance, cultural heritage, religion, nationality, and speaking in a foreign accent (Vitoroulis & Vaillancourt, 2015).

To correctly define and measure ethnic bullying, it would be necessary to provide an unambiguous definition of ethnicity. However, in the scientific literature regarding ethnic bullying, it is possible to detect different ways of defining and measuring membership to an ethnic minority community. In particular, it is possible to identify an overlap between the measure of ethnicity and the country where the study took place. Indeed, while studies conducted in Nord America measure the race of students via a self-report question (Graham & Juvonen, 2002; Hanish, 2000; Maynard et al., 2016), European studies differentiated ethnic minority groups based on the immigrants' generations variable (first, second, and third-generation) (Motti-Stefanidi et al., 2008; Pottie et al., 2015; Strohmeier et al., 2011).

There is no consensus among scholars on the predictive role played by ethnicity in involvement in bullying dynamics (Vitoroulis & Vaillancourt, 2018; Xu et al., 2020). On the one hand, some scientific findings suggest that ethnicity alone may not be an adequate predictor of bullying victimization (Vitoroulis & Vaillancourt, 2015, 2018). Other factors, such as socioeconomic status, might have a higher predictive power. On the other hand, many studies report a significant difference in bullying dynamics between native students and youths from ethnic minority groups (Pottie et al., 2015; von Grünigen et al., 2010). In agreement with Xu and

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colleagues (2020), these inconsistencies can be explained by several considerations, including: measures of bullying behavior adopted, different cultural values influencing peer relationships, density of ethno-racial minorities in schools, and different economic and political contexts across the countries where the studies took place.

There is a large body of literature on the toll that bullying and victimization takes on students' psychological health (Arseneault et al., 2010; Menesini et al., 2009; Ttofi et al., 2012; Arseneault, 2017; Brimblecombe et al., 2018). The negative outcomes linked with bullying victimization result as more severe for ethnic minority youths than for native students. Generally, research shows that youths experiencing bias-based victimization are at greater risk of health and psychological problems compared to youths targeted for non-bias-based bullying, or non-victimized students (Russell et al., 2012). Specifically, the experience of ethnic discrimination results with psychological distress, (Fisher et al., 2000), conduct disorder, attention deficit hyperactivity disorder, defiant disorder (Coker et al., 2009) and compromised academic performance (Wong et al., 2003). Moreover, according to Cardoso and colleagues (2018), ethnic bullying victimization is associated with psychological problems, such as depression and drug abuse. Finally, students who are targets of ethnic bullying report poorer school connectedness (Nishina et al., 2005) than youths who are targets of non-bias-based bullying. On the other hand, to be bullies towards peers with an immigrant background may also have serious implications on the perpetrators' health. According to Stone and Carlise (2017), perpetrators of ethnic-based bullying are more likely to use tobacco, marijuana, and alcohol compared to uninvolved adolescents, victims, or bully/victims. These results are partially confirmed by a recent study, according to which being an ethnic victim or an ethnic bully/victim, but not to be a bully for ethnic reasons, results as positively correlated with alcohol, tobacco, and marijuana use (Hong et al., 2021).

Interventions targeting ethnic bullying

Given the negative effects that the experience of perpetration and/or victimization have on students' health, many anti-bullying programs have been implemented at school, an ideal setting to

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promote positive prosocial peer relationships (Farrell et al., 2018). These anti-bullying programs usually showed effectiveness in preventing and reducing traditional bullying by approximately 19-20% and cyberbullying by approximately 10-15%. They also showed effectiveness in reducing victimization by approximately 15-16% and cybervictimization by approximately 14% (Gaffney, Farrington et al., 2019; Gaffney, Ttofi et al., 2019). The effectiveness can be influenced by the age of the students, though contrasting results have been found (Nocentini, et al., 2019). While Ttofi and Farrington (2011) asserted that greater intervention success can be attained when working with older youths, a more recent meta-analysis found a decline in efficacy of anti-bullying programs among adolescents (Yeager, et al., 2015). Yeager and colleagues suggested that this decline can be explained by the developmental change in three areas. For the first, bullying assumes a more indirect form between adolescents. Secondly, while in younger children the underlying causes of bullying are associated with individual factors, like social competency, in adolescence contextual factors like social status become more relevant. Third, the domain-general behavior-change tactics, that are usually led by adults, could become less effective with adolescents. Yeager and colleagues concluded that it is not sufficient to age up existing materials originally thought for younger children. Programs targeted to adolescents should adopt specific methods and actions thought for this phase of life.

Although many anti-bullying interventions have been implemented in schools, to date, little attention has been paid to the subpopulations at higher risk of bullying victimization, such as youths from ethnic minority groups. Indeed, most interventions are not explicitly designed for at-risk subpopulations (Earnshaw et al., 2018; Xu et al., 2020), and there is a lack of evidence of the effectiveness of traditional anti-bullying programs on specific subtypes of bullying. Specifically, only two studies analyzed the effects of one anti-bullying program, the Olweus Bullying Prevention Program (OBPP), separately for native students and youths from ethnic minority groups (Bauer et al., 2007; Limber et al., 2018). The first study proposed a controlled trial with a cohort of 10 middle schools (grades 6–8). According to the findings, the OBPP is effective in combating bullying within

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the majority group, but not in reducing victimization among youths from ethnic minority communities (Bauer et al., 2007). For the second study, an extended population of 210 schools situated in Pennsylvania was followed over the course of two years. The findings showed that although the program had a stronger effect in reducing bullying and victimization within majority groups, the impact was still significant among minority ones (Limber et al., 2018). Although these findings may be due to the considerably smaller numbers of ethnic minority students as compared with their native counterparts (Xu et al., 2020), they also underline the need to better study the effects of antibullying programs in subpopulations, and design interventions aimed specifically at preventing ethnic bullying (Limber et al., 2018).

Only one anti-bullying program has been implemented to specifically counteract and evaluate ethnic bullying (Moran et al., 2020). The study proposed a brief implementation of the bystander bullying intervention (STAC) adapted for ethnically blended groups. The STAC is an intervention based on Social Learning Theory (Bandura, 1977), which suggests that individuals model their behaviour (1) by imitating the behaviour of others who they perceive as influential, (2) by looking at the rewards that the others obtained for their behaviour, and (3) by observing the behaviour of the individuals who they perceive as similar to them. Results of the study showed a significant decrease in bullying victimization and ethnic bullying victimization from baseline to a follow-up 6-weeks later, with no differences between native students and students from ethnic minority groups.

From a social psychological perspective, stigma-based interventions have been carried out within the educational setting. Specifically, Aboud and colleagues (2012), and McKown (2005) identified two popular types of theory-based stigma interventions for youths: interventions based on social cognitive theory (Tajfel et al., 1971) and interventions informed by contact theory (Kroneman et al., 2019). The first aims to modify social precursors of stigmatized behavior, namely shared social norms and individual beliefs that contribute to maintaining stigma-based attitudes (Earnshaw et al., 2019).

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The second, based on contact theory (Allport, 1954; Pettigrew & Tropp, 2006), aims to promote positive intergroup interactions by implementing group activities that promote peer contact and cooperation. Specifically, according to the contact theory, four group conditions are needed to counteract prejudice towards a minority: equal status between minority and majority groups in the situation; common goals; intergroup cooperation; and the support of authority figures (Allport, 1954; Pettigrew & Tropp, 2006). When these conditions are satisfied, the stigma can be reduced among group members with different backgrounds (McKown, 2005). Thus, according to Aboud and colleagues (2012), interventions informed by contact theory are successful in leading to positive changes in attitudes, particularly among youths belonging to racial/ethnic majorities. In relation to our study, the four conditions postulated in the contact theory seem to be satisfied in a peer-led program wherein peer educators from different cultural backgrounds work together with classmates to reach a common goal with the support of adults (experts and/or teachers).

Peer-lead approach in interventions

Peer-led approaches can be very promising for anti-bullying interventions targeted to secondary school students. Intervening with this age group is more difficult than with younger students (Yeager, et al., 2015). The developmental changes in bullying manifestation and in underlying causes make it increasingly difficult to influence the bullying-related classroom norms in secondary schools (Yeager, et al., 2015). Moreover, adolescents commonly express reluctance to adults' attempts to influence their personal goals, while they are more likely to modify their behaviours and attitudes if they receive positive messages from peers (Wye & AIVL Hepatitis C Peer Education & Prevention Program, 2006). The adoption of a peer-led model anti-bullying program designed for adolescents gains an advantage from a means of sharing information and advice which has already been shown to work.

Although peer-led approaches appear to be very promising in addressing bullying behaviors among adolescents, the research on this topic bore contradictory results (Ttofi & Farrington, 2011;

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Smith et al., 2012; Lee et al., 2015; Zambuto et al., 2020). Indeed, on the one hand, according to the Ttofi and Farrington meta-analysis (2011), working with peers may lead to an iatrogenic effect that reinforces victimization. On the other hand, there are studies, such as the three analysed by Lee, Kim and Kim (2015), whose meta-analysis reports the significant effect of peer-led interventions in reducing bullying perpetration. What's more, among the studies considered in two recent meta-analyses of prevention programs against bullying in schools (Gaffney, Ttofi et al., 2019) and cyberbullying (Gaffney, Farrington et al., 2019), the NoTrap! program, which was one of the most effective, implements a peer-led intervention. It is specifically designed for adolescents. With regards to the three developmental changes of this phase of life found by Yeager and colleagues (2015), the NoTrap! Program (1) works both on direct and indirect forms of bullying and cyberbullying; (2) it also tries to modify the contextual factors of bullying, giving more visibility to students who want to counteract this problem; (3) it adopts peer education as a joining link between experts' actions and the change in class-group dynamics (Zambuto et al., 2020). Specifically, the program has shown effectiveness in reducing traditional bullying and victimization, even when it takes place online (Menesini et al., 2018; Palladino et al., 2016; Zambuto et al., 2020). This reduction was stable at follow-up 6 months after the end of the program (Palladino et al., 2016). Moreover, it effectively decreases the internalized symptoms typical of victims of bullying (Palladino et al., 2019), and increases defending behavior in bystanders (Zambuto et al., 2020).

According to Smith, Salmivalli and Cowie (2012), just *working with peers* may not be enough to make a peer led intervention effective. In order to understand under which circumstances it is effective or not, particular attention should be given to the different components involved in the program and to the characteristics of the approach itself. In this regard, a study of the NoTrap! anti-bullying program (Zambuto et al., 2020), found that it is effective in reducing bullying and victimization, and in increasing defending behavior, only when peer educators are voluntarily recruited. Conversely, when the peer educators were nominated by their classmates, bullying and

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victimization remained stable, and defending behavior did not increase in the whole class, but only in the group of peer educators.

Moreover, authors found that voluntary peer educators are more involved in bullying victimization than both nominated ones and other classmates (Zambuto et al., 2019, 2020). Thus, the results of the study suggest that a peer-led program may be more effective when peer educators have some experience with the problem they are going to counteract. A peer educator who has direct experience with situations involving bullying, even as a victim, may have a deeper understanding of the problem and feel compelled to change classroom bullying dynamics. In line with this hypothesis, a recent study on the effectiveness of a peer-led program in counteracting bias-based victimization involving members of the lesbian, gay, and bisexual (LGB) community as peer educators showed effectiveness in reducing LGB stigma-based attitudes (Kroneman et al., 2019).

The current study

The present study aims at investigating whether the NoTrap! anti-bullying program is effective in reducing ethnic bullying and victimization when the peer educators include students from immigrant backgrounds.

The NoTrap! anti-bullying program is not specifically designed to counteract ethnic bullying. Indeed, the program does not include any action specifically oriented towards modifying social norms and individual beliefs about immigration or ethnicity, which are the main predictors of stigmatized attitudes and behavior (Tajfel et al., 1971). However, within the NoTrap! program, the conditions postulated in the contact theory are applicable when students are involved among educators and other participants, regardless of their immigrant status. Indeed, in this situation, all members, regardless of their nationality or ethnicity, (1) have equal status and work together (as peer educators or as other participants) (2) have to reach a common goal (3) cooperatively, and (4) they are supported by teachers. Thus, based on the contact theory, we hypothesize that the NoTrap! program may reduce ethnic bullying and victimization when it involves students with an immigrant background as peer educators. Moreover, since previous results showed that when peer educators

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are more involved in the problem, they can be also more effective in reducing and combating it (Zambuto et al., 2020), we hypothesize that, in classrooms with peer educators with an immigrant background, the NoTrap! program could also reduce ethnic bullying dynamics. On the contrary, we hypothesize that in the control group and in classrooms in which all peer educators are Italians, ethnic bullying and victimization will remain stable.

Method

The NoTrap! program

NoTrap! is an Italian online and school-based universal intervention programme developed to counteract bullying and cyberbullying. It is designed for adolescents between grades 7 and 10. In the Italian educational system, all these students attend secondary school, but at two different levels. Specifically, in Italy we can distinguish between lower secondary school (so-called “middle school”), which lasts 3 years (from grade 6 to 8), and upper secondary school (so-called “high school”), which lasts 5 years (from grade 9 to 13). The program targets adolescents between the 7th and 10th grades, for two main reasons. First, regarding middle school, we do not include sixth grade students because they are still too young for a peer-led program. Second, for secondary school we focused on the first two grades (9th and 10th), because these represent an important developmental transition for Italian students, with changes of classmates, teachers, subjects, and quite often neighbourhood, with students moving to another town or city. In order to establish positive and non-aggressive peer relations, an intervention focused on bullying and cyberbullying appears to be particularly relevant for the first two years of high school, where the dropout rate can be very high, even because of a negative school climate. In order to work in this particular stage of development, the NoTrap! program adopted a peer-led model, and it uses specific materials which were conceived for adolescents.

The programme is one school year long, and it consists in three main phases. The first goal is to raise awareness among the students. This is done by holding a two-hour meeting with all the students of a class, in which psychologists present the program and begin raising awareness on

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bullying and cyberbullying by presenting videos and holding discussions with the participants. At the end of the first phase, psychologists explain what it means to be a peer educator of the program. Then, four or five students per class are voluntarily recruited as peer-educators. The second phase consists of training the teachers (4 hours) and the peer educators (8 hours). The teachers' training starts with a lesson about bullying and cyberbullying, followed by an explanation of the NoTrap! program. Then, teachers are empowered and encouraged to support their students during the third phase of the program. Specifically, during training, teachers are invited to simulate the two workshops that peer educators will perform in class in the final phase of the program. In this way, they will be ready to help their students when they start working in the group class.

Regarding peer educators, in each school they attend a day-training all together. Each training session is held with about 20-25 peer educators. The training is designed to empower three areas of peer educators' competence: their listening skills, emotional competences and empathy, and coping strategies against bullying and cyberbullying both as victims and bystanders. For each competence, there is a unit composed of specific activities (e.g., realization of posters, role play, games) and considerations.

Finally, during the third phase, peer educators hold two workshops in their classroom on the emotions and the coping strategies experienced by bystanders and victims. Based on cooperative learning, the two workshops aim to raise empathy and coping strategies to deal with the incidents and prevent them. Specifically, during these workshops, classmates are divided in four or five groups, each one led by a peer educator. In each group there is a positive interdependence between members, because all of them have a specific role (i.e., reader, writer) necessary to complete the proposed activities. This means that each member is equally responsible for the end result. Teachers supervise the workshops' activities, and they offer their help to students. Specifically, according to Wood, Bruner, and Ross's Scaffolding Theory (1976), teachers' support should be tailored for peer educators and students' needs, and it should be gradually removed in order to promote their autonomy. At the end of each activity, groups share the work done with classmates and teachers.

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Design and Procedure

We defined a cluster quasi-experimental controlled trial within the NoTrap! anti-bullying program, in which we compared three conditions: a) students in classes in which all peer educators are not immigrants (Experimental A); b) students in classes in which at least one peer educator has an immigrant background (Experimental B); c) students in classes that do not participate in the NoTrap! program (control group).

In September 2016, an invitation to participate in the NoTrap! program was sent by the Regional Office of the Ministry of Education for Tuscany (Ufficio Scolastico Regionale) to all 316 secondary schools of the provinces of Lucca, Pistoia and Livorno. We included the first 14 schools that accepted the invitation (the 7% of all the secondary schools of the three provinces) in the experimental group. The participating schools were then matched with 8 other schools in the same provinces and with the same curriculum (control schools). We specifically requested school staff to include all the 7th, 8th (i.e., middle school) and 9th, 10th grade (high school) classes in their school.

Between January and April 2017 100% of classes of the experimental conditions completed all the NoTrap! program phases. Implementation fidelity in Experimental A and Experimental B was strictly monitored by the research group. For both conditions, 100% of Experimental classes attended the first (awareness-raising meeting) and the second (teachers' and peer educators' training) phases. For the third phase, we asked the teachers of each class to fill in a structured report at the end of the program, about whether and how the two workshops were implemented. For both conditions we had a 100% rate of replies by teachers and 100% of classes implemented both workshops, following the same structure, and using the standardized materials provided by the program.

Two data collections were conducted: November 2016 (T1, pre-test) and May-June 2017 (T2, post-test). The questionnaires were administered in class by trained research assistants during school hours.

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The research, titled PREvenzione del BULLismo e dell'ABbandono scolastico nelle scuole della provincia di Lucca (Pre_BULLAB), was carried out in accordance with the 1964 Helsinki declaration by the World Medical Association (WMA) and its later amendments, the ethical standards of the Italian Association of Psychology ethics code, and the obligations imposed by the Italian law for the protection of minors. It was not approved by the ethic committee of the University of Florence, which was not yet established when the study started. However, in accordance with Italian law on the protection of minors, preliminary informed consent, consisting of initial approval by the School Principal and the class council, was requested. Once permission was gained from the schools, informative letters were sent to all students and to their parents, explaining the study, the intervention aims, and requesting the parents' consent for their child's participation. The 98% of the target sample received parents' approval to participate in the study and in the intervention.

Participants

Participants to the cluster quasi-experimental controlled trial were 1570 students nested in 74 classes of 22 Secondary Schools in Tuscany. Of these, 61% attended middle school (grades 7 and 8), and 40% Lyceum, Technical and Vocational high school (grades 9 and 10).

Most of the participants were Italian. By having one (10.1%) or both (75.5%) parents born in Italy, they were of Italian citizenship. 184 students (11.7% of the whole sample) came from an immigrant background, with both parents born abroad (29% from Albania, 19% from Romania, 14% from Morocco, 4% from China, 3% from Philippines, and the remaining 31% from various countries of the world). By Italian law, they do not have Italian citizenship, regardless of whether they were born in Italy (102 students) or not (82 students). 41 students skipped the questions about their parents' origins, so their citizenship status is missing. In the following paragraphs, the label "with an immigrant background" will refer to students of whom both parents were born abroad. On the contrary, the label "Italian students" will refer to youths who have at least one parent born in Italy. In other words, we have chosen to consider all students without Italian citizenship as members

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of an ethnic minority, regardless of where they were born (Palladino et al., 2020). In accordance with the *ius sanguinis* law, minors must have at least one Italian parent to qualify for citizenship.

1094 students (42% females, age $M=13.04$; $SD=1.43$; age range=11-17 years) out of 1570, nested in 50 classes across 14 Schools (59% middle schools), participated in the NoTrap! program (Experimental Group). 231 of them (from three to seven in each class, depending on the N size of the class they belonged to; 47% females; age $M=12.94$; $SD=1.41$; age range=11-17 years) voluntarily decided to become peer educators. Among them, 32 peer educators had an immigrant background (28% females; age $M=13.19$; $SD=1.80$; age range=11-16 years). For the current study, we defined two conditions within the experimental group on the basis of the peer educators' citizenship: 30 classes in which all peer educators were Italian (Experimental A); and 20 classes in which at least one had an immigrant background (Experimental B). It is important to underline that we used the same peer educators' recruitment procedure for both experimental A and experimental B conditions. Specifically, at the end of the first phase, the trainers requested that the volunteers take on the role of peer educators. Students who raised their hand were selected, with a proportion of one peer educator for every 4-5 students. This proportion was found to be a good balance in the previous implementations of the program (Palladino et al., 2016, Zambuto et al., 2020). Specifically, in the third phase of the program each peer educator must lead the workshops with a subgroup of 4-5 classmates and the proportion we used in the recruitment allowed every participant to have his/her role in the activities. In the rare case in which the number of volunteers for class exceeded this proportion, we wrote each of their names on bits of paper and proceeded with a random extraction.

The first condition (Experimental A) consisted of 661 students (46% females; 11% came from an immigrant background; age $M=12.97$; $SD=1.28$; age range=11-17 years). The second condition (Experimental B) consisted of 433 students (36% females; 20% with an immigrant background; age $M=13.15$; $SD=1.63$; age range=11-17 years). The third condition - control group- was composed of 476 students (39% females; 6% with an immigrant background; age $M=13.22$; $SD=1.26$; age

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range=11-18 years) belonging to 24 classes - 8 Schools (64% middle schools), who did not participate to the NoTrap! program.

In Table 1 sample characteristics are reported for each condition (i.e. Experimental A, Experimental B and Control Group).

Table 1
Sample characteristics in the three experimental conditions

Descriptive	Experimental A	Experimental B	Control Group
N	661	433	476
Gender			
% Female	46%	36%	39%
% Male	54%	64%	61%
Citizenship status			
% With an immigrant background	11%	20%	6%
School level			
% Middle School	63%	54%	64%
% High School	37%	46%	36%
Age			
Range	11-17	11-17	11-18
Age mean, SD	12.97; 1.28	13.15; 1.63	13.22; 1.26

Note. SD = Standard Deviation

Overall, 1475 students were present on the day of the first data collection. We have data from 1165 students from T1 and T2 for ethnic bullying, and 1173 for ethnic victimization. Attrition at T2 was analysed with two logistic regression analyses in which dropout for ethnic bullying at T2 and for ethnic victimization at T2 respectively were the dependent variables (0 = dropout, 1 = in the study), and condition (0 = control, 1 = *experimental a*, 2= *experimental b*), ethnic bullying at T1 and ethnic victimization at T1 were the predictors. Independent variables do not predict the dropout both for ethnic bullying at T2 (condition - OR=1.048, 95% CI= .865-1.268 $p=.634$; ethnic bullying at T1 - OR=0.410, 95% CI= .147-1.145, $p=.089$) both for ethnic victimization at T2 (condition - OR=1.124, 95% CI= .923-1.369 $p=.244$; ethnic victimization at T1 - OR=0.687, 95% CI=.431-1.095, $p=.115$). For the following analyses, we used a listwise deletion.

Measures

Ethnic Bullying and Ethnic Victimization. We used an adaptation of the Florence Bullying and Victimization Scales (Palladino et al., 2016, 2020) that ask how often in the previous couple of

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months students had experienced physical, verbal, and indirect attacks, either as perpetrators (i.e., "I made fun of someone. . .") or victims (i.e., "Someone made fun of me. . .") "because of their culture or country of origin." (for the complete version of the Ethnic Bullying scale, see Appendix A, Table A1; for the complete version of the Ethnic Victimization scale, see Appendix A, Table A2). A definition of bullying introduced the scales, consisting of 4 items each. Each item was evaluated along a 5-point scale from "never" to "several times a week."

CFAs showed good fit indices both for ethnic bullying (T1: $\chi^2_{(2)}=0.374$, $p=.829$, CFI=1.000, RMSEA=.000, 90% CI [.000 - .031], SRMR=.010; T2: $\chi^2_{(2)}=0.708$, $p=.702$, CFI=1.000, RMSEA=.000, 90% CI [.000 - .040], SRMR=.014) and ethnic victimization (T1: $\chi^2_{(2)}=2.453$, $p=.293$, CFI=.992, RMSEA=.013, 90% CI [.000 - .056], SRMR=.022; T2: $\chi^2_{(2)}=1.525$, $p=.467$, CFI=1.000, RMSEA=.000, 90% CI [.000 - .050], SRMR=.015). For the following analysis, saved factor scores were used for both scales.

In each set of data collection, the scales present acceptable internal consistency: for ethnic victimization Cronbach's alpha is .73 at T1 and .79 at T2; for ethnic bullying it is .73 both at T1 and T2.

We administered the ethnic victimization scale to students of Italian citizenship as well, for two main reasons. First, according to Italian law, in our study we defined "Italians" as students who have at least one parent born in Italy. However, ethnicity goes beyond citizenship status (e.g., minority groups who have been settled within a new country over several generations, such as Roma; people professing a different religion compared to the majority group; etc.), which is only one factor that goes into defining one's ethnicity. It is possible, for example, that an adopted child has Italian citizenship regardless of the fact that their parents' physical characteristics are different from those of the majority. Moreover, it is also possible that an Italian student with one Italian parent has inherited certain physical characteristics from their foreign parent, such as skin color, and this could lead to victimization because of prejudice and stigma. Second, in some Italian schools there are classes where most of the students come from an immigrant background. In these

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classes it is possible that the children from Italian parents become the victimized minority.

Specifically, in our sample, of the 1211 Italian students who answered the Ethnic Victimization scale at T1, 5% reported at least one answer different from “never” ($M = -.025$, $Min = -.062$, $Max = 3.004$). Obviously, these scores are higher among students from an immigrant background, where 37,2% of the 164 students who compiled the Ethnic Victimization scale reported at least one answer different from “never” ($M = -.184$, $Min = -.062$, $Max = 2.070$).

Overview of the Analysis

We performed two linear mixed-effects models (MIXED) to verify whether, at the beginning of the study, the control and the experimental group differed in ethnic bullying and ethnic victimization. The models were built with classes as the cluster variable, and experimental condition as the dichotomous factor. The effect of the experimental condition was estimated as fixed effect for each MIXED model performed. Furthermore, random intercept across classes was included.

After verifying, at the beginning of the study, that the control group and the experimental group did not differ in levels of ethnic bullying and ethnic victimization, within the second group, we identified two conditions on the basis of the peer educators' recruitment: 30 classes in which all peer educators were Italian (Experimental A); and 20 classes in which at least one peer educator had an immigrant background (Experimental B).

In order to test whether the experimental conditions (Control Group, Experimental A, and Experimental B) affect the efficacy of the NoTrap! program in reducing ethnic victimization and bullying, we performed two linear mixed-effects models (MIXED) with a restricted maximum likelihood (REML) estimation. MIXED procedure handles more complex situations, in which experimental units are nested in a hierarchy. The models used are 3-level (measurement occasion within individual and within class) random-intercept models: a random-intercept model was fit to account for within-subject, within class correlations. The fixed-effect portion of the model treated

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outcomes as a function of *time*, *experimental condition*, and the interactions between these variables. As a second step, significant interactions were followed up by examining the outcome variables of each group across time. The random-effect portion of the model considered the random effects of subjects and classes.

When MIXED showed significant effects *time X experimental condition*, the intervention effect was evaluated based on the statistical significance and the direction of the *experimental condition X time* interaction and by evaluating the mean differences between groups before and after the program, using simple effects analysis. For this analysis we used the R package “lmerTest”, that provides p-values in type I, II or III Anova and summary tables for *lmer* model fits via Satterthwaite's degrees of freedom method (Kuznetsova et al., 2014).

Effect size estimates from pre-test, post-test, and control group designs were calculated following suggestions from Morris (2008), that favoured an effect size (d_{ppc2}) based on the mean pre–post change in the treatment group, minus the mean pre–post change in the control group, divided by the pooled pre-test standard deviation, according to the definition of Carlson and Schmidt (1999). Following this procedure, we calculated (a) effect size based on the mean pre-post change in the Experimental B, minus the mean pre-post change in the control group, (b) effect size based on the mean pre-post change in the Experimental B, minus the mean pre-post change in the Experimental

A, and (c) effect size based on the mean pre-post change in the Experimental A, minus the mean pre-post change in the control group. Finally, we converted the d_{ppc2} in odd ratio, following the procedure outlined by Ttofi and Farrington (2009). In this way it was possible to compare our results with the effectiveness of other school-bullying prevention programs included in a recent meta-analysis (Gaffney et al., 2019).

Transparency and openness

All data, analysis code, and research materials are available by prior request to the corresponding author. Analyses were conducted using RStudio (RStudio Team, 2020), and the

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package “lme4” (Bates et al. 2014). This study’s design and its analysis were not pre-registered.

Results

The results of the first MIXED models showed no differences between the control and experimental groups in both ethnic bullying ($F_{(1, 89.054)}=0.283$; $p=.596$) and victimization ($F_{(1, 68.403)}=0.283$; $p=.596$) at the pre-test data collection.

Descriptive analysis for the two waves of data collection (pre-test and post-test) in the three conditions (Control Group, Experimental A, and Experimental B) are presented in Table 2.

Table 2

Descriptive statistics for the two waves of data collection in the three Experimental Conditions

Condition		Ethnic Victimization			Ethnic Bullying		
		N	M	SD	N	M	SD
Control Group	T1	340	.007	.279	340	-.005	.056
	T2	340	.020	.354	340	-.003	.150
Experimental A	T1	508	-.029	.170	508	.001	.136
	T2	508	-.011	.198	508	.001	.160
Experimental B	T1	378	.020	.288	317	-.005	.053
	T2	365	-.014	.148	317	.002	.153

Note. N=sample size; M = mean; SD=Standard Deviation

Table 3 contains the results of the two linear mixed-effects models (MIXED) performed to analyze the effectiveness of the NoTrap! program in reducing ethnic bullying and victimization.

Table 3

Mixed models predicting ethnic bullying and victimization

Fixed Effects	df	Ethnic Victimization		Ethnic Bullying		
		F value	p Value	df	F value	p Value
Time	1-1170	.012	.091	1-1162.00	.427	.513
Condition	2-1170	3.06	.047	2-70.63	.245	.782
Time*Condition	2-1170	4.19	.015	2-1162.00	.215	.806

Note. df = degrees of freedom; Bold: $p < 0.05$

A significant interaction *time by Experimental Condition* has been found for ethnic victimization ($F_{(1, 1170)}=4.185$; $p=.015$), while no significant effects have been found for ethnic bullying ($F_{(1, 1162)}=0.215$; $p=.806$). Thus, we performed the simple effect analysis only for ethnic

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victimization. We found a significant difference between the condition of Experimental A and Experimental B at the beginning of the study. In particular, Experimental A showed lower levels of ethnic victimization than both Experimental B ($\Delta_{\text{Means}} = -.05$, $t = -2.85$, $p = .004$) and control group ($\Delta_{\text{Means}} = .03$, $t = 2.07$, $p = .03$). Moreover, simple effect analysis showed that in the Experimental B condition, ethnic victimization decreased significantly over time ($\Delta_{\text{Means}} = .03$, $t = 2.30$, $p = .020$) while in the control group and in the Experimental A it remained stable.

Regarding ethnic victimization, the Experimental B condition's effect size (d_{ppc2}) was .173 when compared with the control group, corresponding to a significant OR of 1.369 [CI (1.039-1.803; $z = 2.230$)]. When compared with Experimental A's condition, the effect size was .238, which corresponds with a significant OR of 1.540 [CI (1.196-1.982); $z = 3.351$]. The Experimental A condition's effect size compared with the control group was 0.019, corresponding to a non-significant OR of 1.035 [CI (.804-1.332); $z = 0.267$].

Discussion

Ethnic bullying is a crucial topic in today's society. Indeed, children and adolescents with an immigrant background currently constitute an increasing subpopulation in many countries worldwide (International Organization for Migration, 2019). Since ethnicity is a recognizable characteristic that often becomes the target of aggression, these youths are at higher risk of peer bullying victimization. Despite how scientific literature underlines the urgency to design interventions specifically aimed at preventing ethnic bullying victimization (Limber et al., 2018; Xu et al., 2020), to our knowledge, only one program has been proposed to this aim (Moran et al., 2020), while two studies analysing the effects of a universal bullying intervention among ethnic minority groups found that it was ineffective (Bauer et al., 2007), or had little effect (Limber et al., 2018) in reducing bullying victimization in youths from ethnic minority groups.

Within this line of research, in the present study we analyzed the effects of a universal bullying intervention, the Italian NoTrap! anti-bullying program, on ethnic bullying and ethnic

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victimization. Although actions specifically designed to prevent ethnic bullying and ethnic victimization are not included in this program, we hypothesized that involving students with an immigrant background among the peer educators might be effective in counteracting ethnic bullying and victimization.

In order to test our hypotheses, we compared three conditions: a) classes in which all peer educators are not immigrants (Experimental A); b) classes in which at least one peer educator has an immigrant background (Experimental B); c) classes that do not participate in the NoTrap! program (control group).

Results partially confirmed our hypotheses. Indeed, while ethnic bullying remained stable across time in all the three conditions, the program showed effectiveness in reducing ethnic victimization in classes in which at least one student from an immigrant background was involved as a peer educator (Experimental B). On the contrary, in the control group and in the Experimental A condition, ethnic victimization remained stable over time. The effect sizes of Experimental group B vs respectively control group and Experimental group A are small, if we consider the cut offs defined by Cohen (1988). However, they are higher as compared to the average odd ratio for before-after/experimental-control designs equal to 1.225 recently presented by a meta-analysis on the effectiveness of school-bullying prevention programs (Gaffney, Ttofi, et al., 2019). On the other hand, the odd ratios of the current study are smaller than the ones obtained in the previous trials of the NoTrap! program (Palladino et al., 2016) regarding traditional victimization. This difference was expected, considering that the NoTrap! program was conceived to counteract traditional bullying and victimization, and it does not include specific components targeting the ethnic manifestation of these phenomena.

Contact theory (Allport, 1954) might explain the main findings of the study. Specifically, in both Experimental A and in Experimental B conditions, students belonging to minority and majority groups work together towards a common goal, cooperatively and with the support of teachers. However, only in Experimental B, where students with and without an immigrant

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background are peer educators, the equal status criterion is satisfied. On the contrary, when all peer educators are Italian and all the students with an immigrant background have a less active role in the program, the equal status criterion is missing. According to Allport, within a group, if all the members belonging to a minority community have an inferior role or status than teammates belonging to the majority community, it is likely that existing stereotypes will be reinforced (Allport, 1954).

Another possible explanation of our results, in line with a previous study (Zambuto et al., 2020), is that the NoTrap! program is more efficacious when peer educators are directly involved in the phenomenon they counteract. In the present study, the presence of students with an immigrant background between peer educators (Experimental B) implies that they could be more active in counteracting ethnic victimization than Experimental A's peer educators, who are all Italian. The higher efficacy of Experimental B's peer educators could be related to different reasons. For instance, they could be more motivated to counteract a problem that involves them directly. At the same time, assuming the role of peer educator could increase the popularity of students with an immigrant background among classmates, and this, in turn, could increase peer acceptance and decrease ethnic victimization.

Moreover, the NoTrap! program aims to empower victims both at individual -for instance increasing their coping strategies against bullying, and social levels - promoting empathy and prosocial behavior between classmates, and giving victims a more proactive role in class dynamics. By becoming peer educators, students who get bullied for their immigrant background have the chance to improve their status in class, thus reducing risk of victimization. Their example could, in turn, reduce other immigrant classmates' sense of inferiority.

The NoTrap! program did not affect ethnic bullying in any condition. We can explain this result, considering the program's activities, which are more oriented toward improving victims' and bystanders' defending abilities, rather than working directly on bullies' behavior. Indeed, it is possible to hypothesize that reducing ethnic bullying behaviors requires specific actions to modify

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the beliefs and attitudes that underlie ethnic prejudice. For instance, it is possible that after a positive contact with students with an immigrant background, bystanders stop reinforcing bullies and start defending the victims. When bullies lose bystander support, they may shift their perpetration away from the classroom, continuing to bully immigrant peers, but in a non-scholastic setting.

Limitation and future studies

Although results are encouraging, the present study has some limitations that should be mentioned. First, we did not use a randomized allocation of the classes in the experimental vs control conditions. Specifically, we matched the schools that requested to participate in the NoTrap! program with other schools asked to participate as controls because they were similar (e.g., the same curriculum, or the same contextual features, or a similar distribution of males and females). Since in the NoTrap! program the peer educators' selection is based on voluntary recruitment (Zambuto et al., 2019, 2020), the two Experimental conditions cannot be defined a priori, in a randomized way: they are based on a condition (i.e., presence of at least one peer educator with an immigrant background) that emerges in the following steps of the program, and it is based on a voluntary recruitment procedure. Thus, we cannot exclude a potential selection bias. This selection bias may explain the significant differences found at T1 between Experimental A and Experimental B and between Experimental A and the control group. Replications of the study might confirm these differences, underlying the presence of specific processes related to the variables involved, but not measured within this first trial. Alternatively, differences might be related to variability in the samples assigned to the three conditions, which was not considered because the study did not provide a randomized trial. Additionally, the higher presence of students with an immigrant background in the Experimental B condition (20%) than in Experimental A (11%) and in Control condition (6%), could influence not only the higher level of ethnic victimization in Experimental B at the baseline, but also the main findings. For instance, it is possible that the decrease of ethnic

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victimization in the Experimental B condition is due to ethnic diversity in the class and to higher occasions of interactions between minority and majority group members, regardless of the NoTrap! program activities. Future studies could replicate the three conditions to compare equivalent groups in terms of the proportion of students with an immigrant background for class and of ethnic victimization at the baseline.

Another limitation of the study is that we do not add immigrant background as a factor of the model. This decision was driven by two main reasons. The first one is theoretical: in accordance with Italian law, we considered as Italians all students with at least one parent born in Italy, as a way to define the ethnic minority groups, but we do not know whether in the Italian sub-sample there are students with specific ethnic characteristics who are bullied for their ethnic characteristics (regardless of citizenship status). Indeed, at T1 5% of Italian students in our sample reported that they have been victimized for ethnic reasons. The second reason is related to statistical considerations. To include another factor related to the ethnic background of the students, would lead to a very unbalanced sample, given that there are more Italian students than students with an immigrant background (1386 vs 184) and the model results would lose strength and validity. Future studies, with a more balanced sample, could test the model separately for Italians and students with an immigrant background.

Moreover, another limitation of the study is that the tested model does not include any covariates. However, a multilevel model where additional variables are included (and their effects are tested), would give a more in-depth overview of the processes involved in explaining the effectiveness of the NoTrap! program in counteracting ethnic bullying victimization. For instance, according with the meta-analyses by Yeager and colleagues' (2015), where a decline of effectiveness of anti-bullying programs for students in 8th grade and beyond was found, the moderating role of school grade should be investigated. Furthermore, the role played by ethnic composition of the classroom should be investigated, given that literature on the effect of this variable on bullying reached mixed results. Indeed, on the one hand, some studies suggest that the

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more a school is ethnically diverse, the more bullying occurs (e.g. Jansen et al. 2016). On the other hand, and following contact theory, under specific circumstances, such as the balance of power between different ethnic groups, schools' ethnic diversity could be a protective factor for bullying victimization (e.g. Bellmore et al., 2012; Closson, et al., 2014). Despite that, considering the sample size of the three conditions included in the present study, especially the low number of classes involved, we could not address this issue including covariates in the tested model. Future studies, involving larger sample sizes, should include additional intervening variables (such as the ethnic composition of the classroom, but also participants' characteristic) in the research, and test for their effects, using multilevel models.

Finally, a limitation of the present study is the lack of evaluation of program effectiveness on general bullying victimization and perpetration. The NoTrap! anti-bullying program has been validated in several studies which have shown its effectiveness in reducing both bullying and victimization (e.g., Palladino et al, 2016; Zambuto et al. 2020). Given the general effectiveness of the intervention, the goal of the present study was to test its effectiveness in reducing a particular type of stigmatized bullying: the one motivated by the ethnic background of the victims. However, despite our findings showing that the NoTrap! program is effective in reducing ethnic victimization, but not ethnic bullying, it remains unclear whether the significant effects are unique to ethnic victimization or are in part due to shared variance with global victimization. Future studies should address this important issue, controlling for the variance that ethnic victimization and global victimization share.

Despite the above limitations, the study enriches our knowledge about how we can counteract ethnic victimization at school. Future studies could evaluate if the higher effectiveness of the program in the Experimental B condition is mediated by the higher motivation of the peer educators with an immigrant background, or by the perception of an equal status between minority and majority group members. Furthermore, future studies could clarify whether it is the exposure to having an ethnic minority student in a leadership role (i.e., peer educator) that reduces negative

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perceptions, or whether it is working individually or directly with the ethnic minority student in a leadership role (i.e., cooperating, specific interactions), that is the driving mechanism for reducing ethnic victimization. For instance, it is possible that during the activities led by peer educators with an immigrant background, Italian students might have the opportunity to better get to know these classmates, who are no longer seen as a “category”. Moreover, the moderating role of gender should be further explored.

Finally, it could be interesting to develop a version of the NoTrap! program with new actions and components specifically designed to modify shared social norms and individual beliefs that contribute to maintaining ethnic bullying and victimization. These new actions could be based on social cognitive theory (Tajfel et al., 1971), that, together with contact theory (Kroneman et al., 2019), are the most efficacious types of theory-based stigma interventions models for youths (Aboud et al., 2012; McKown, 2005).

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Appendix A

Ethnic Bullying and Ethnic Victimization Scales

Table A1 Ethnic Bullying scale. Each item was evaluated along a 5-point scale: “never”, “only 1 or 2 times”, “2 or 3 times per month”, “once a week” and “several times a week.”

During the last 2 months:	
Item 1	I spread rumors about someone because of him/her culture or country of origin
Item 2	I excluded someone because of him/her culture or country of origin
Item 3	I beat someone because of him/her culture or country of origin
Item 4	I made fun of someone because of him/her culture or country of origin

Table A2 Ethnic Victimization scale. Each item was evaluated along a 5-point scale: “never”, “only 1 or 2 times”, “2 or 3 times per month”, “once a week” and “several times a week.”

During the last 2 months:	
Item 1	Rumours about me have been spread because of because of my culture or country of origin
Item 2	I was excluded because of my ethnicity/origin because of my culture or country of origin
Item 3	I was beaten because of my ethnicity/origin because of my culture or country of origin
Item 4	Someone made fun of me because of my culture or country of origin